



Accessibility and Region Economic Potential at Rapid Growth Strategic Area

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ABSTRACT

Region development can be done through development of rapid growth strategic area with policy support and potential management strategies, issues and opportunities for area development. The realization need to determine the strategic area namely acts locally, regionally, and nationally in supporting economic activity. Strategic Area Development is expected to spread the effect and/or a positive multiplier effect on other areas. The research aims are a) determining the accessibility of Poleang Subdistrict both internally and externally, b) analyzing the potential resource based on its characteristics, c) strategic development plan for rapid growth area. The research area is Poleang Subdistrict, Bombana District, and Southeast Sulawesi Province. Analysis used is internal and external accessibility, natural resource potential, socio-cultural conditions, settlement, and employment infrastructure condition. Data used are primary and secondary data. Study results are follows; (1) Poleang Subdistrict has potential in natural resources and agricultural, fisheries and marine resources, forestry resources, and livestock. (2) Poleang Subdistrict is an outlet centers and marketing of agricultural production from several districts in vicinity. (3) Priority development at Poleang subdistrict as a rapid growth strategic area is through region infrastructure development.

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INTRODUCTION

Region development basically is an effort to improve the people welfare at a particular area, decrease the gap growth, and welfare inequality between regions. Various region development concept has been applied in various countries through a various disciplines. Previous concepts generally dominated by region economic science, although in fact its application will be more dependent on potential growth of each region that different from other regions, both natural resources, socio-cultural and economic conditions of community, availability of infrastructure and others [5,1].

Strategic region development plan contains policies and potential management strategies, issues and opportunities for region development scenario compiled into medium-term region development policy (five years), further implemented through action plans. Strategic Development Plan and Rapid growth Regions is based on conditions, peculiarities and potentials in regions which in turn can strengthen the economy competitiveness. This condition only become acceleration development driver of region as a potential growth area that has developed or potential development, reduce the development gap between regions and encourage the growth of surrounding area that still underdeveloped, as well as optimizing the use of comparative and competitive sectors/products in regions and attractiveness of region in domestic and international markets.

This realization need strategic area design for specific areas/regions, at large-scale in national and local, industrial activities, tourism and nature reserves [2,12]. Basically, strategic area is a potential area with rapid growth that could play a role as a leader/motors in region development [17,4,16]. Strategic region development plan is expected to spread the effect to other areas or it may cause a positive multiplier effect on other areas [15].

Poleang Subdistrict is located at Bombana Districts in Southeast Sulawesi Province with high levels of economic growth compared to other districts. Region economic activity is based on utilization of natural

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resources such as agriculture, fisheries and marine. In addition, services and trade sectors also contribute positively on economic growth. This districts have created appeal against the district or the surrounding region [21,6]. Under these conditions, an effort to achieve equitable and balanced development need to create necessary policy analysis and development planning (Poleang Subdistrict) as a rapid-growth strategic area.

Based on description above, this study aims are: a) analyzing the resource potential based on its characteristics; b) developing a strategic development plan for rapid-growth region at Poleang Subdistrict, Bombana District, and Southeast Sulawesi Province.

Research Methods:

Data Types and Sources:

This study uses secondary and primary data. Secondary data is obtained from several agencies in Bombana District, Central Bureau of Statistics, Region Development Planning Agency, Department of Spatial Planning, Environment Agency, Forest Service, Department of Agriculture and Fisheries and Marine Resources and Department of Public Works. Primary data is obtained from interviews with stakeholders by referring to questionnaire.

Data Analysis:

Data is analyzed with analysis method below.

a. Accessibility analysis, it is easiness measurement for movement of people or goods to reach a particular location or area in relation with interaction and land usage. Easiness measurement of an area can be seen from a distance, travel time and travel expenses. To understand the interaction between Poleang Subdistrict and hinterland area, gravity analysis approach is used to know the population movement between Poleang Subdistrict and hinterland areas compared to distances between regions, using formula as follows [20]:

$$b. T_{ij} = k \frac{P_i P_j}{d_{ij}^2}$$

Description

T_{ij} = gravity strength between region i and region j

k = constant

P_i = number of residents in area i

P_j = total population in region j

d_{ij} = physical distance between region i and region j

Gravity index value between the Poleang Subdistrict and its hinterland can determine accessibility level of categories area comparing each gravity index weight on average index of whole region analyzed. Gravity index weighting will produce three criteria of accessibility easiness between regions: regions with high accessibility (IG weight > 1), region with intermediate accessibility (IG weight = 0.5 -1) and region with low accessibility (IG weight <0.5).

b. Natural resources analysis, it is natural resources potential in Poleang Subdistrict as main resources for development. The potential can be seen from the aspect of typology that in mainland and having a coastal or marine area. Region typology has a condition that can reach the accessibility area but require a relatively long travel time from the Capital District. It makes the area can serve as a satellite and rapid-growth strategic area for surrounding subdistricts that relatively underdeveloped. Dominant type and natural resource potential in study area is agricultural resources. It includes the resource potential of agriculture and plantation, fishery and marine resource potential, forest resources potential and livestock. One measurement that can be used to assess comparative advantage in natural resource commodities relative to its hinterland and internally of Poleang Subdistrict can use Location Quotient (LQ) analysis approach, with following equation [11,14]:

$$SLQ_{ik} = \frac{S_{ik}}{S_k} \bigg/ \frac{S_{ip}}{S_{kp}}$$

Description

V_{ik} = economic value of i commodity at k village

V_k = economic value of similar commodities in k village

V_{ip} = economic value of i commodity in Poleang Subdistrict

V_{kp} = economic value of similar commodities in Poleang Subdistrict

c. Development analysis is done by SWOT analysis.

RESULTS AND DISCUSSION

Accessibility Analysis of Poleang Subdistrict and its Hinterland:

Internal Accessibility:

Calculation result of Gravity Index (GI) shows that degree of village accessibility to Poleang Subdistrict Capital (Boepinang) is 15,107 to 22,459,536. Village with biggest GI from and to Poleang Subdistrict Capital is West Boepinang Village and the lowest GI value is Salosa village. Accessibility movement of goods and people

will more easily and quickly in areas with high GI compared with low GI [9]. This is because the distance between West Boepinang Village \pm 0.5 km, while Salosa village and village Boepinang village is \pm 10 Km (Table 2).

Table 2: Gravity Index and Internal Space Interaction at Poleang Subdistrict year 2012.

No	Village	Distance between Poleang Subdistrict Capital Poleang (Boepinang) (Km)	Gravity Index year 2012	Gravity Index Weight year 2012	Interaction criterion (GI Weight)
	Boeara	6	94.885	0,03	Low
2	Kasabolo	2	1.231.640	0,38	Medium
3	Pokurumba	8,5	.735	0,02	Low
4	Salosa	10	15.107	0,00	Low
5	Kastarib	1	5.081.238	1,55	High
6	Barangga	8	19.698	0,01	Low
7	West Boepinang	0,5	22.459.536	6,87	High
8	Pallimae	3	93.002	0,12	Medium
9	Matirowalie	5	60.738	0,02	Low
	Average		3.267.953	1,00	

Comparative analysis results the Gravity Index Weight of each village with Poleang Subdistrict Capital have an average 0.00 to 6.87. Based on Gravity Index, it can be classified weight of interaction opportunities of population movement at Poleang Subdistrict that can be categorized into low to high interaction. Village has a high interaction due population number and relatively closes distance and supported by facilities and adequate transportation infrastructure. Villages with low interaction due to far distance between the village and Poleang Subdistrict Capital and bad road condition as well as the influence (interaction) which is higher than other districts around Poleang Subdistrict.

External Accessibility:

Gravity Index analysis results of Poleang Subdistrict and surrounding area indicates that accessibility level between regions is between 26,561 to 606,756. Districts Central Poleang Subdistrict has biggest GI from and to Poleang Subdistrict Capital; Southeast Poleang Subdistrict is lowest (Table 3).

Table 3: Gravity Index and Internal Interaction Space Interaction between Poleang Subdistrict and other Subdistrict, year 2012.

No	Village	Distance between Poleang Subdistrict Capital Poleang (Boepinang) (Km)	Gravity Index year 2012	Gravity Index Weight year 2012	Interaction Criterion (Bobot IG)
1	East Poleang	36,00	104.388	0,43	Low
2	North Poleang	29,28	181.087	0,75	Medium
3	South Poleang	19,53	257.037	1,06	High
4	Southeast Poleang	45,81	26.561	0,11	Low
5	West Poleang	22,94	318.008	1,32	High
6	Central Poleang	9,23	606.759	2,51	High
7	Tontonunu	19,92	196.504	0,81	Medium
	Average		241.478	1,00	

Source: Data Processed (2012)

Interaction criteria are based on Gravity Index Index:

High = Gravity Index Weight (> 1)

Medium = Gravity Index Weight (0.50 to 1.00)

Low = Gravity Index Weight (< 0.5)

Comparison the Gravity Index weight of Poleang Subdistrict and surrounding districts are 0.11 to 2.51. Based on the results, there are three sub-districts with high interaction, two Districts with interaction medium, and two sub-districts with low interaction. Interaction between Poleang Subdistrict and surrounding district at high category is due to distance between these districts are relatively close, supported by facilities and adequate transportation infrastructure to facilitate movement of people and goods. Low interaction between district is caused by farther distance and low availability of transport facilities and infrastructure.

Closer distance between sub-districts can increase the chances of population movements. This may also have implications on movement or goods flow between district in order to meet the needs of each district [10]. Potential movement between districts with high interaction will greater if the condition and availability of transport facilities and infrastructure increasingly adequate, so the multiplier effect will further increase the resources production, manpower, flow velocity of money between sub-districts [8].

*Natural Resource Potential:**Agricultural Resource Potential:*

Poleang Subdistrict is one area at Bombana District in Southeast Sulawesi Province Bombana with agriculture potential. The agricultural potential includes food crops and plantation crops. Food crops cultivation at Poleang Subdistrict generally grown on land. Land area of agricultural development potential in Poleang Subdistrict is composed of 10,107 hectares of agricultural potential with 9,494 acres of dry land and agricultural potential (paddy) covering 613 hectares [3].

Plantation crops are one main agricultural sector in Poleang Subdistrict. Potential plantation crops in Poleang Subdistrict are big enough. Some plantation species are cultivated are palm (4 ha), tamarind (3 ha), cloves (6 ha), cashew (464 ha), cocoa (1,978 ha), coconut (2,228 ha), hazelnut (4 ha), coffee (26 ha) and pepper (8 ha). Food crop production in Poleang Subdistrict is dominated by sweet potato plants at 7.50 tons/ha, cassava at 6.90 tones/ha, rice at 2.15 tons/ha, green beans at 1.60 tons/ha,

Fisheries and Marine Resource Potential:

Fisheries and marine are potential resources for Poleang Subdistrict. Fishermen communities who live in Poleang Subdistrict are 5.32 percent (774 fishermen) from 14,561 population of Poleang Subdistrict. Fishing gear is used in relatively simple such as boats and fishing vessels as many as 773 units. Types of fishing gear consist of: 325 units gill nets, 6 units lift nets, 2,213 units fishing, and 116 units trap.

Data analysis shows that development potential of fisheries and marine resource in Poleang Subdistrict is supported by following region. a) Junction between the various aspects of life on land, sea and air to shape of coastal region as the result of a dynamic balance of weathering and construction of above three aspects. b) Habitat of various species of fish, marine mammals, and birds to spot enlargement, spawning and foraging. c) A high fertility rate and an important source of organic substances in food chain and terrestrial and marine life; d) sharp changes in ecological properties and small region will be different at ecological conditions. e) Center of various development interests of sector and region development as well as having an international dimension.

Forestry Resource Potential:

Broadly speaking, forestry resources potential at Poleang Subdistrict is divided into two types namely community forests and state forests. Forest area in Poleang Subdistrict at 2011 is 125 hectares (1.1%) of total Poleang Subdistrict area. Furthermore, it was shown that state forest area is 230 hectares (2.0%) of total Poleang Subdistrict area. Most of Poleang Subdistrict is non-forested area of 11,184 hectares (96.9%) of total area.

Forest area at Poleang Subdistrict is still very low, at 3,462 hectares (30%) of total Poleang Subdistrict area. This phenomenon needs serious efforts to increase the forest area in Poleang Subdistrict, e.g. HTR planting, reforestation sloping areas (> 40%), and forestation area of riparian and coastal border. Total forest area (community and state forest) at Poleang Subdistrict only about 355 acres. It is lower than total forests of other districts.

Livestock Resource Potential:

Poleang Subdistrict is a region in Bombana District with considerable potential for large farms development. This potential is supported by appropriate region conditions, socio-economic conditions of people who have developed a farm with region skills and knowledge, and promising market opportunities. People at Poleang Subdistrict generally come from ethnic of Bugis Poleang hereditary with large livestock raising and poultry. Habit to raise cattle is began much earlier when they are still in origin region. Livestock types are grouped into: large livestock, small livestock and poultry. Large livestock consists of 895 cow, 56 buffalo and 216 horses; Small livestock consists of 940 goats; 59,769 chicken, and 1,138 duck.

*Social and Cultural Potential:**Population Analysis:*

Population growth is an important component to affect all aspects of development. Population growth rate will affect to increase needs for various aspects of life, such food, cloth, shelter, space, water and others [18]. Poleang Subdistrict population also increases along with time.

Settlement Analysis:

House need is directly relates to population growth at Poleang Subdistrict. Population growth based on birth, death and migration of each village in district in year 2011 at Poleang Subdistrict show that population growth rate average of 1.96% with highest growth in Salosa village (2.73% per year) and lowest in Sub Boepinang village (1.51%/year).

Table 4: Projection the number of population at Poleang Subdistrict year 2014 s/d 2020.

No	Villages	Population year 2011	Population growth (%/year)	Population projection		
				2014	2017	2020
1	Boeara	1325	2,19	1412	1499	1586
2	Kasabolo	1911	1,52	1998	2085	2172
3	Pokurumba	1562	2,11	1661	1760	1859
4	Salosa	586	2,73	634	682	730
5	Kastarib	1971	1,52	2061	2151	2241
6	Barangga	489	2,25	522	555	588
7	Boepinang	2578	1,51	2695	2812	2929
8	West Boepinang	2178	1,65	2286	2394	2502
9	Pallimae	1372	1,90	1450	1528	1606
10	Mattirowalie	589	2,21	628	667	706
	Total	14.561	1,96	17361	18150	18939

Source: Data Processed, 2013

High population growth is affected by number of higher births of 2.73% per annum (Village Salosa), higher than Boepinang Village with low population growth (1.51% per year). It is in affected by higher people die and exit (move) per unit of population.

Cultural Analysis:

Poleang Subdistrict population is dominated by Bugis and Moronene and other ethnic groups are Javanese and Buton and Bajo tribe who live in coastal communities. This social structure built up strength of region ethnic groups, Bugis and other ethnic groups live in Poleang. This region grows as agriculture and fishery area with abundant fish catches.

Community orientation in Poleang Subdistrict makes livelihood as a source of income in agricultural, farming, fishing, and trade. Moronene Ethnic as one of ethnic groups in Southeast Sulawesi generally spread not only at large land, but also on Kabaena Island. At colonial time, they evolved to form autonomous regions, led by leader of Ethnic Moronene that developed until now as farmers at dry land. Their customs can still be seen in wedding ceremony or death.

Bugis ethnic arrival to Bombana (Poleang) area was begun with trade orientation, but to date in addition to trade sector also work on plantations and fisheries sectors as well as government. Trade relations are built from the Bugis traders by sea to make the region opened to outside world. Bugis community has been settled and grown for generations in the region. Therefore, it is not surprising that Bugis ethnic group have more roles in commerce and government in comparison with Moronene ethnic. Bugis ethnic presence is affected the dynamics and existence of many region communities.

Conditions of Region Infrastructure:

Land Transport Infrastructure:

One element to show the progress of subdistrict can be seen from the availability of a long road and road surface conditions. More roads in an area with sufficient density can facilitate the accessibility and mobility of people and goods, and improve linkages between regions in subdistrict Poleang. Data analysis result until year 2011 show that roads availability in Poleang Subdistrict relatively good, but still limited. The length of road is 143 km, consisting of 20 km of provincial roads, 123 Km county roads. Based on roads availability in each village, largest spread is in Pokurumba village of 28 km (19.58%) and the lowest is Boepinang and West Boepinang Village respectively 6 km (4.20%) of total road. Level of transport easiness based on roads length at Poleang Subdistrict is at a low to high level. Classification the ease movement of population from density criteria are divided into: (a) Areas with high road density namely Solusa, (b) Areas with moderate road density namely Boepinang West, and (c) Areas with low road density namely Boera, Kasabolo, Pokurumba, Kastarib, Barangga, Boepinang, Pallimae, and Mattirowalie.

Land and Water Transportation Facilities:

Roads availability at one area and availability of land and water transportation can create greater accessibility and mobility of people and goods in a region and linkages between regions relatively wide [13]. Analysis result from transport media availability in form of a motor vehicle on land until the year 2011 at Poleang Subdistrict is relatively good, but limited in type and quantity. There are 75 units transportation, consist of 11 units of bus, 13 units microbus, 16 units pick up and 35 units truck.

Water transportation availability in form of motor and non-motor boats until the year 2011 at Poleang Subdistrict is relatively good, particularly canoe and Jarangka. The number depends on region access (sea) and source of livelihood (fishing). Water transportation with motor boat and non-motor boat in Poleang Subdistrict consist of motorboat (Jarangka) of 2,673 units (79.22%) and non motor boat (canoe) of 69 units (20,78%). Village with availability of motor and non-motorized boats the most are West Boepinang Village (40.96%) and lowest in Pokurumba and Salosa village respectively 0%. This means that movement of people and goods from

sea is relatively higher in West Boepinang than Pukarumba and Salosa village. Difference number of sea transport is affected by region location at coastal and livelihood as fishermen.

Rapid-growth Strategic Area:

Poleang Subdistrict is center of rapid-growth strategic area. In conjunction with this, Poleang Subdistrict has close links with surrounding area, especially the seven districts the extension Poleang Subdistrict. Poleang Subdistrict has ports in Boepinang linked to 7 districts. The port functions are for : (1) passenger boat to Bone and Bau-Bau, (2) Ships from and to Bone mostly unloading rice and other basic foods, (3) Ships to Bau-Bau mostly unloading passengers, and (4) fishing boats.

Activities at Poleang Subdistrict Port include unloading groceries especially rice, transporting agricultural production such as cocoa, cashew and coconut. In addition, Poleang Subdistrict port has small-scale economic activities, such as coffee shops and food stalls. The activity is more prevalent if there is a ship from South Sulawesi.

Existence of port area at Poleang Subdistrict also becomes first distribution of basic food, especially from South Sulawesi. The goods are unloaded in Poleang Subdistrict port, then distributed throughout the district that became hinterland region of District Poleang.

The linkage between Poleang Subdistrict Region with its hinterland region is also indicated by telecommunications network (mobile phone) in District Poleang. In addition, due to good roads access to and from Kolaka, it can be passed by a four-wheeled vehicles as well as access roads to and from Kasipute (capital Bombana) is smooth to cause linkages between sub-district in Poleang area and its hinterland more close.

Poleang Subdistrict also has a public transport terminal and one shadow terminal at Boepinang Central Market. It is one important factor that led to relation between Poleang Subdistrict and surrounding areas. Shadow terminal is used as commuter terminal from and to Poleang-Kolaka, Poleang-Kasipute and Poleang-Kendari.

Boepinang market in Poleang Subdistrict also has important role to support economy at Poleang Subdistrict and surrounding areas. This market causes close relationship between Poleang Subdistrict and surrounding area.

Port of Poleang Subdistrict has an important role for local trade. There is Fish Auction Sites (TPI) and one ice factory to meet the fishermen needs. Fish catches from hinterland will be sold in TPI. In addition, ice factory also supply ice not only for fishermen at Poleang Subdistrict, but also other districts around it.

One infrastructure development plan at Poleang Subdistrict is construction of a passenger ship port (PELNI ship). Port activity is not only used for loading and unloading of goods but also as commuter passenger port of Bone (South Sulawesi) -Poleang.

Development Plan of Poleang Subdistrict as Rapid-growth Strategic Area:

Strategic area development and rapid-growth region is done by looking at strategic position and accessibility and availability of infrastructure. In addition, it also considers the sector and local leading commodity.

Development program planning at Poleang Subdistrict as Rapid-growth Strategic Area refers to its development strategy. The main strategy in rapid-growth development of strategic areas at Poleang Subdistrict is follows:

1. Opening the access to markets, both locally and nationally
2. Government order to access the financial institutions (Bank) to get capital for small businesses
3. Development of agricultural processing industry (fisheries, cocoa and coconut)
4. Localization the leading commodity
5. Extending the crops policy
6. Rehabilitation of unproductive plantation crops and coastal ecosystems
7. Preparation of spatial detail at Poleang Subdistrict (Areas for industry, trade and services, education and public facilities)
8. Provision and improvement of electric power capacity, clean water infrastructure by government or private.
9. Law enforcement for destruction of coastal environment in line with policy of alternative livelihoods.
10. Increasing the productivity of fishermen and infrastructure development (TPI, ice plant).
11. Strict supervision to make new intercity terminal can be operated
12. Partnerships formation at level of institutional and agricultural business/fisheries, industry and services.
13. Increasing the ports capacity and warehouses to store agricultural product when the prices are unstable
14. Cooperation with Universities to provide skilled labor in agriculture.

Conclusion:

Based on potential analysis of Poleang Subdistrict as Rapid-growth Development Regions, the conclusion can be stated as follows:

1. Internal accessibility is analyzed based on villages interaction with Poleang Subdistrict Capital, i.e. there are two villages with higher interaction, two villages with medium interaction, and five villages with lower interaction. Externally there are three subdistricts with high interaction, two with medium and two with low interaction.
2. Natural resources potential at Poleang Subdistrict include agricultural resources that dominated by agricultural crops as palm plantations, sweet potato, cassava, rice and green beans. Marine and fisheries are dominated by fish capture and fishery, and forestry resources (timber) and livestock resources is dominated by cattle and chickens
3. Development of rapid-growth strategic areas at Poleang Subdistrict require policy, institutional strengthening and development of infrastructure, especially electricity, transport and communication, as well as economic infrastructure (markets and shops).

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