

STUDY OF LOCAL-BASED EXCELLENT POTENCY IN BOMBANA DISTRICT

R. Marsuki Iswandi^{*}, Lukman Yunus^{**}, Hadi Sudarmo^{***},
Ramdhias Panti^{****} and Edi Cahyono^{*****}

Abstract: Basically, development is a transformation process. The process brings a change in allocation of economic resources, benefits distribution from the accumulation to increase production, income and welfare. Development process should be based on careful strategic planning. This study purpose is to analyze the potential of superior sectors in Bombana District. This study analyzes the sector/location, market potential and competitiveness of superior sectors. Research results show that: (1) each sub-district at Bombana has peculiarities in superior sector/commodity. Competitive commodities of food crops are rice, maize and cassava. While plantation commodities are cashew, cocoa, clove, coconut, pepper and nutmeg. Marine fisheries and aquaculture superior commodities from fisheries commodity, and superior livestock are cows, goats, chickens and ducks. (2) Sub-districts with ability to capture market opportunities from other regions are West Kabaena, North Kabaena, Rumbia, Central Rumbia, North Rarowatu and Lantari Jaya.

Keywords: Excellent potency, local-based.

1. INTRODUCTION

DEVELOPMENT is a change process to achieve better society welfare. Basically, development is a transformation process. The process brings a change in allocation of economic resources, benefits distribution from the accumulation to increase production, income and welfare [3].

Development process should be based on careful strategic planning [15,10]. The planning can be done through forecasting of achievement level of development

* Associate Professor at the Department of Agribusiness, Universitas Halu Oleo, Kampus Hijau Bumi Tridharma Anduonohu Kendari 93232, Indonesia. Email: marsuki_iswandi@yahoo.com

** Associate Professor at the Department of Agribusiness, Universitas Halu Oleo, Kampus Hijau Bumi Tridharma Anduonohu Kendari 93232, Indonesia. Email: lukuyus@yahoo.com

*** Department of Agribusiness, Universitas Halu Oleo, Kampus Hijau Bumi Tridharma Anduonohu Kendari 93232, Indonesia. Email: hadisudarmo@rocketmail.com

**** Faculty of Engineering, Universitas Sulawesi Tenggara, Kendari, Indonesia. Email: ramdhias.panti@yahoo.com

***** Professor of Industrial and Applied Mathematics of Universitas Halu Oleo, Kampus Hijau Bumi Tridharma Anduonohu Kendari 93232, Indonesia. Email: edi.cahyono@uho.ac.id, or edi_cahyono@innov-center.org

objectives. It can determine the best alternatives to optimize the potential, prospects, obstacles and risks faced [4].

Regional economic development is an integral part of national development. It is directed to spur equitable development and to create employment opportunities for community to improve the society welfare to support the living standards improvement of local communities. Therefore, local government is required to optimally exploit the local potential and empower their resources in order to provide benefits to economic growth that is supported by a wide range sectors. Development acceleration should be emphasized on potential sectors to provide a wider impact on society welfare [11,14].

Bombana is one district in Southeast Sulawesi-Indonesia with a land area of $6918.38 \pm \text{km}^2$ and territorial waters (sea) of $\pm 15,000 \text{ km}^2$. Bombana is divided into 20 districts with population of 287.246 inhabitants (in 2012). Economic activity area in Bombana is still dominated by agricultural sector with contribution more than 30% of total Gross Domestic Product (GDP).

Agricultural land usage currently reaches 26,943 ha and absorbs 82,240 workers 61.48% [6]. Agricultural sector dominates contribution d to GDP Bombana from year 2008-2012, but from year to year the contribution tends to decrease. It indicates a tendency of transformation process of economic structure in Bombana. This situations need development direction to takes into account the potential usage of local resources to provide a large multiplier effect to improve the incomes and welfare of community to support the availability of resources in a sustainable manner. Superior economic sectors should be encouraged to grow with the principle of sustainable development.

Sustainability of the sectors role are expected to provide a big share to create strong regional economic foundation through community involvement/small people with populist economic in character is to develop an approach that involves the development cooperation between government, private sector and local communities in form co-management based society to drive the real economy dynamic of the region. In other words, people are the main development actors in Bombana. It is supported by [16] that Local non-governmental Organizations (NGOs) can play in agricultural development in sub-Saharan Africa.

Development approaches of superior sector are concentrated at sub-districts. Sub-districts are viewed as single entity development areas with comparative and competitive advantage to produce one or a few commodities/products. Some districts with the appropriate capacity will become a major contributor to economic growth in a sub-district. Economic potential knowledge of each district will facilitate the possibility of development to meet the target to increase production with more efficient investment.

Sub-district at Bombana District need sectors potential analysis to be used as reference for material planning and development evaluation and policy development in entire region of Bombana.

This study purpose is to analyze the potential of superior sectors in Bombana District.

2. RESEARCH METHOD

A. Research Location and Time

The study was conducted in Bombana District, Southeast Sulawesi Province, Indonesia. The study was conducted in 2012.

B. Data Collection Method

The data collected is primary and secondary data. Primary data is obtained through in-depth interviews with the subdistrict head, while the secondary data obtained from the relevant agencies in Bombana.

C. Data Analysis

Analysis techniques to assess the comparative advantages and superiority are Dynamic Location Quotient (DLQ) and Static Location Quotient (SLQ) and Shift-Share Analysis (SSA).

1. Analysis of Location Quotient (LQ)

This analysis has an important role to look at base sector or non base plantation crops to further identify the comparative advantage of a particular type of crop/ plantation/ fishery in Bombana. This approach used is ratio between the relative function of plantation area in subdistricts with a plantation area function at district level. The mathematic formulation is below.

(a) *Static Location Quotient, (SLQ):*

$$SLQ_{ik} = \left[\frac{\frac{V_{ik}}{V_k}}{\frac{V_{ip}}{V_p}} \right]$$

Description:

V_{ik} = GDP of sector I at k study area

V_k = Total GDP of all sectors in k study area

V_{ip} = GDP sector I at p reference local

V_p = Total GDP in all sectors at p reference area

Assumptions, all residents in every region has a similar demand patterns with reference area for expenditure, labor productivity, and goods production in each sector.

(b) *Dynamic Location Quotient, (DLQ)*

$$DLQ_{ik} = \frac{\left[\frac{(1 + g_{ij})}{(1 + G_j)} \right]^t}{\left[\frac{(1 + G_i)}{(1 + G)} \right]^t} = \frac{IPPS_{ij}}{IPPS_i}$$

Specification:

$IPPS_{ij}$ = Potential Index of (i) sector development in (j) area

$IPPS_i$ = Index sector development of (i) in reference area.

g_{ij} = growth rate of (i) sector in (j) area

G_i = growth rate of (i) sector in reference area.

Dynamic Location Quotient, (DLQ), with g_{ij} sector formulation

$$\left. \begin{aligned} X_{it} &= X_{i0}(1 + g_{it})^t \\ \frac{X_{it}}{X_{i0}} &= (1 + g_{it})^t \\ \left[\frac{X_{it}}{X_{i0}} \right]^{1/t} &= [(1 + g_{it})^t]^{1/t} \\ \left[\frac{X_{it}}{X_{i0}} \right]^{1/t} &= (1 + g_{it}) \\ \left[\frac{X_{it}}{X_{i0}} \right]^{1/t} - 1 &= g_{it} \end{aligned} \right\} g_{it} = \left[\frac{X_{it}}{X_{i0}} \right]^{1/t} - 1$$

Sectors classification based on comparative analysis

CRITERIA	$DLQ_i < 1$	$DLQ_i > 1$
$SLQ_i < 1$	Not superior sectors and without superior potential	Not superior sectors and having superior potential
$SLQ_i > 1$	Superior sectors that not potential anymore	Superior sectors with superior potential

2. Market Potential Analysis Based on Regional Economy

Market potential is analyzed by local market analysis. It is based on local potential as a driver. It is seen from the population number, number of sellers

and sales value per capita or per capita income. Equation of local market as follows:

$$PS_s^i = P_s(Pcs_{pusat}^i) \frac{Pci}{Pci_{pusat}}$$

Specification:

PS = Local potential Sales

P = Population

Pcs = Village Per Capita Sales

Pci = Value of Per Capita Sales

Criteria: PS > rural areas movement is better/potential

Analysis of Trade Area Capture (TAC) is used to see the opportunities of a region to seize opportunities or potential for potential region development originating from other regions. The equation is follows:

$$TAC_s^i = \frac{AS_s^i}{Pcs_{pusat}^i \left(\frac{Pci_s}{Pci_{pusat}} \right)}$$

Description:

TAC = Trade Area Capture

AS = Actual Sales/Sales

Pcs = Per Capita Sales

Pci = Sales Per Capita Value

3. Analysis of Superior Sector Competitiveness

Bombana Policy Analysis Matrix (PAM) approach is used to test the feasibility and competitiveness of main commodity.

3. RESULT AND DISCUSSION

A. Economic Potential of Superior Area

LQ analysis results (both static and dynamic) with derivation of location index and specialist index show that Bombana District has some commodities that potential, superior and competitive. Superior economic potential of plantation commodities can be seen in Table 1.

Table 1
Superior Economic Potential of Plantation Commodities in Bombana District, 2013

No.	Sub-districts	<i>Economic Potential (Plantation Commodity)</i>		
		<i>Potential and Superior</i>	<i>Still Not Potential and Superior</i>	<i>Potential and not Superior</i>
1	Kabaena	Clove	Cashew and cacao	Inside and Hybrid Coconut
2	North Kabaena	Inside and Hybrid Coconut	Coffee, cotton	Java acid
3	South Kabaena	-	-	Cashew, coffee and cacao
4	West Kabaena	Inside and Hybrid Coconut, Java acid	Cotton	Cashew, coffee and cacao
5	East Kabaena	Cashew, coffee and cacao	-	Inside and Hybrid Coconut
6	Central Kabaena	Cashew	Coffee and cacao	Inside and Hybrid Coconut
7	Rumbia	Cashew	Java acid, clove, coffee, Inside coconut and Hazelnut	Cacao and nutmeg
8	Mata Oleo	Pepper	Hazelnut, Inside and Hybrid Coconut, pepper	Java acid, clove, Cashew, cotton, coconut, and coffee
9	Great Masaloka Island	Cacao, Hazelnut, pepper and hazelnut	Java acid, clove, Cashew, cotton, coconut and coffee	-
10	Central Rumbia	Cashew, Hazelnut and pepper	Java acid, clove, cacao, and coconut	Cotton and hazelnut
11	Rarowatu	-	-	Cashew
12	North Rarowatu	-	-	Cashew
13	Mata Usu	-	Inside coconut and hybrid coconut	Cashew and Hazelnut
14	Lantari Jaya	-	-	Cashew and Hazelnut
15	East Poleang	Cashew, hazelnut, and pepper	Coffee and cotton	Java acid, clove, hazelnut, Inside coconut and cacao
16	North Poleang	Clove, cacao, Inside coconut, coffee and hazelnut	Java acid, hybrid coconut, Hazelnut and pepper	Cashew and Hazelnut
17	South Poleang	-	-	Inside coconut
18	Southeast Poleang	Cashew and Inside coconut	-	Coffee and cacao
19	Poleang	Cashew and Inside coconut	-	Coffee and cacao
20	West Poleang	-	-	Inside coconut
21	Tontonuhu	Cashew and Inside coconut	-	Coffee and cacao
22	Central Poleang	Cashew and Inside coconut	-	Coffee and cacao

Superior economic potential of food agricultural commodities are presented in Table 2.

Table 2
Superior Economic Potential of Agriculture Commodities in Bombana, 2013.

No.	Subdistricts	<i>Economic Potential (Agriculture Commodity of Food Crop)</i>		
		<i>Potential and Superior</i>	<i>Still Not Potential and Superior</i>	<i>Potential and not Superior</i>
1	Kabaena	Rice and cassava	-	Sweet potato
2	North Kabaena	Rice	-	Corn, cassava and sweet potato
3	South Kabaena	Rice	-	Corn, cassava and sweet potato
4	West Kabaena	Rice	-	Corn, cassava and sweet potato
5	East Kabaena	-	Corn, cassava and sweet potato	Rice
6	Central Kabaena	Rice, corn and cassava	Sweet potato	-
7	Rumbia	Rice and cassava	Sweet potato	-
8	Mata Oleo	-	Cassava, sweet potato, and soybeans	Rice
9	Great Masaloka Island	Rice and cassava	-	Corn and sweet potato
10	Central Rumbia	Rice	Cassava and sweet potato	Corn
11	Rarowatu	-	-	Rice, corn, cassava and sweet potato
12	North Rarowatu	Rice and peanut		Corn, cassava, sweet potato and soybeans
13	Mata Usu	Rice and cassava	-	Corn and sweet potato
14	Lantari Jaya	Rice	-	Corn, cassava, sweet potato, green bean and soybeans
15	East Poleang	-	Corn, cassava and sweet potato	Rice
16	North Poleang	-	Corn, cassava and sweet potato	Rice
17	South Poleang	Rice, cassava and sweet potato	-	-
18	Southeast Poleang	-	Cassava, sweet potato and peanut and green bean	Rice
19	Poleang	-	-	Rice and cassava
20	West Poleang	Rice	Cassava, sweet potato and green bean	Corn and peanut
21	Tontonuhu	Rice	Cassava	Corn and sweet potato
22	Central Poleang	Rice	Cassava and peanut	Corn and sweet potato

Livestock superior potential in Bombana is dominated by cattle and goats for large livestock and poultry for small livestock as chicken and duck. [8] estimate the total amounts of (cattle, buffalo, pig and chicken) livestock inputs required to effect entry and compare and contrast the alternative input districts requirements. Sub-district potential for livestock can be seen in Table 3.

No.	Subdistricts	<i>Economic Potential (Agriculture Commodity of Food Crop)</i>		
		<i>Potential and Superior</i>	<i>Still Not Potential and Superior</i>	<i>Potential and not Superior</i>
1	Kabaena	Goat, chicken	-	Cattle, sheep and horse
2	North Kabaena	Chicken	Cattle, goat	Buffalo
3	South Kabaena	-	Cattle, chicken	-
4	West Kabaena	-	Goat, duck	Cattle, chicken
5	East Kabaena	-	-	Cattle, goat and chicken
6	Central Kabaena	-	-	Cattle and chicken
7	Rumbia	-	Cattle and chicken	-
8	Mata Oleo	-	-	-
9	Great MasalokaIsland	-	-	-
10	Central Rumbia	Cattle, goat, duck	-	Chicken
11	Rarowatu	-	-	-
12	North Rarowatu	-	-	Cattle
13	Mata Usu	-	Cattle and chicken	-
14	Lantari Jaya	-	Cattle and chicken	-
15	East Poleang	-	Chicken and duck	-
16	North Poleang	-	Cattle and chicken	-
17	South Poleang	-	-	-
18	Southeast Poleang	-	Chicken	-
19	Poleang	-	Cattle and horse	-
20	West Poleang	-	Horse	-
21	Tontonuhu	-	Cattle and chicken	-
22	Central Poleang	-	Cattle and duck/duck	-

Fisheries sector in Bombana consists of catch and aquaculture fisheries.[2] said that more empirical evidence should be collected on aquaculture would provide varied opportunities to improve the income, employment and food consumption levels within Households.

Related to local food availability, [9] believe that complementary foods formulated from locally available food commodities have great potential in providing nutritious foods that are practical, food-based approaches, aimed at combating the problem of malnutrition among infants and children in Nigeria in particular, and developing countries in general.

Research results of [7] in Bombana indicate that Poleang Subdistrict is an area with huge potential and deserves to become center of Minapolitan in Bombana. Poleang Subdistrict is connected and easily accessible by other regions both in Bombana or other regions as well as other districts and even other province (South Sulawesi Province).

Tourism sector with economic potential consists of natural attractions such as waterfalls, beaches, caves and mountain. [5] showed that potential to grow local nature tourism in the area appears substantial. Other tourism potential relate to social culture of Bombana society such as village and custom home, tomb of king as well as the traditional ceremony of Bombana community. Agra case studies by [17] showed that although Agra receives the maximum number of tourists except TajMahal but they are not aware about other monuments.

Mining sector in Bombana was strengthened since 2008 with the discovery of gold mining in Rarowatu Subdistrict. Since 2008, agricultural sector contribution to GDP growth began to decline and inversely proportional to higher mining sector contribution in GDP growth every year.

Mining lands in Bombana are located in 19 subdistricts. North Poleang and North Rarowatu Subdistricts have widest IUP, respectively 86,826 and 71,790 ha. [1] shows that tin mining activities reduced farm land through soil erosion problems, swampy nature of neglected mined excavation, mine dump and pits on arable land. Consequently, the farmers experienced low productivity in crop farming, land fragmentation, land disputes and conflicts in area.

Other economic potential is a household industry in small scale sector. It becomes backbone of agriculture, plantation, animal husbandry and fisheries sectors as a source of industrial raw materials of the four sub-sectors. Domestic industry is dominated by foodstuffs and building materials industry. Foodstuffs dominant industry is brown sugar, palm sugar, coconut oil and sale bananas jam. These foodstuffs products are consumed by local communities. [12] says Local food initiatives create a niche market in many developed countries where consumer choice is being met with an expanding offering in both conventional as well as complementary retail outlets. Other industries are furniture and brick. [13] said that the policies, of which food aid was a by-product and which have led to the accumulation of large food surpluses in the industrial countries and the inhibition of the efficient functioning of food markets in the developing countries, have by now become thoroughly discredited.

4. CONCLUSION

Each subdistrict in Bombana District has peculiar and superior sector/commodity. Competitive commodities of food crops are rice, maize and cassava. While plantation commodities are cashew, cocoa, clove, coconut, pepper and nutmeg. Fisheries commodities are marine fish and aquaculture, and superior livestock are cows, goats, chickens and ducks.

Sub-districts with ability to capture market opportunities from other regions are West Kabaena, North Kabaena, Rumbia, Central Rumbia, North Rarowatu and Lantari Jaya Sub-district.

References

- Adegboye, M.A., Effect of Mining on Farming in Jos South Local Government Area of Plateau State, *Journal of Soil Science and Environmental Management*, 2012, Vol. 3, No. 4, pp. 77-83.
- M. Ahmed, dan M. H. Lorica, *Improving developing country food security through aquaculture development lessons from Asia*. *Jurnal Food Policy*, 2002, Vol. 27, pp. 125-141.
- T. Cadden, Stephen John Downes, Developing a business process for product development, *Business Process Management Journal*, 2013, Vol. 19, issue 4.
- F. He, Jun Chang, Combined forecasting of regional logistics demand optimized by genetic algorithm, *Grey Systems: Theory and Application*, 2014, Vol. 4, issue 2.
- N. M. Hodur, F.L. Leistritz and K. Wolfe, Assesing The Economic Development Potential of Nature Tourism. *Journal of great Plain Research*, 2005, Vol. 15, No. 2, pp. 279-293.
<http://www.bps.go.id/> [1 March 2012].
- R. M. Iswandi, L.O. Alwi, A. Sani, M. Ramli, L. Baco, L. Yunus, W. Widayati, *A Minapolitan Regional Development and Its Application to the Regency of Bombana, Southeast Sulawesi, Indonesia*, Proceedings of the 13th International Conference on Environment, Ecosystems and Development, Kuala Lumpur, Malaysia Apr. 2015.
- M. L. Lapar, G. Halloway and S. Ehui, Policy Options Promoting Market Participation Among Smallholder Livestock Producers: a Case Study From the Phillipines, *Food Policy Journal*, 2003, Vol. 28, pp. 187-211.
- S. Mariam, Nutritive Value Of Three Potential Complementary Foods Based On Cereals And Legumes, *African Journal of Food and Nutritional Sciences*, 2005, Vol. 5, No. 2, pp. 1-14.
- P. Meissner and T. Wulf, The development of strategy scenarios based on prospective hindsight: An approach to strategic decision making, *Journal of Strategy and Management*, 2015, Vol. 8, Issue 2.
- S. Milutinovic and Snezana Zivkovic, Planning local sustainable development in Western Balkans, *Management of Environmental Quality: An International Journal*, 2014, Vol. 25 Issue: 1.
- D. Pearson, dan A. Bailey, Exploring The Market Potential of 'Local' in Food Systems. *Journal of Regional Food Studies*, 2012, Number 2, pp. 82-103.
- S. Reutlinger, From 'food aid' to 'aid for food': into the 21st century, *Journal Food Policy*, 1999, Vol. 24, pp. 7-15.

- M. J. Rodríguez-García, C. M. Mora, Clemente J. Navarro Yáñez, Cultural Strategies, Creativity, and Local Development in Spain, *Research in Urban Policy*, 2014, Vol. 11.
- D. Sakas, D. Vlachos, D. Nasiopoulos, Modelling strategic management for the development of competitive advantage, based on technology, *Journal of Systems and Information Technology*, 2014, Vol. 16, Issue 3.
- S. B. Seidemann, Actual and Potential Roles of Local NGOs in Agricultural Development in Sub-Saharan Africa. *Quarterly Journal of International Agriculture*, 2011, Vol. 50, No. 1, pp. 67-78.
- S. Srivastava, Economic Potential of Tourism: A Case Study of Agra, *An International Multidisciplinary Journal of Tourism*, 2011, Vol. 6, No. 2, pp. 139-158.

