



Evaluation Of Leading Sector Comparison: Economic Cooperation Opportunities Between Surabaya City And Bangkalan Regency

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Abstract. Gross Regional Domestic Product (GRDP) of Surabaya, one of the highest in East Java, and Bangkalan Regency, which has promising economic potential, this research aims to evaluate a comparative analysis of the leading sectors between Surabaya city and Bangkalan regency, and identify potential economic cooperation between these two regions. With the increasing complexity of local and global economies, an in-depth understanding of the economic sectors that are a region's strengths becomes very important. The urgency of this research lies in the need to understand the differences and similarities in the leading sectors between these two geographically close regions. By understanding the dynamics of the leading sectors, we can identify mutually beneficial economic cooperation opportunities for both parties. The targeted output of this research is a research report that includes comprehensive findings and analysis on the comparison of leading sectors between Surabaya City and Bangkalan Regency, as well as recommendations for economic cooperation that can be undertaken to strengthen less developed sectors.

Keywords: Comparative Evaluation, Development Strategies, Economic Cooperation, Leading Sectors, Local Economy.

1 Introduction

Economic growth is a key indicator in evaluating government performance in promoting a country's economic development. With the regional autonomy policy, Indonesia grants significant authority to provincial and district/city governments to govern their regions in accordance with applicable laws [1]. Regional economic development involves local governments and communities working together with the private sector to create new jobs and drive economic growth by optimizing available resources[2]. Therefore, it is important to prioritize the exploration, development, and utilization of local economic potential in order to realize sustainable economic development in the region [3].

In an effort to develop the local economy, focusing on leading sectors is a commonly applied strategy. The development of leading sectors in a region enables an increase in local economic capacity which in turn is expected to create prosperity for the local population [4]. Sectoral-based local economic development can be a driving force for regional economic growth [5]. GRDP data can be an important indicator to identify the leading sector of a region [6]. GRDP is an economic indicator that measures the development progress of a country or region with the added value of production factors, economic growth, and economic structure in one year [7].

In Surabaya City, eleven leading sectors have been identified, including the corporate services sector, transportation sector, and trade sector, which make an important contribution in strengthening Surabaya City's economy [8]. Whereas in Bangkalan Regency, leading economic sectors such as agriculture, forestry, and fisheries, construction, and government administration, defense and mandatory social security, have been identified as the basis for economic development [9]. Contributions from these sectors are key in strengthening the local economy [7]. The sectoral-based approach to local economic development is recognized for involving efforts from government and community organizations to encourage and stimulate business activities, thereby creating jobs [10]. In this context, leading sectors are identified as the center of attention in stimulating local economic growth.

The differences in economic potential between regions indicate the importance of adopting development policies that are appropriate to local characteristics [11]. Each region has different potential, so effective development policies should prioritize existing local potential [12]. This emphasizes the importance of adjusting local economic development strategies to the existing potential in each region. In this context, a comparative evaluation of the leading sectors between Surabaya City and Bangkalan Regency is important to identify potential and opportunities for economic cooperation between the two regions. By understanding the differences and similarities between the leading sectors in the two regions, strategic measures can be formulated to strengthen underdeveloped sectors and capitalize on shared potential to improve local economic welfare.

This research will compare the leading sectors between Surabaya City and Bangkalan Regency and identify significant differences and similarities in the contribution of these sectors to local economic growth. We will also evaluate the potential for economic cooperation between the two regions based on the results of the leading sector comparison. Our goal is to conduct an in-depth analysis of the leading sectors in both regions and formulate an economic cooperation strategy that strengthens the less developed sectors in each region

2 Literature Review

Regional economic development requires contributions from local governments, communities, and the private sector in creating new jobs and driving economic growth by optimizing local resources. In Indonesia, the regional autonomy policy gives significant authority to provincial and district/city governments to govern their regions in accordance with applicable laws, emphasizing the important role of local governments in driving economic development [3]. Economic growth is a key indicator

used to evaluate government performance in promoting economic development. This growth is usually measured by Gross Regional Domestic Product (GRDP), which reflects the added value of production factors, economic growth, and the economic structure of a region within one year [13]. GRDP data can help identify leading sectors that have the potential for further development, so as to increase regional economic capacity [3]. Focusing on leading sectors is a common strategy used in regional economic development. of course, the development of these sectors can increase regional economic capacity and is expected to improve the welfare of local communities. Sectoral-based regional economic development can be a driver of regional economic growth, where leading sectors are identified and developed optimally [3]. Surabaya City and Bangkalan Regency are two regions with different economic characteristics, but have the potential to complement each other. In Surabaya City, eleven leading sectors have been identified, including corporate services, transportation, and trade, which significantly contribute to the city's economic strength [8]. Meanwhile, in Bangkalan Regency, sectors such as agriculture, forestry, fisheries, construction, and government administration have been identified as sectors that form the foundation of regional economic development [9]. The differences in economic potential between regions underscore the importance of implementing development policies that are tailored to regional characteristics. Effective development policies must prioritize existing local potential and adjust strategies accordingly [3]. A comparative evaluation of the leading sectors between Surabaya City and Bangkalan Regency, using the LQ method, can help identify potential and opportunities for economic cooperation between the two regions. By focusing on the LQ method, this research can provide deeper insights into sectors that have comparative advantages and potential for further development.

3 Material and Method

This study uses a quantitative research method with a comparative descriptive approach, data is collected according to research instruments with quantitative or statistical data analysis [11]. The purpose of comparing the leading sectors between Surabaya City and Bangkalan Regency is to provide opportunities for appropriate economic cooperation between the two. Using secondary data on the Gross Regional Domestic Product (GRDP) of Surabaya City and Bangkalan Regency, based on prices prevailing for the period 2022-2023, from the Central Statistics Agency (BPS) of East Java Province. Analyzed using the Location Quotient (LQ) method as one way to determine the potential sector of a region as a determinant of base and non-base areas based on the LQ value [14]. If the LQ coefficient value > 1 indicates that the subsector is a leading subsector in the region. Meanwhile, the LQ coefficient value < 1 indicates that the subsector is not a leading subsector in the region. This LQ method is used to broadcast the relative strength of economic sectors in both regions and describe how typical a sector is in a region compared to the average to determine which sector has a comparative advantage in each region. The results can be used as a reference in formulating effective strategy recommendations to improve economic cooperation between Surabaya City and Bangkalan Regency based on leading sectors.

3.1 Design Study

The design study starts from GRDP data which is used to calculate LQ, so that it can analyze leading sectors. Then it is explained again to get the bad strategy for the leading sectors of the city of Surabaya. The following is a design studi flow diagram.

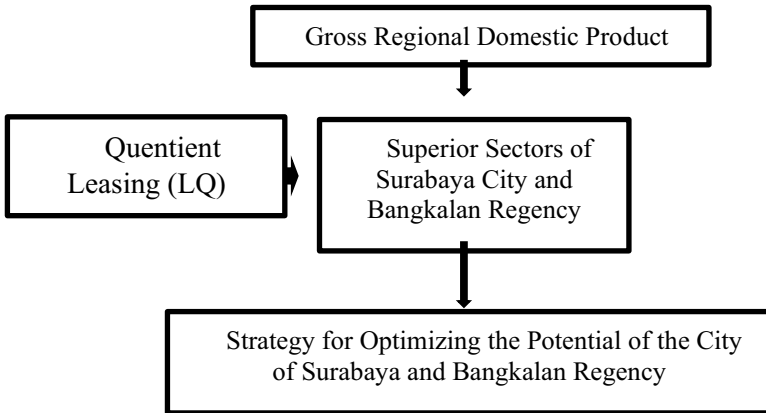


Fig. 1. Design Study

3.2 Data Analysis

The research uses secondary data from the Central Statistics Agency of East Java Province with data from the City of Surabaya and Bangkalan Regency. The data used in this study comes from GDP data for 2022-2023 which describes the economic growth rate of the region. This data is then processed using LQ to determine the superior sectors of each region. Formula data calculation: Location Quotient (LQ), can be formulated as follows:

$$LQ = y_i/y_t / Y_i/Y_t \quad (1)$$

y_i = GDP of economic sector in Surabaya City / Bangkalan Regency

y_t = total GRDP in Surabaya City / Bangkalan Regency

Y_i = GDP of the economic sector in East Java Province

Y_t = GDP of the total economy of East Java Province

According to [15]. Rules of the Location Quotient (LQ):

$LQ > 1$, the role of the sector is greater in the regions than nationally.

$LQ < 1$, the role of the sector is smaller in the regions than nationally.

$LQ = 1$, the role of the sector is the same both in the region and nationally.

4 Result

Calculation Results of LQ Analysis of Surabaya and Bangkalan in 2022-2023

Table 1. Sector Classification

Category/Sector	Surabaya	Bangkalan	Surabaya	Bangkalan
	LQ	LQ		
A. Agriculture. Forestry. and Fisheries	0,01	2,14	Non Base	Base
B. Mining and Quarrying	0,00	4,26	Non Base	Base
C. Processing Industry	0,62	0,09	Non Base	Non Base
D. Electricity and Gas Procurement	1,45	0,14	Base	Non Base
E. Water Procurement. Waste Management. Waste and Recycling	1,58	1,14	Base	Base
F. Construction	1,03	1,63	Base	Base
G. Wholesale and Retail Trade; Car and Motorcycle Repair	1,50	0,96	Base	Non Base
H. Transportation and Warehousing	1,52	0,47	Base	Non Base
I. Provision of Accommodation and Eating and Drinking	2,75	0,25	Base	Non Base
J. Information and Communication	1,12	1,11	Base	Base
K. Financial Services and Insurance	1,93	0,70	Base	Non Base
L. Real Estate	1,54	0,77	Base	Non Base
M.N. Corporate Services	3,06	0,31	Base	Non Base
O. Government Administration. Mandatory Defense and Social Security	0,59	2,98	Non Base	Base
P. Educational Services	0,91	1,57	Non Base	Base
Q. Health Services and Social Activities	1,22	0,66	Base	Non Base
R.S.T.U. Other Services	1,02	0,52	Base	Non Base

An LQ analysis demonstrates that Surabaya and Bangkalan possess distinctive advantages in disparate sectors, thereby indicating a substantial scope for collaboration between these two regions. Surabaya has a strong presence in the corporate services sector ($LQ = 3.06$), the provision of accommodation and food/beverage ($LQ = 2.75$), and wholesale and retail trade ($LQ = 1.50$), which positions the city as a significant service and distribution hub. Conversely, Bangkalan demonstrates a notable proficiency in the domains of agriculture, forestry and fisheries ($LQ = 2.14$), and mining and quarrying ($LQ = 4.26$). These capabilities afford the potential for the provision of raw materials and natural resources. Surabaya, in turn, is well-positioned to leverage these strengths by offering processing, distribution and logistics services for products originating from Bangkalan.

Such collaboration could also be extended to other sectors, including water supply, waste management, construction, and information and communication, which are base sectors in both regions. Furthermore, Surabaya's presence in the health and social services sector ($LQ = 1.22$) allows it to provide support for the enhancement of health services in Bangkalan, which remains classified as a non-base sector. Similarly, the education sector in Bangkalan has an LQ of 1.57, which positions it as a base sector. This provides an opportunity for Surabaya to provide support in terms of education technology and vocational training. This synergy will not only improve the efficiency and competitiveness of each region, but also encourage inclusive and sustainable economic growth in the region.

Furthermore, non-base sectors that are present in both regions may also be the subject of joint development through strategic collaboration. To illustrate, the manufacturing sector, which is still classified as non-base in both Surabaya ($LQ = 0.62$) and Bangkalan ($LQ = 0.09$), could be enhanced through joint investment in production technology and innovation. Given its advantage in the information and communication technology sector ($LQ = 1.12$), Surabaya could serve as a training and technology transfer centre for Bangkalan, thereby assisting in the strengthening of less developed sectors. Cooperation in infrastructure improvements, such as electricity and gas procurement, which is already a base in Surabaya ($LQ = 1.45$) but still non-base in Bangkalan ($LQ = 0.14$), could also be undertaken to ensure more equitable energy distribution and support the growth of other sectors. Through these collaborative efforts, both regions can improve the economic welfare of their communities and create a more competitive business environment.

Overall, LQ analysis highlights which sectors are strong and should be further developed, and which sectors need attention and innovation to meet local demands.

5 Discussion

This study reveals the comparison of leading sectors between Surabaya City and Bangkalan Regency, two regions with significant economic potential in East Java, using the LQ method. The main objective of this study is to evaluate the leading sectors in each region and identify opportunities for mutually beneficial economic cooperation. The results show that Surabaya City has base sectors in electricity and gas supply, water supply, waste management, waste and recycling, construction, wholesale and retail trade, repair of cars and motorcycles, provision of accommodation and eating and

drinking, information and communication, financial services and insurance, real estate, corporate services, and health services and social activities. On the other hand, Bangkalan Regency has base sectors in agriculture, forestry, and fisheries, mining and quarrying, water supply, waste management, recycled waste, construction, information and communication, government administration, defense and mandatory social security, and education services. This finding confirms the hypothesis that the two regions have different but equally important leading sectors for their local economies. The LQ analysis used in this study provides an overview of the relative strength of economic sectors in each region. By comparing the proportion of these sectors with the provincial average, we can identify sectors that have comparative advantage. The analysis shows that the base sectors in Surabaya tend to have a higher contribution compared to the provincial average, while the base sectors in Bangkalan show a significant contribution but in a different context. For example, the electricity and gas supply, wholesale and retail trade, and company services sectors in Surabaya play a vital role in driving the city's economic growth. In Bangkalan, the agriculture, forestry and fisheries, and government administration and communication information sectors play a major role in the local economy. This suggests that there is potential for the two regions to complement each other in regional economic development.

Compared to previous studies that generally focus on a single region, this research provides a more holistic comparative view. Previous studies often only identified leading sectors without looking at the potential for inter-regional cooperation. The findings of this study highlight significant similarities and differences between the two regions, opening up opportunities for more effective collaboration strategies. For example, the construction and information and communication sectors that excel in both regions suggest that there is a strong basis for cooperation and sharing of best practices. Surabaya's high performing wholesale and retail trade sector can serve as a model for Bangkalan to improve its local distribution and trade efficiency. Conversely, best practices in the agricultural sector in Bangkalan can be applied in Surabaya to strengthen this lagging sector.

This study has limitations in terms of the scope of data used. The use of the LQ method provides a static view of sectoral advantages without capturing the dynamics of change over time. Overall, this study makes an important contribution to the understanding of local economic dynamics and the potential for inter-regional cooperation, which can form the basis for more effective economic development policies. The findings are expected to provide guidance for policymakers and other stakeholders in developing strategies to strengthen the local economic sectors in both regions. By utilizing their respective comparative advantages, Surabaya and Bangkalan can work together to create a more balanced and sustainable economic growth in East Java.

6 Conclusion, Implication, Recommendation

This research provides a significant theoretical contribution, especially in the development of the economic sector in Surabaya City and Bangkalan Regency. This research also identifies the potential for economic cooperation between the two regions, therefore this research can be used as a reference for policy makers in formulating strategies to strengthen the local economic sector in Surabaya City and Bangkalan

Regency. Recommendations for further research, it is necessary to conduct a more in-depth analysis of the use of Location Quotient (LQ), especially in Surabaya City and Bangkalan Regency to identify important sectors and their growth trends.

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