

IDENTIFICATION OF BASE SECTORS IN PACITAN REGENCY BASED ON LOCATION QUOTIENT (LQ) ANALYSIS FOR THE 2014–2023 PERIOD

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Abstract

This study aims to identify the economic base sectors of Pacitan Regency during the 2014–2023 period using the Location Quotient (LQ) method. The data utilized are Gross Regional Domestic Product (GRDP) data of Pacitan Regency and East Java Province at constant prices. The analysis results indicate that eight sectors serve as the economic base of the region, namely agriculture, forestry, and fisheries; mining and quarrying; construction; information and communication; public administration; education; health; and other services. The agriculture sector recorded the highest LQ value of 2.358, indicating the dominance of natural resource–based economic activities. However, the construction and information–communication sectors showed increasing LQ values, reflecting a gradual shift toward more productive sectors. These findings are expected to serve as a reference for formulating regional development policies focused on economic diversification and strengthening potential sectors to support sustainable regional growth.

Keywords: Location Quotient, Basic Sektor, GRDP, Pacitan Regency.

1. INTRODUCTION

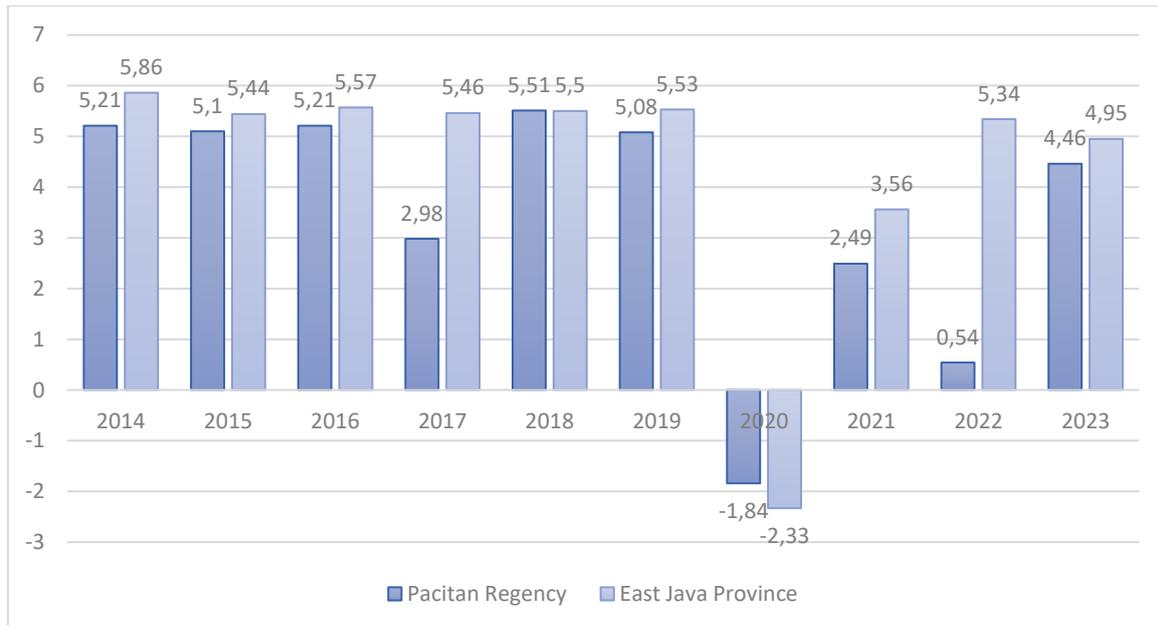
Regional economic development is a process in which local governments, together with the community, manage available resources to create employment opportunities and stimulate economic growth within the region (Suciati & Hasmarini, 2017). It is expected that local governments carry out equitable development to enhance public welfare and make optimal use of regional potential. Furthermore, regional development is aimed at promoting balanced growth across areas, both urban and rural, in accordance with the needs and potentials of each region.

Each region has the rights and authority to manage its finances in accordance with the applicable laws. This has been implemented since the establishment of economic and fiscal decentralization. A region's ability to manage its finances can be observed from its annual economic growth. According to the Central Statistics Agency (BPS), Gross Regional Domestic Product (GRDP) is one of the indicators used to assess the economic condition of a region. If the GRDP is high, it indicates that the regional economy is performing well and experiencing growth (Widodo & Marseto, 2023).

Pacitan Regency is one of the regencies in East Java. Based on its topography, with a total area of 138,987.16 hectares, approximately 85% of the region consists of

mountainous areas, hills, and steep ravines that are part of the Seribu Mountains range (Pemerintah Kabupaten Pacitan, 2025). Pacitan Regency holds significant potential in several economic sectors, yet its regional development still lags behind other regencies in East Java. This can be observed from the regency’s per capita Gross Regional Domestic Product (GRDP).

Figure 1 Economic Growth Rate of Pacitan Regency and East Java Province, 2014–2023



Source: BPS Pacitan Regency and East Java Province

Based on the growth rate of the Gross Regional Domestic Product (GRDP) at constant 2014 prices from 2014 to 2023, the economy of Pacitan Regency has shown considerable fluctuations, but overall follows the growth pattern of East Java Province. During the period from 2014 to 2019, Pacitan’s economic growth was relatively stable at around 5 percent, close to East Java’s achievement of approximately 5–6 percent. This indicates that the regional economy was performing fairly well, with the largest contributions still dominated by the agriculture, trade, and government services sectors. However, in 2017, Pacitan’s growth slowed to 2.98 percent, which was likely due to a decline in primary sector production caused by weather factors and a decrease in tourism activity.

Entering 2020, the COVID-19 pandemic had a significant impact on the regional economy. Pacitan’s economic growth contracted by -1.84 percent, in line with East Java’s economic decline of -2.33 percent. This was caused by weakened demand and investment, limited community mobility, and Pacitan Regency’s high economic dependence on sectors directly affected by the pandemic. Nevertheless, in 2021, Pacitan’s economy began to show signs of recovery, growing by 2.49 percent, although still below the provincial level.

Economic recovery continued during 2022–2023, with Pacitan Regency's economic growth increasing from 0.54 percent to 4.46 percent, approaching East Java's growth of 4.95 percent in the same period. This pattern indicates that, in the long term, Pacitan's economy is moving in a positive direction through a gradual recovery process. However, the relatively lower growth compared to the provincial average suggests that Pacitan's economic structure still relies on traditional sectors and has not yet fully transformed toward higher-productivity sectors.

The economic growth of a region can be enhanced by developing sectors that have the potential to be exported to other areas. Therefore, an analysis of leading sectors is necessary to identify which sectors hold the most potential. Developing these sectors using local resources, including labor and raw materials, can increase regional revenue and create employment opportunities.

A similar study on the analysis of leading sectors was conducted in Sumedang Regency by Masruri et al. (2021) using GRDP data from 2015–2019 with a sequential explanatory method that combined quantitative analysis (LQ, Shift-Share, and overlay) with a qualitative approach through Focus Group Discussions (FGD). The quantitative analysis identified 11 basic sectors in Sumedang Regency; however, only the construction sector and the financial and insurance services sector were classified as leading sectors due to their competitive advantage and rapid growth compared to the reference region. Interestingly, the FGD results provided additional perspectives, highlighting the agriculture, forestry, and fisheries sectors as the main potential sectors because of their resilience to the COVID-19 pandemic, their role in supporting food security, and their function as a social safety net through large-scale employment absorption.

Research related to the identification of leading sectors and commodities in Pacitan Regency has been conducted by several researchers with different focuses. Jauhari (2020) identified leading food crop commodities using a Composite Index analysis that combines the IKS, MRP, DLQ, and SD methods, as well as utilizing Geographic Information Systems (GIS) for area mapping. The results showed that cassava, corn, and rice are the leading food crop commodities in Pacitan Regency, with Bandar District serving as the main production center.

Meanwhile, Zain (2022) analyzed the regional economy at the macro level for the period 2018–2021 using the Static Location Quotient (SLQ) and Dynamic Location Quotient (DLQ) methods. The study concluded that five sectors were the most prominent drivers of economic growth: agriculture, forestry, and fisheries; construction; information and communication; government administration, defense, and mandatory social security; and education services. The findings of these two studies confirm that the agricultural sector remains the primary contributor and the most significant economic specialization for Pacitan Regency.

Based on a review of previous studies, it can be concluded that research on leading sectors in Pacitan Regency still has limitations, both in terms of data period,

sector coverage, and long-term economic dynamics. Previous studies generally used relatively short time frames and did not fully capture changes in the regional economic structure, particularly before and after the COVID-19 pandemic. Therefore, this study was designed to complement and update previous research by utilizing Pacitan Regency's GRDP at constant prices (ADHK) data for the period 2014–2023. With a longer time span, this study is expected to provide a more comprehensive overview of basic and non-basic sectors and serve as a basis for formulating more targeted regional economic development policies.

2. METHODOLOGY

The method used in this study is descriptive quantitative. The data used are secondary data obtained from the official websites of the Central Statistics Agency (BPS) of Pacitan Regency and East Java Province. The study employs Location Quotient (LQ) analysis to identify the basic and non-basic sectors present in a region. The LQ formula is as follows:

$$LQ = \frac{GRDP_{ir}/GRDP_r}{GRDP_{in}/GRDP_n}$$

Where:

$GRDP_{i,r}$ = GRDP of sector i in Pacitan Regency

$GRDP_r$ = Total GRDP of Pacitan Regency

$GRDP_{i,n}$ = GRDP of sector i in East Java Province

$GRDP_n$ = Total GRDP of East Java Province

The criteria for using LQ are as follows:

1. $LQ > 1$: This indicates that the sector can be classified as a basic sector, with the capacity to meet regional needs and export to other regions.
2. $LQ = 1$: This indicates that the sector can still be considered a basic sector, but it only meets the region's own needs.
3. $LQ < 1$: This indicates that the sector is classified as a non-basic sector, as it cannot fully meet regional needs and therefore requires imports from other regions.

3. FINDINGS AND DISCUSSION

3.1 Findings

Figure 2 LQ Calculation Results

LAPANGAN USAHA	LQ										RATA-RATA LQ	KETERANGAN
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
Pertanian, Kehutanan, dan Perikanan	2,260	2,280	2,306	2,308	2,410	2,376	2,430	2,379	2,435	2,398	2,358	BASIS
Pertambangan dan Penggalian	1,248	1,205	1,101	1,087	1,107	1,122	1,080	1,164	1,299	1,373	1,179	BASIS
Industri Pengolahan	0,233	0,230	0,233	0,234	0,234	0,233	0,221	0,230	0,231	0,240	0,232	NON BASIS
Pengadaan Listrik dan	0,110	0,116	0,119	0,123	0,132	0,138	0,141	0,137	0,136	0,128	0,128	NON BASIS
Pengadaan Air, Pengelolaan Sampah, Limbah dan Daur Ulang	0,966	0,954	0,954	0,961	0,972	0,984	0,964	0,985	0,997	0,993	0,973	NON BASIS
Konstruksi	1,566	1,586	1,593	1,614	1,634	1,680	1,621	1,624	1,634	1,656	1,621	BASIS
Perdagangan Besar dan Eceran; Reparasi Mobil dan Sepeda Motor	0,931	0,942	0,951	0,967	0,974	0,993	1,004	0,990	0,975	0,981	0,971	NON BASIS
Transportasi dan Pergudangan	0,791	0,806	0,829	0,850	0,868	0,913	0,963	1,063	1,025	0,996	0,910	NON BASIS
Penyediaan Akomodasi dan Makan Minum	0,391	0,396	0,392	0,394	0,396	0,400	0,397	0,407	0,429	0,422	0,402	NON BASIS
Informasi dan	1,158	1,173	1,177	1,183	1,185	1,195	1,167	1,174	1,175	1,156	1,174	BASIS
Jasa Keuangan dan	0,735	0,730	0,727	0,750	0,749	0,752	0,741	0,740	0,740	0,742	0,741	NON BASIS
Real Estat	0,960	0,964	0,968	0,972	0,954	0,949	0,935	0,959	0,963	0,966	0,959	NON BASIS
Jasa Perusahaan	0,358	0,362	0,366	0,368	0,365	0,368	0,365	0,366	0,365	0,365	0,365	NON BASIS
Administrasi Pemerintahan, Pertahanan dan Jaminan	1,980	1,987	2,005	2,015	2,013	2,016	1,971	1,946	1,945	2,014	1,989	BASIS
Jasa Pendidikan	1,866	1,874	1,888	1,897	1,893	1,902	1,853	1,875	1,862	1,872	1,878	BASIS
Jasa Kesehatan dan Kegiatan Sosial	1,562	1,509	1,501	1,507	1,497	1,499	1,509	1,525	1,542	1,576	1,523	BASIS
Jasa lainnya	1,942	1,942	1,945	1,954	2,018	2,038	1,986	1,986	1,973	1,978	1,976	BASIS

Source: Data processed by the researcher, 2025.

Based on the results of the Location Quotient (LQ) calculation for seventeen economic sectors during the 2014–2023 period, it was found that eight sectors are classified as basic sectors and nine sectors as non-basic sectors in the economic structure of Pacitan Regency. This condition indicates that the regional economy is still dominated by traditional sectors with agrarian characteristics, as well as relatively stable public service sectors. The basic sectors with LQ values greater than one include agriculture, forestry, and fisheries; mining and quarrying; construction; information and communication; government administration, defense, and mandatory social security; education services; health services and social activities; and other services.

The agriculture, forestry, and fisheries sector records the highest LQ value, with an average of 2.358, and consistently remains above two throughout the observation period. This confirms that Pacitan Regency's economic activities are still highly dependent on the primary sector, which plays a crucial role in employment absorption, maintaining local economic stability, and serving as the main driver of agricultural and fisheries trade. The mining and quarrying sector is also classified as a basic sector, with an average LQ value of 1.179, indicating that the extraction of mineral resources such as limestone and sand continues to contribute to the regional economy, particularly in rural areas. Meanwhile, the construction sector shows an average LQ value of 1.621, reflecting high levels of infrastructure development carried out by both

the government and the private sector, especially in the post–COVID-19 period as part of regional economic recovery efforts.

In addition, the information and communication sector, with an average LQ value of 1.378, indicates the development of digital transformation in Pacitan Regency, although its scale remains smaller compared to urban areas. The government administration, defense, and mandatory social security sector, with an average LQ value of 1.989, along with the education services sector, which averages 1.878, are two public service sectors that make substantial contributions to the regional economy through government expenditure, public service provision, and formal educational activities. The health services and social activities sector, with an average LQ value of 1.523, also demonstrates a significant increase in its role, particularly since the pandemic, as demand for health services and social activities rose sharply. Meanwhile, the other services sector, with an average LQ value of 1.976, underscores the important role of community-based social activities in Pacitan Regency.

On the other hand, the remaining nine sectors are classified as non-basic sectors because their LQ values are below one. These sectors include manufacturing; electricity and gas supply; wholesale and retail trade; transportation and warehousing; accommodation and food service activities; as well as financial and insurance services. The relatively low LQ values indicate that these sectors primarily serve local demand and have not yet developed a comparative advantage at the regional level.

Overall, the results of the LQ analysis indicate that the economic structure of Pacitan Regency over the past ten years has remained agrarian in nature and oriented toward public service sectors. The dominance of agriculture as well as government administration and education services suggests that the transformation toward a more modern economic structure has progressed relatively slowly. Nevertheless, the increasing LQ values in the construction, information and communication, and health services sectors indicate potential shifts toward a more diversified and productive economic structure. This finding provides an important basis for formulating regional economic development policies that are oriented toward the sustainable strengthening of leading sectors.

3.2 Discussion

3.1.1 Overview of the Economic Structure of Pacitan Regency

Based on the results of the Location Quotient (LQ) analysis of seventeen economic sectors over the 2014–2023 period, it is found that eight sectors are classified as basic sectors and nine sectors as non-basic sectors in the economic structure of Pacitan Regency. These results indicate that the regional economy is still dominated by natural resource–based sectors and public service activities, with a relatively limited level of diversification. The basic sectors include agriculture, forestry, and fisheries; mining and quarrying; construction; information and communication; government services; education; health and social activities; and other services. Among these sectors, agriculture holds a dominant position with an average LQ value

of 2.358, indicating that it serves as the backbone of Pacitan Regency's economy. The dominance of this primary sector suggests that economic activities remain highly dependent on the utilization of natural resources, particularly in rural and coastal areas.

3.1.2 Analysis Based on Regional Economic Theory

From the perspective of regional economic development theory, the economic growth of a region is strongly influenced by its ability to manage local potential and generate productive economic activities. In the context of Pacitan Regency, the results of the LQ analysis indicate that the regional economic structure is still in the early stage of transformation, where the dominance of the primary sector has begun to shift toward secondary and tertiary sectors. This finding is consistent with economic base theory, which states that basic sectors act as the main drivers of regional growth by generating income inflows from outside the region and stimulating the growth of non-basic sectors through the multiplier effect.

The construction, information and communication, as well as government and education services sectors are classified as basic sectors due to their substantial contributions to the regional GRDP. The development of the construction sector has been primarily driven by increased infrastructure development activities over the past ten years, such as the South Coast Cross Road (Jalur Lintas Selatan/JLS) project, the construction of public facilities, and the rehabilitation of village roads. Meanwhile, the information and communication sector has shown significant growth as a result of the expansion of internet networks and the digitalization of community economic activities. These two sectors reflect the initial formation of a more modern economic development pattern that is increasingly oriented toward the service sector.

3.1.3 Dynamics of Change and Intersectoral Linkages

Temporally, the LQ values of the agriculture, forestry, and fisheries sector remained relatively stable above two throughout the 2014–2023 period. This indicates that Pacitan Regency's economic dependence on the primary sector remains strong and has not yet experienced significant diversification. In contrast, the construction and information and communication sectors show increasing LQ values, particularly after 2019, indicating growth in non-agricultural productive economic activities.

The interconnection between sectors is also important in understanding the role of basic sectors in the regional economy. Growth in the agriculture sector stimulates activity in trade, accommodation, and transportation sectors through increased demand for processed products and nature-based tourism. Meanwhile, the development of the construction sector also drives growth in the building materials industry and expands employment in the informal sector. This phenomenon reinforces the view that the development of basic sectors can generate a multiplier effect on non-basic sectors in the surrounding areas.

3.1.4 Social and Geographical Conditions and Development Challenges

The economic structure of Pacitan Regency cannot be separated from its geographical and social conditions. Geographically, Pacitan is dominated by limestone hills and karst areas, with a landscape that varies between mountains and a southern coastline of approximately 70 kilometers. This topography limits agricultural land and makes it largely dependent on seasonal rainfall. Most of the population still works in the agriculture, forestry, and fisheries sectors, which in 2023 absorbed more than 33% of the workforce in Pacitan Regency. This explains why these sectors are classified as basic sectors with the highest LQ values, while also highlighting the region's high dependence on the primary sector.

In addition, capture fisheries in the southern waters of Pacitan Regency also hold significant potential, particularly for tuna, with an estimated annual production of around 5,000 tons. This potential serves as one of the main supports for the coastal economy, especially in Prigi, Tulakan, and Donorojo Districts (Dinas Kelautan dan Perikanan Provinsi Jawa Timur, 2019). Local fishing activities not only contribute to the income of coastal households but also support the supply chain of trade and seafood processing industries at the local level. However, limitations in fishing port infrastructure and storage facilities for catches remain obstacles to fully optimizing the potential of this sector.

Although Pacitan has significant natural potential, its geographical conditions also present several development challenges. Limited interregional transportation access is a major obstacle, as much of Pacitan is located in remote mountainous areas. Before the completion of the South Coast Cross Road (Jalur Lintas Selatan/JLS) project in 2020, Pacitan's connectivity with other regions in East Java and Central Java was relatively low. This resulted in slow distribution of goods and services and high logistics costs. However, following the operation of the JLS, economic connectivity has improved, particularly for the trade, tourism, and logistics sectors.

In addition to physical factors, social conditions also influence the direction of regional development. Pacitan is known for its relatively high level of educational participation, as reflected in the increase of the expected years of schooling from 13.6 years in 2014 to 14.5 years in 2023 (BPS Kabupaten Pacitan, 2023). The education sector serves as one of the main pillars of the economy, with an LQ value of 1.878. This is reinforced by the presence of formal educational institutions, such as Unggulan State Senior High School and STKIP PGRI Pacitan, which contribute to improving human capital quality. Meanwhile, the health sector, with an LQ of 1.523, also demonstrates its significant role, particularly since the COVID-19 pandemic, when the local government strengthened primary healthcare services and created new employment opportunities in medical facilities.

Nevertheless, several socio-economic challenges remain. In 2023, the poverty rate in Pacitan Regency was still 13.01%, higher than the East Java provincial average

of 10.4%. Income disparities between regions are also quite pronounced; the southern areas, which are based on fisheries and tourism, are developing faster compared to the northern areas dominated by subsistence agriculture. In addition, low industrial investment and limited non-agricultural employment opportunities have led some of the working-age population to seek work outside the region, resulting in seasonal urban migration.

This condition indicates that economic development in Pacitan still faces a dualism between abundant natural resources and the limited economic capacity of the population. Therefore, the main challenge for the local government is to promote inclusive economic transformation through improving human capital quality, strengthening interregional connectivity infrastructure, and developing local potential-based economic activities such as tourism, fisheries, and the creative economy. With these strategies, it is expected that regional disparities can be reduced and the regional economy can become more resilient and sustainable.

3.1.5 Implications for Regional Development Policy

The results of this analysis provide important implications for the direction of economic development policy in Pacitan Regency. The local government needs to balance the development of established leading sectors with the creation of new potential sectors. Value addition in the agriculture sector can be achieved through downstream processing and product diversification, while non-basic sectors such as manufacturing, trade, and tourism should be facilitated to grow and become competitive. The development of nature- and culture-based tourism, such as Klayar Beach, Watukarung, and Gong Cave, can serve as a new source of economic growth that directly involves local communities.

In addition, the local government needs to strengthen infrastructure connectivity, expand digital networks, and increase investment in education and vocational training to enhance labor productivity. These policies align with the development direction outlined in the Pacitan Regency Medium-Term Development Plan (RPJMD) 2021–2026, which emphasizes the strengthening of the agriculture sector, improvement of regional infrastructure, and development of a creative economy based on local potential. With these strategies, it is expected that the economic transformation of Pacitan Regency can proceed more rapidly, resulting in inclusive, resilient, and sustainable growth.

4. CONCLUSION

Based on the results of the Location Quotient (LQ) analysis of Pacitan Regency's economy for the period 2019–2023, eight basic sectors were identified: (1) agriculture, forestry, and fisheries; (2) mining and quarrying; (3) construction; (4) information and communication; (5) government administration, defense, and mandatory social security; (6) education services; (7) health services and social activities; and (8) other

services. These sectors have a comparative advantage as they can meet regional needs while also having the potential to be exported outside the region. Meanwhile, the remaining nine sectors are classified as non-basic sectors because they do not yet meet the criteria.

The study's results confirm that the primary sector still dominates, but there are indications of a gradual economic transformation toward higher-productivity sectors such as construction and information and communication. The increase in LQ values for these two sectors reflects the emergence of economic diversification, primarily driven by infrastructure development and expanded digital access. Meanwhile, public service sectors such as education and health contribute to improving human capital quality, which serves as a foundation for sustainable development.

Nevertheless, this study has limitations as it only uses the static Location Quotient method, which emphasizes relative comparison with the provincial level. Therefore, future research is recommended to combine LQ analysis with other approaches, such as Shift-Share or Klassen Typology, so that the results can provide a more comprehensive overview of regional economic dynamics.

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