



## The Role of Leading Sectors in Labor Absorption in North Lampung Regency

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### ABSTRACT

This study aims to identify the leading economic sectors in North Lampung Regency and analyze how much their ability to absorb labor. The issue of employment is an important issue in regional economic development, where the high unemployment rate is a challenge that must be addressed immediately. For this reason, strengthening the leading sector is a key strategy in creating jobs and improving people's welfare. This research uses a quantitative descriptive approach with secondary data obtained from the official publication of the Central Statistics Agency (BPS) for the 2019-2024 period. The analysis methods used include *Location Quotient (LQ)*, *Dynamic Location Quotient (DLQ)*, *Shift Share*, *Klassen Typology*, and *Labor Ratio (RTK)*. The results of the analysis show that there are six leading sectors in North Lampung Regency. However, not all leading sectors have high labor absorption. The Trade Sector is recorded as a sector with a more optimal labor absorption ratio than other leading sectors, even though the Trade Sector is not a leading sector.

## **INTRODUCTION**

Economic growth is a sign of the economic development process carried out both at the national and regional levels. To encourage economic effectiveness and efficiency in development, efforts on sectors that can have a significant multiplier effect on other sectors and it is important to focus development the economy as a whole (Noisirifan, 2017). A region can improve economic development by developing sectors that are the mainstay / excellence of the region. The leading sector is the economic sector that makes the largest contribution to GRDP (Gross Regional Domestic Product) and has a positive effect if it is developed with other leading sectors or the regional economy in general (Sayuti & Safitri, 2020).

The economic development of a country can be seen from several economic indicators, one of which is the unemployment rate, through the unemployment rate we can see the level of community welfare (Wahed, 2022). Developing countries generally face various problems ranging from unemployment problems to other sectors, including labor problems, as well as high unemployment which is included in economic problems and social problems. Unemployment is a very complex problem because it affects and is affected by many factors that interact with each other following a pattern that is not always easy to understand. If unemployment is not resolved immediately, it can lead to economic disparities in society. (Andrian et al., 2023).

Along with this problem, Lampung Province is one of the regions that has great economic opportunities because of its strategic location as the main gate to Sumatra Island and the main trade route between Sumatra Island and Java Island. The economic condition of Lampung Province during the period 2019-2023 continued to experience positive growth even though it tended to show a slowdown (BPS Lampung Utara, 2024). North Lampung's economic growth during 2019-2023 shows a slowdown in economic growth considering that the growth rate has not reached the pre-Covid pandemic growth rate of 5%.

Bandar Lampung City recorded the highest TPT at 7.44%, followed by North Lampung Regency at 5.85%. This shows that both regions still have difficulties in providing sufficient and equitable employment opportunities compared to other regions in the province. The development of the Open Unemployment Rate (TPT) in North Lampung Regency during the 2019-2024 period, which showed a fluctuating pattern, reflected the dynamics of the employment situation in the area. Indications of economic recovery and increased labor absorption can be seen from the decline in the TPT to 5.73% in 2023, after previously experiencing a significant increase from 2020 to 2022 due to the negative impact of the Covid-19 pandemic. However, in 2024, the TPT rate rose again to 5.85%. This shows that there are challenges in maintaining labor stability in the region.

The economic structure of North Lampung Regency is supported by three main sectors including Agriculture, Forestry, and Fisheries; Processing Industry; and Wholesale and Retail Trade, Car and Motorcycle Repair. The economy of North Lampung Regency is still highly dependent on the primary sector. Although from year to year, the size of the primary sector's contribution has mostly decreased. The slowing growth in the agriculture, forestry and fisheries

business category was caused by the El Nino drought, which caused a decline in production of leading commodities. This slowing growth certainly had an impact on the decline in the contribution of this sector to North Lampung's GRDP (BPS Lampung Utara, 2024). In 2023, there was a decrease in contribution of 1.27% from 33.90% in 2022 to 32.63% in 2023. In addition to the agricultural sector, the processing industry category also experienced a growth slowdown of 13.22% in 2023.

According to Tumangkeng (2018), the development of leading sectors can help economic development in a region. Each region has economic potential that can be utilized effectively and efficiently (Munifah & Daryono Soebagyo, 2019). In achieving this, it is necessary to know the superior and potential sectors to strengthen and encourage economic growth for North Lampung Regency. The leading sector has an important role in absorbing labor, especially in areas that rely on certain sectors to support their economy (Fakhira, 2023).

Based on the background description of the problem above, a study is needed to identify economic sectors in North Lampung Regency and assess whether the leading sectors have functioned optimally and have a significant impact on employment.

## **LITERATURE REVIEW**

### ***Economic Development***

Economic development is a process of increasing total income and per capita income by taking into account population growth and accompanied by fundamental changes in the economic structure of a country and income equality for the population of a country (Rapanna & Fajriah, 2018). Economic development goals can be achieved by paying attention to the need for the main policy that must be carried out, namely making maximum efforts so that the prioritization of regional development adjusts the potential of the region (Wahed & Sishadiyati, 2023). This is due to the variety of economic or development potential that exists in each region so that it is necessary to identify the determination of the most dominating economic sector among other sectors (Hidayat & Darwin, 2017).

### ***Economic Growth***

Economic growth is the process of developing regional economic activity that leads to an increase in the amount of goods or services produced by the community. If economic growth depends only on certain groups, only certain groups will enjoy economic growth so that welfare increases but is less affected (Wahed, 2018). To predict the uneven quality of economic growth, it is important to identify the leading sector first. Because the leading sector is one of the effective sectors in developing other sectors (Soleh & Maryoni, 2017). In Adam Smith's classical theory, any increase in economic growth is expected to absorb labor, thereby reducing the number of unemployed (Anggoro, 2015).

### ***Leading Sector***

The economic sector is said to be superior if it can meet regional needs and demand from other regions or export. The leading sector is a sector that has comparative advantages and competitive advantages that can spur regional economic growth (Mahaesa & Huda, 2021). The leading sector can be used as one of the drivers in accelerating economic growth in each region (Maharani, 2022). The criteria for leading sectors vary widely. This is based on how big the role of the sector is in the regional economy, including: first, the leading sector has a high growth rate; second, the sector has a relatively large labor absorption rate; third, the sector has high inter sectoral linkages both forward and backward (Sambodo in Usva, 2006).

### ***Labor Absorption***

According to (Todaro, 2003), labor absorption is the acceptance of labor actors to perform tasks as they should or the existence of a situation that describes the availability of workers or jobs to be filled by job seekers. Labor absorption is the number or number of people working in various sectors. Labor has worked and is absorbed in the economic sector where it will have an impact on producing goods and services in large quantities (Lube et al., 2021).

### ***The Role of Leading Sectors in Labor Absorption***

Economic sectors that have high labor absorption can be categorized as leading sectors. However, not all economic sectors classified as leading sectors have a higher level of labor absorption than non leading economic sectors (Fakhira, 2023). The leading sector whose activities sell and supply goods from outside the region requires labor to meet the supply of goods to be exported outside the region. Thus illustrates the role of the leading sector in labor absorption (Indriaty, 2013). By knowing the sectors that can be the main drivers (leading sectors) as well as other sectors, the local government can direct job seekers to be more precise in labor absorption according to sectors that require labor so that proper labor absorption occurs (Lapong et al., 2018).

## **METHODOLOGY**

This research applies a descriptive approach using quantitative research methods. The data collection method uses the literature study method. The type of data applied is secondary data. The data taken in this study were obtained from the publication of the Central Bureau of Statistics. The data includes data on the GRDP of North Lampung Regency, GRDP of Lampung Province and also data on the total employment of North Lampung Regency for the 2019-2024 period. Data analysis in this study used the Location Quotient (LQ), Dynamic Location Quotient (DLQ), Sult Share, Klassen Typology and Labor Ratio (RTK) methods.

## **RESEARCH RESULT**

### ***Location Quotient (LQ) Analysis***

*Location Quotien* is a tool used to assess the sectoral performance of GRDP to see the basic and non-basic sectors. The LQ technique cannot yet provide a

final conclusion of the sectors identified as strategic sectors. However, for the first stage, it is enough to provide an overview of the ability of an area in the identified sector (BPS Purbalingga Regency, 2024). Below are the results of the LQ calculation in North Lampung Regency.

Table 1. LQ Calculation Results of North Lampung Regency 2019-2024

Sector	2019	2020	2021	2022	2023	2024	Average	Desc.
Agriculture, Forestry and Fisheries	1,27	1,26	1,25	1,26	1,26	1,22	1,26	B
Mining and Quarrying	0,59	0,62	0,65	0,68	0,69	0,68	0,65	NB
Processing Industry	0,73	0,73	0,72	0,76	0,75	0,76	0,74	NB
Electricity and Gas Procurement	0,46	0,49	0,55	0,52	0,55	0,63	0,53	NB
Water Supply, Waste Management, Waste and Recycling	0,57	0,56	0,53	0,54	0,54	0,54	0,55	NB
Construction	0,86	0,85	0,85	0,84	0,84	0,91	0,86	NB
Wholesale and Retail Trade, Car and Motorcycle Repair	1,04	1,04	1,06	0,98	0,96	0,95	1,01	B
Transportation and Warehousing	1,08	1,08	1,10	1,01	1,02	1,12	1,07	B
Provision of Accommodation and Drinking Food	0,82	0,81	0,82	0,75	0,74	0,75	0,78	NB
Information and Communication	1,11	1,10	1,11	1,19	1,21	1,23	1,16	B
Financial and Insurance Services	0,88	0,88	0,87	0,90	0,91	0,90	0,89	NB
Real Estate	0,91	0,90	0,90	0,88	0,89	0,88	0,89	NB
Company Services	0,73	0,73	0,73	0,65	0,64	0,64	0,69	NB
Government Administration	1,06	1,06	1,06	1,08	1,13	1,16	1,09	B
Education Services	1,28	1,26	1,26	1,28	1,32	1,34	1,29	B

Health Services and Social Activities	0,99	0,95	0,94	0,95	0,97	0,98	0,96	NB
Other Services	0,83	0,83	0,83	0,82	0,82	0,81	0,82	NB

Based on the results of the *Location Quotient* (LQ) analysis, there are seventeen economic sectors in North Lampung Regency in 2019-2024, it is known that the average LQ is that six of the seventeen sectors are basic sectors, namely the Agriculture, Forestry and Fisheries sector; the Wholesale and Retail Trade sector, Car and Motorcycle Repair; the Transportation and Warehousing sector; the Information and Communication sector; the Government Administration sector; and the Education Services sector. These six sectors have an average LQ value  $> 1$ , which means that the level of specialization of these economic sectors at the North Lampung Regency level is greater than the same sector in the Lampung Province level economy.

#### ***Dynamic Location Quotient (DLQ) Analysis***

*Dynamic Location Quotient* (DLQ) is the development of LQ by accommodating the factor of economic sector output growth rate over time (Nugroho, 2010). The results of DLQ analysis show the potential of a sector to become an economic base in the future (BPS Purbalingga Regency, 2024). Below are the results of the DLQ calculation in North Lampung Regency.

Table 2. Results of DLQ Calculation for North Lampung Regency 2019-2024

Sector	Average DLQ	Description
Agriculture, Forestry, and Fisheries	272440,01	POTENTIAL
Mining and Quarrying	0,000811	NOT POTENTIAL
Processing Industry	76,93	POTENTIAL
Electricity and Gas Procurement	164,95	POTENTIAL
Water Supply, Waste Management, Waste and Recycling	4,13	POTENTIAL
Construction	25,07	POTENTIAL
Wholesale and Retail Trade, Car and Motorcycle Repair	4,40	POTENTIAL
Transportation and Warehousing	5,09	POTENTIAL
Accommodation and Drinking Food Provision	4,26	POTENTIAL

Information and Communication	173,94	POTENTIAL
Financial and Insurance Services	0,97	NOT POTENTIAL
Real Estate	4,56	POTENTIAL
Corporate Services	17,43	POTENTIAL
Government Administration	112,67	POTENTIAL
Education Services	3,04	POTENTIAL
Health and Social Services	2,85	POTENTIAL
Other Services	1,09	POTENTIAL

Based on the results of the *Dynamic Location Quotient* (DLQ) analysis, there are fifteen economic sectors in North Lampung Regency that are classified as potential base sectors. The fifteen sectors have an average value of  $DLQ > 1$ , which means that the observed sector in the area has the potential to be developed or is prospective. Two of the seventeen sectors are not potential base sectors, including the Mining sector and the Financial Services sector. These two sectors have an average value of  $DLQ < 1$  which means that the observed sector is not prospective in becoming the economic base sector in a particular location or region.

### ***Shift Share Propotional Shift Analysis***

*Proportional shift* analysis is conducted by comparing a sector as part of the regional economy with the sector as part of the national economy. This component shows whether economic activity in the sector is growing faster or slower than the growth of economic activity nationally (Basuki M. & Febri, 2017). Below are the results of the calculation of the Shift Share Proportional Shift of North Lampung Regency.

Table 3. Results of Shift Share Propotional Shift (PS) Calculation of North Lampung Regency 2019-2024

<b>Sector</b>	<b>Average PS</b>	<b>Description</b>
Agriculture, Forestry, and Fisheries	-162,38	relatively slow growing sector at provincial level
Mining and Quarrying	-22,05	relatively slow-growing sector at the provincial level
Manufacturing Industry	-19,00	relatively slow growing sector at provincial level

Electricity and Gas Procurement	-0,63	relatively slow growing sector at provincial level
Water Procurement, Waste Management, Waste and Recycling	0,01	fast-growing sector at the provincial level
Construction	10,71	fast-growing sector at provincial level
Wholesale and Retail Trade, Car and Motorcycle Repair	86,74	fast-growing sector at the provincial level
Transportation and Warehousing	59,05	fast growing sector at provincial level
Provision of Accommodation and Drinking Food	3,99	fast-growing sector at the provincial level
Information and Communication	32,88	fast growing sector at provincial level
Financial Services and Insurance	-2,79	relatively slow growing sector at the provincial level
Real Estate	-3,49	relatively slow growing sector at provincial level
Corporate Services	0,59	fast-growing sector at the provincial level
Government Administration	-0,37	relatively slow growing sector at provincial level
Education Services	-4,38	relatively slow growing sector at provincial level
Health and Social Services	3,67	fast-growing sector at the provincial level
Other Services	8,42	fast-growing sector at provincial level

Based on the findings from the application of the *Proportional Shift* (PS) method, nine economic sectors in North Lampung Regency were identified that experienced higher growth rates than similar sectors at the provincial level. Among these sectors, the Wholesale and Retail Trade and Motor Vehicle Repair sector stands out with an average PS score of 86.74. All sectors included in this group show positive PS values ( $PS > 0$ ), indicating that the growth acceleration is not solely attributable to internal regional forces, but is also in line with national economic development trends. This finding underscores the importance

of these sectors as driving forces in supporting the acceleration of regional economic development. Therefore, sectors with positive PS performance should be the main focus in formulating development strategies that are oriented towards sustainable growth and regional competitiveness.

**Shift Share Differential Shift Analysis**

*Differential Shift* analysis is used to help determine the extent of a region's sectoral competitiveness compared to the benchmark economy (Wahed & Ayu, 2022). If the differential shift of a sector is positive, then the sector is more competitive than the same sector in the reference economy. So it is also called the effect of competitive advantage (Amalia F. et al., 2024). Below are the results of the calculation of *Shift Share Differential Shift* of North Lampung Regency.

Table 4. Shift Share Calculation Results Differential Shift (DS) North Lampung Regency 2019-2024

Sector	Average DS	Description
Agriculture, Forestry, and Fisheries	-65,17	sector has slower growth
Mining and Quarrying	13,10	sector has faster growth
Processing Industry	9,85	sector has faster growth
Electricity and Gas Procurement	0,86	sector has faster growth
Water Supply, Waste Management, Waste and Recycling	-0,15	sector has slower growth
Construction	16,42	sector has faster growth
Wholesale and Retail Trade, Car and Motorcycle Repair	-54,64	sector has slower growth
Transportation and Warehousing	9,24	sector has faster growth
Accommodation and Food Supply	-4,04	sector has slower growth
Information and Communication	20,40	sector has faster growth
Financial Services and Insurance	0,09	sector has faster growth
Real Estate	-3,91	sector has slower growth
Corporate Services	-0,56	sector had slower growth
Government Administration	8,69	sector has faster growth
Education Services	4,19	sector has faster growth

Health Services and Social Activities	-1,02	sector has slower growth
Other Services	-1,20	sector has slower growth

Based on the results of the *Differential Shift* (DS) calculation, there are nine economic sectors in North Lampung Regency that are classified as having faster growth than the same sector in other districts/cities. These sectors not only grew nationally and sectorally, but also grew significantly in North Lampung compared to other regions. The sector with the highest DS value is the Information and Communication sector with an average DS value of 20.40. The nine sectors have an average DS value  $> 0$  (positive value) which means that the sector has a good local advantage.

### *Klassen Typology Analysis*

The Klassen Typology analysis tool is used to determine the pattern and structure of economic growth in each region. This analysis includes three main indicators, namely the Location Quotient (LQ) value, regional sectoral growth (DS), and provincial sectoral growth (PS), which are then used to determine the typology classification and potential level of each sector (Asyafina, 2022). The determination of the leading sector classification in North Lampung Regency was carried out using Klassen's Typology analysis. Below are the results of the Klassen Typology calculation for North Lampung Regency.

Table 5. Calculation Results of Klassen Typology of North Lampung Regency 2019-2024

Sector	Average LQ	Average DS	Average PS	Typology	Potential Level
Agriculture, Forestry, and Fisheries	1,26	-65,17	-162,38	IV	MORE THAN ENOUGH
Mining and Quarrying	0,65	13,10	-22,05	VII	LESS
Processing Industry	0,74	9,85	-19,00	VII	LESS
Electricity and Gas Procurement	0,53	0,86	-0,63	VII	LESS
Water Supply, Waste Management, Waste and Recycling	0,55	-0,15	0,01	VI	ALMOST THAN ENOUGH
Construction	0,86	16,42	10,71	V	ENOUGH
Wholesale and Retail Trade, Car and Motorcycle Repair	1,01	-54,64	86,74	II	EXCELLENT

Transportation and Warehousing	1,07	9,24	59,05	I	IMMEDIATE
Provision of Accommodation and Drinking Food	0,78	-4,04	3,99	VI	ALMOST THAN ENOUGH
Information and Communication	1,16	20,40	32,88	I	SPECIAL
Financial and Insurance Services	0,89	0,09	-2,79	VII	LESS
Real Estate	0,89	-3,91	-3,49	VIII	LESS
Company Services	0,69	-0,56	0,59	VI	ALMOST FROM ENOUGH
Government Administration	1,09	8,69	-0,37	III	GOOD
Education Services	1,29	4,19	-4,38	III	GOOD
Health Services and Social Activities	0,96	-1,02	3,67	VI	ALMOST ENOUGH
Other Services	0,82	-1,20	8,42	VI	ALMOST THAN ENOUGH

Based on the results of the calculation of the Klassen Typology of North Lampung Regency in 2019-2024, there are two sectors that are classified in the "special" category, namely the Transportation and Warehousing and Information and Communication sectors. These two sectors are classified into Typology I, which means that they are leading sectors that have a large contribution to the regional economy and experience higher growth than the provincial average.

#### ***Labor Ratio Analysis (RTK)***

Labor Ratio Analysis (RTK) in this study is used to determine the absorption of labor in the leading sectors in North Lampung Regency by calculating between the contribution of sector GRDP and the contribution of the number of sector workers.

Table 6. Calculation Results of Labor Ratio (RTK) of North Lampung Regency 2019-2024

Sector	2019	2020	2021	2022	2023	2024	Average	Desc.
Agriculture, Forestry and Fisheries	0,82	0,71	0,66	0,62	0,62	0,66	0,68	>10%
Processing Industry	1,08	1,51	1,38	1,22	1,40	1,53	1,35	>10%

Wholesale and Retail Trade, Car and Motorcycle Repair	2,75	2,98	3,46	4,07	3,73	3,28	3,38	>10%
Transportation and Warehousing	1,65	1,46	1,40	1,33	1,51	1,58	1,49	>10%
Provision of Accommodation and Drinking Food	0,32	0,33	0,37	0,41	0,33	0,29	0,34	>10%
Information and Communication	1,76	2,17	1,86	1,92	2,50	1,73	1,99	>10%
Financial and Insurance Services	0,44	0,53	0,57	0,57	0,49	0,42	0,51	>10%
Real Estate	0,57	0,64	0,72	0,99	0,95	0,74	0,77	>10%
Company Services	0,03	0,03	0,03	0,04	0,03	0,03	0,03	<10%
Government Administration	0,89	1,00	1,22	1,23	1,04	0,81	1,03	>10%
Education Services	0,86	0,94	0,94	1,11	0,99	0,86	0,95	>10%
Health Services and Social Activities	0,22	0,27	0,31	0,35	0,30	0,24	0,28	>10%
Other Services	0,21	0,23	0,22	0,29	0,27	0,24	0,24	>10%

The calculation results for the period 2019 to 2024 indicate that a number of sectors in North Lampung Regency have a significant role in absorbing labor. One of the most prominent sectors is Wholesale and Retail Trade and Motor Vehicle Repair, which recorded the highest employment ratio of 3.38. This value reflects the high ability of this sector to provide employment for the local population.

It can be seen in the Klassen Typology calculation that there are 2 sectors classified as leading sectors, namely the Transportation and Warehousing and Information and Communication Sectors. These two sectors show excellence based on positive growth indicators and sectoral contributions. However, the condition of the leading sector is not fully optimal in encouraging employment. This is reflected in the labor ratio value which is still below the Wholesale and Retail Trade; Car and Motorcycle Repair sector, which actually has a higher labor absorption capacity.

## DISCUSSION

In the Klassen Typology calculation, there are 2 sectors classified as leading sectors, namely the Transportation and Warehousing and Information and Communication Sectors. The condition of the leading sector is not fully optimal in encouraging labor absorption. This can be caused by the relatively low level of labor education with the majority of graduates only at the elementary

level, so that most are only able to fill job positions at the operational level (Wahed, 2022). The limited number of skilled workers and the lack of competence possessed by low-educated workers and those with higher education is one of the obstacles in increasing the maximum capacity of employment in this sector.

There is a misalignment between the provision of business opportunities in the two leading sectors and the availability of labor in North Lampung Regency. Although these sectors have shown good economic performance in terms of their contribution to GRDP and potential for future growth, this is not accompanied by the sector's ability to absorb local labor optimally. The main cause is the mismatch between the type of work required by the leading sectors and the level of education and skills possessed by the labor force in the region.

Most of the workforce in Lampung Utara Regency still comes from junior high school graduates and below, while the leading sectors generally demand workers with technical expertise, digital literacy, or other specialized skills. This condition causes employment opportunities in these sectors to not be maximally applied by the local population, resulting in a gap between the rate of sectoral economic growth and the improvement of employment conditions. Therefore, policies that align the development of leading sectors with the improvement of the quality of human resources are needed to create a synergistic relationship between economic growth and equitable and inclusive job creation.

### *Transportation and Warehousing Sector*

Labor absorption in the Transportation and Warehousing sector shows a downward trend at the beginning of the period (2019-2022) and experiences a recovery or increase in the last two years (2023-2024). The sector contributes part of the total available labor but is still not optimal in labor absorption as reflected in the average ratio of 1.49. Therefore, it is necessary to improve the quality of human resources and infrastructure support so that its contribution to job creation can be optimized.

The role of this sector is quite important because it supports regional connectivity, distribution of goods and services, and supports other economic activities. However, limitations in the provision of adequate transportation infrastructure and unequal access to logistics are the main obstacles in the expansion of this sector. In addition, the lack of skilled workers in transportation and logistics management also narrows the available job opportunities.

Although the transportation sector has experienced a significant increase in activity marked by the development of online transportation, increased goods delivery activities due to the growth of e-commerce, and increased public interest in travel, employment in this sector is still not optimal. This condition is due to various reasons, namely that many transportation and logistics companies are now shifting to more efficient and digital-based systems, such as automated booking, and real-time tracking of shipments. This technology reduces the need for a large conventional workforce. In the online transportation model and modern delivery services, many workers work as partners (not permanent employees). As a result, they are not officially recorded in the transportation

sector's formal workforce data. This causes employment data in this sector to appear lower than reality.

### ***Information and Communication Sector***

Information and Communication experienced an upward trend at the beginning of the period (2019-2021), then experienced a gradual decline in the last three years (2022-2024). This sector still contributes >10% of the workforce but is still not optimal in employment as reflected by the average ratio of 1.99. The declining trend in the last three years signals the need for a strengthening strategy.

This condition illustrates that access to digital communication has not been evenly distributed throughout the region, which can be an obstacle in the development of the Information and Communication sector as one of the leading sectors in North Lampung Regency. This imbalance in telecommunications infrastructure affects the carrying capacity of the sector in absorbing labor and optimally encouraging local economic growth. Therefore, improving and equitable distribution of digital network infrastructure is crucial to strengthen the role of the communication sector in regional development and job creation.

Many communication systems and networks are generally operated automatically or through remote control with a limited number of staff. For example, internet network management, satellite monitoring or customer service are now being replaced by AI and *chatbot* systems. Therefore, there is a need for a strategy to strengthen this sector through increasing the capacity of local human resources in the field of information and communication technology and accelerating the development of digital infrastructure evenly so that this sector can play a greater role in regional development and job creation in the future.

## **CONCLUSIONS AND RECOMMENDATIONS**

There are 2 leading sectors in North Lampung Regency, including the Transportation and Warehousing sector, and the Information and Communication sector. These two sectors meet the criteria as leading sectors because they have  $LQ > 1$ ,  $DS > 0$ , and  $PS > 0$ , which indicates that the sector not only has a significant contribution to the regional economy, but also experiences a more rapid increase when compared to similar sectors.

The results of the RTK analysis show that the ability of the leading sector to absorb labor in North Lampung Regency is still not fully optimal. The leading sector indicates that labor absorption has not been maximized despite having high economic potential. This condition indicates that the sector's contribution to job creation is still limited, which can be caused by a mismatch between the qualifications of the available workforce and the competency needs in the sector.

The mismatch between the characteristics of the leading sector and the educational background and skills of the workforce is a major challenge that needs to be addressed together. Thus, the active involvement of various stakeholders is necessary to encourage the provision of access to training and education programs geared towards the specific needs of the relevant sectors. Improving technical skills and digital literacy is essential to deal with changing

work patterns in leading sectors such as transportation and information-communication.

### ADVANCED RESEARCH

For future researchers, it is recommended to consider using other variables that can provide a broader picture. One alternative variable that could be added is the quality of human resources, which includes education level. Researchers can also change the focus from labor absorption to the influence of leading sectors on regional economic growth. This focus will provide an understanding of the extent to which leading sectors are able to encourage an increase in GRDP and regional development. In addition, research can also focus on analyzing the impact of leading sectors on improving community welfare, through the human development index (HDI) approach.

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