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Analysis Of The Role Of The Trade Sector And The Transportation Sector On The Gross Regional Domestic Product Of Pematangsiantar City

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Abstract

This study is to determine whether the trade sector and the transportation sector as the largest contributing sector to the GRDP of Pematangsiantar City is a basic sector in Pematangsiantar City with Location Quotient (LQ) analysis tools, analyzing sector growth and shifts with Shift Share analysis tools and sector growth classification with Klassen Typology analysis tools. The type of research used is descriptive with mixed methods. The data used are secondary and primary data. The type of data used in this research is secondary data obtained from the Central Bureau of Statistics of Pematangsiantar City, the Central Bureau of Statistics of North Sumatra Province, journals, websites, books and data obtained from the Office of Cooperatives, SMEs and Trade. Primary data through interviews from an informant, observation and documentation. The analysis in this study uses Microsoft Excel 2016 and the data used is data from 2010-2022. The research results from the Location Quotient (LQ) analysis tool show that the trade sector and the transportation sector are the basic sectors for Pematangsiantar City. The research results from the Shift Share analysis tool show that the trade sector and the transportation sector have positive growth. Meanwhile, the trade sector and the transportation sector experienced a negative net shift, which means that these two sectors are slow sectors. Then from the research results of the Klassen Typology analysis tool describes the classification of the growth of the trade sector and the transportation sector including the advanced and rapidly growing sectors.

Keywords: Trade Sector; Transportation Sector; Location Quotient (LQ); Shift Share; Klassen Typology

1. Introduction

Economic development is a process that takes into account the increase in total and per capita income of an economic sector. Economic development planning in the region is an absolute necessity because it is related to the allocation of the distribution of factors of production among regions and sectors of the economy. Factors of production will move between regions based on market mechanisms and encourage economic sectors to grow faster. Success in regional economic development can be seen from how much the Gross Regional Domestic Product grows and the smaller income inequality among the population, between regions and between sectors.

In this study, I focus on Pematangsiantar City and analyze the role of the trade sector and the transportation sector on the city's Gross Regional Domestic Product. Inclusive growth refers to growth that is equitable and provides benefits to various layers of society, while exclusive growth tends to benefit only a few people or certain sectors. Such growth is supported by existing economic sectors. The economic structure of a region can be seen from the distribution of each economic sector to the total value of GRDP at current prices.

This GRDP[1] value can be developed towards the utilization of existing resources in each region through which sectors have a major contribution in the economic growth of a region. To increase economic growth, there must be effectiveness and efficiency of economic development, so the implementation of economic development needs to be directed at sectors that are able to provide a large multiplier effect on other sectors and the economy as a whole. The economic base theory states that the rate of economic growth of the region is determined by the magnitude of the increase in exports from the region, namely the ability to not only meet the needs of the region itself but also other regions called the base sector. Only the base sector can drive regional economic growth and the non-base sector acts as a service sector or service that meets local needs and supports the base sector.

Economic development should focus on the base sector which will encourage regional economic growth, namely by increasing the production of goods and services, which are accumulated in the Gross Regional Domestic Product but also not forgetting the non-base sector which acts as a support for the base sector. Pematangsiantar City tries to maximize the potential of sectors that can increase economic growth. The economic growth rate of Pematangsiantar City is supported by the existence of economic sectors that can be used as regional potential for the development of the region. Over the past 7 years the trade and transportation sectors have been among the sectors that support the largest numbers for the GRDP of Pematangsiantar City.

Table 1. GRDP at Constant Price 2010 Pematangsiantar City by Business Field 2016-2022 (Billion Rupiah)

Field Business	GRDP at Constant Prices 2016-2022 By Business Field						
	2016	2017	2018	2019	2020	2021	2022
A. Wholesale and Retail, Repair of Automobiles and Motorcycles	2134.77	2245.83	2377.14	2572.16	2523.74	2606.61	2757.03
B. Transportation and Warehousing	587.06	625.57	658.24	710.52	706.23	707.56	729.25
GRDP	8380.77	8750.15	9170.19	9611.74	9430.04	9547.7	9878.87

Source: BPS Kota Pematangsiantar 2023

In addition, through this study it will be examined more deeply whether the trade sector, the transportation sector is the basic sector of the city of Pematangsiantar. The calculation of location quotient is used to show the comparison between the role of sectors at the regional level and the role of sectors at the top level for the region. The discussion above shows that the trade sector and the transportation sector play an important role in the development of a region. The greater the role of a sector, the greater the influence of the sector in the regional economy.

It is hoped that the development of the trade sector and the transportation sector in Pematangsiantar City can be more focused and properly planned in accordance with the actual economic situation. Based on this background, the author took the research title Analysis of the Role of the Trade Sector and the Transportation Sector on the Gross Regional Domestic Product of Pematangsiantar City.

2. Literature Review

2.1. Economic Development

According to Todaro [2], development must be understood as a multidimensional process that involves changes in structures, attitudes and institutional factors, as well as accelerated economic growth, reduction of inequality and elimination of absolute poverty Thus, the discussion of economic development centers on the increase in real national income and the specific changes that are included in the overall increase. Although the increase in output per capita itself is an important outcome, it does not look at economic welfare in the same way as social welfare and other considerations.

2.2. Economic Growth

Economic growth is the development of activities in the economy that cause goods and services produced in society to increase [3]. Regional economic growth is an increase in production activities in real terms, both prices of goods and services in a certain period. For this reason, calculating economic growth can be done by calculating the increase in GRDP value from one year to the next. Regional economic growth is the increase in overall community income that occurs in the region, namely the increase in all value added that occurs in the region.

2.3. Regional Economic Development Theory

Regional development is a sub-system of national development and is an integral part of national development. One measure of regional economic development is regional economic growth. This theory is divided into:
1. Classical Economic Theory
2. Economic Base Theory
3. Location and Agglomeration Theory
4. Central Place Theory
5. Cumulative Causation Theory
6. Growth Center Theory
7. Harrod Domar Theory

2.4. Gross Regional Domestic Product

Gross Regional Domestic Product figures are needed and need to be presented, because in addition to being used as material for analyzing development planning it is also a barometer for measuring the results of development that has been carried out. Gross Regional Domestic Product is the gross added value of all goods and services created or produced in the domestic territory of a country arising from various economic activities in a certain period regardless of whether the production factors owned by residents or non-residents.

3. Research Method

The type of research used in this research is descriptive with mixed methods. This research refers to the dependent variable, namely the Gross Regional Domestic Product in Pematangsiantar City and the non-bound or independent variable is the trade sector and the transportation sector of Pematangsiantar City. The data source of this research is primary data collection and secondary data. Primary data obtained from observations, interviews and documentation. Secondary data obtained from the central statistics agency of Pematangsiantar city and North Sumatra province, journals, websites, books and quantitative data from the cooperative, UKM and trade offices.

Data analysis methods are used to solve the problem formulation in this study. This research uses several data analysis methods, namely Location Quotient (LQ) analysis, Shift Share (SS) analysis and Klasssen Typology analysis. This analysis is used to see the sectors that are included in the basic sector category. If the LQ value > 1 indicates that sector i is a basic sector, If the LQ value < 1 indicates that sector i is a non-base sector, If the LQ value = 1 indicates that the level of specialization is equal. To obtain the LQ value, the method used is to refer to the formula proposed by Bendavid-Val in the following formula:

$$LQ = \frac{\frac{PDRBi,b}{\sum PDRBb}}{\frac{PDRBi,a}{\sum PDRBa}}$$

Description:

LQ = Location Quotient

PDRBi, b = PDRB sector i in Pematangsiantar City

$\sum$PDRBb = Total GRDP in Pematangsiantar City GRDPi, a = GRDP sector i in North Sumatra Province

$\sum$PDRBa = Total GRDP in North Sumatra Province

Shift Share analysis is an analytical tool that also compares the difference in the growth rate of various sectors at the regional level with the national region. This measurement allows us to know whether the regional economy is concentrated in sectors that are growing faster than the economy of North Sumatra Province. This component arises from this being influenced by external elements acting nationally.

$$PPij = Yij (Ri - Ra)$$

Description:

Ppij = Proportional growth component of sector i in region j

Yij = GRDP of sector i in region j in the initial year of analysis

Ri = National GRDP ratio of sector i

Ra = National GRDP ratio

If PPij < 0, it means that sector i in region j has slow growth. On the other hand, if PPij > 0 then sector i in region j is growing fast.

Klassen's typology analysis produces four sector classifications with different characteristics as follows (Sjafrizal 2008):
1. Quadrant I, Advanced and rapidly growing sectors This classification is denoted by si > s and ski > sk.
2. Quadrant I, Developed but depressed sector This classification is denoted by si < s and ski > sk.
3. Quadrant III, Potential sectors or can still grow This classification is symbolized by si > s and ski < sk.
4. Quadrant IV, relatively underdeveloped sectors This classification is denoted by si < s and ski < sk.

4. Results and Discussion

The data used in this research are primary data and secondary data obtained through interviews with informants and various sources such as data sourced from the Central Statistics Agency (BPS), namely the Central Statistics Agency of Pematangsiantar City and North Sumatra Province, and other sources related to the topic of this research. The data obtained is used for analysis using three analytical tools, namely, Location Quotient (LQ) analysis, Shift Share and Klassen Typology in two sectors, namely the wholesale and retail trade sector, repair of cars and motorbikes and the transportation and warehousing sector, obtained the following results:

Table 2. Result of Analytical Tools

Variable	Location Quotient	Shift Share	Klassen's Typology
Wholesale and Retail Trade, Repair of Cars and Motorcycles Sector	1.4622	-1.121.363.166	si > s and ski > sk
Transportation and Warehousing Sector	1.5637	-256.979.669,3	si > s and ski > sk

Source: Researcher Processed Data

Based on table 2, it can be explained that the trade sector and the transportation sector are basic sectors because the LQ value> 1. The trade sector and the transportation sector in the city of Pematangsiantar have a negative PPij indicating that the growth of the wholesale and retail trade sector, repair of cars and motorcycles in the city of Pematangsiantar is growing relatively slowly when compared to the same sector in the province of North Sumatra. based on the contribution of the trade sector and the transportation sector, Pematangsiantar city is included in quadrant one, namely the advanced and fast-growing sector with qualifications si>s and ski>sk.

5. Conclusion

The results of the Location Quotient analysis of the wholesale and retail trade sector, car and motorcycle repair are basic sectors and play a major role in the formation of GRDP of Pematangsiantar City because the sector is not only able to meet the needs of Pematangsiantar City but also exports to other regions. The results of the Shift Share analysis of the wholesale and retail trade sector, car and motorcycle repair experienced negative proportional growth during 2010-2022, sector growth is still very dependent on the influence of the national economy, sector growth tends to be slow compared to the same sector in North Sumatra Province. Klassen Typology Analysis of the wholesale and retail trade sector, car and motorcycle repair is included in Quadrant I, which is a developed and rapidly growing sector.

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