Analysis of Kerinci District Development Sectors

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ABSTRACT

This study aims to analyze 1) Classification of development sectors in Kerinci Regency, 2) What sector is the leading sector in the development of Kerinci Regency. 3) Shifting share of economic sectors in Kerinci Regency. The data analysis techniques used are Klassen Typology, Location Quotient (LQ), Analytical Hierarchy Process (AHP) and Shift Share. The results of the study concluded 1) Based on Klassen's Typology it can be seen that the development sectors in Kerinci Regency are relatively good. This condition can be seen from the increase in the Forward and Growing Sectors in 2017 which previously in 2014 amounted to 2 sectors, now there are 4 sectors. While the Potential sectors and the Relatively Underdeveloped sector the numbers from 2014 - 2018 still remain the same. 2) From 17 sectors forming the Kerinci Regency GRDP from 2014 - 2018, on average there were 9 sectors forming the Kerinci Regency GRDP that had a LQ value of> 1 or the Basis sector. While there are 8 sectors which are categorized as Non Base with LQ value <1. While there are 4 leading sectors based on AHP calculation.

Keywords: klassen tipology, location quotient, analytical hierarchy process, shift share

1. INTRODUCTION

Economic development in general is followed by a shift in economic structure from the primary sector (agriculture and mining) to the secondary sector (manufacturing and construction industry) and the tertiary sector (trade and services). As stated by Arsyad (1999: 298) that regional economic development is a process in which the regional government and the community manage existing resources and form a partnership pattern between the government and the private sector to create new jobs and stimulate the development of regional economic activities.

The development carried out by Indonesia certainly cannot be separated from the development of the provinces within it. One of them is Kerinci Regency. Kerinci Regency as one of

the regencies in Jambi Province which is an autonomous region has the authority to organize its own government. The Kerinci Regency Government as the implementer of the policy is obliged to provide services to the community optimally so that it can be enjoyed by all the people in this district.

There are several methods carried out by various previous researchers in determining the leading sectors of a region. Some of the methods often used by previous research are Klassen typology, location quotient (LQ), and shift-share (Abysvales, 2018; Clarck, 2016; Harry, 2016; Hendrick, 2019; Herath, 2011; Jane, 2014; Stevenson, 2011; Toriq, 2017; Yuin, 2011; Satrianto, 2018). However, these researchers only determine the leading sectors of an area according to each method. For example, Abysvales (2018) found that

based on the Klassen Typology the leading sector in Ukraine District was sector 1) Agriculture. Based on the LQ method, the leading sectors are 1) Agriculture Sector, 2) Building Sector, 3) Trade, Hotel and Restaurant Sector, and 4) Services Sector. The same thing was done by Yuin (2011) who found superior sectors in India according to the Klassen Typology are 1) Agriculture and 2) Mining and Excavation, according to the LQ method are 1) Agriculture Sector, 2) Mining and Excavation Sector, 3) Sector Processing Industry and 4) Electricity, Gas and Water Supply Sector

However, none of these researchers confirmed which same superior sector of each method. This condition is considered important because the method has its own formula so there are advantages and disadvantages. To cover the weaknesses of each of these methods, it should be determined which same superior sector of the 5 methods. Thus the same leading sectors are truly tested based on the 5 methods. If the same leading sectors have been found, these sectors will be prioritized for development, not all leading sectors are found based on each method.

Based on data from the Central Statistics Agency, the average economic growth in Kerinci Regency ranks first compared to the average economic growth in other regencies / cities in Jambi Province. The average economic growth rate of Kerinci Regency has always been above the average economic growth rate of Jambi Province for the past five years, namely from 2014 - 2018.To find out the economic potential of a region by sector, it is calculated how and how much each sector contributes to the GRDP and the ability of each sector to absorb labor. The sector which is able to provide the largest contribution and at the same time as the sector that can make the highest employment absorption, will become the leading economic potential (base economy) of the region.

Viewed from the sector that has a role in the Regency of Kerinci, the agriculture, forestry and fisheries sectors are sectors that have a large contribution to the Kerinci community where most of the people are rural, and plantations. Judging from the condition of the Kerinci Regency region with its promising natural resources suitable to be developed and is a capital to improve the regional economy, it contains promising potential such as economic potential in the fields of mining, forestry, plantation, food crops, livestock, as well as tourism and other potentials. Kerinci Regency has the potential in the mining and quarrying sector because it always experiences an increase every year.

BPS data shows that the contribution of business fields forming the Kerinci Regency GRDP from 2014 to 2017 is the largest average contributed by the Health Services and Social Activities sector with an average growth rate of 8.84%. Then followed by the Wholesale and Retail Trade sector; Car and Motorcycle Repair at 8.60% and the Information and Communication sector at 8.52%. Thus, it can be said that in the last five years these sectors have become the backbone of economic activity in Kerinci Regency.

However, if seen from the contribution of each sector it can be seen that the agriculture, forestry and fisheries sectors have the highest contribution. On average, the contribution of this sector from 2014 - 2018 was 51.57%. This means that most of the development in Kerinci Regency comes from the agriculture, forestry and fisheries sectors. Based on these data, if sorted by the average growth of the agriculture, forestry and fisheries sectors only ranks 13. While the Health Services and Social Activities sector which has the highest average rate from 2014 - 2018, when viewed from the average contributions only have a value of 1.64%. If sorted the sector with the highest average growth is only ranked 11th.

Based on the description above, it is very important to study in more detail, the development sectors in this Kerinci Regency. By knowing the potential of each of these sectors, the development planning of Kerinci Regency is expected to be more targeted and targeted so as to stimulate the creation of sustainable development. To find out what sector is superior in this Kerinci Regency, the writer is interested in studying it in the form of a study entitled "Analysis of the Kerinci Regency Development Sectors".

2. METHODS

The data used in this study are secondary data, among others, Kerinci Regency GRDP and Jambi Province for the period 2012-2016, this data is used for analysis of sector growth classifications, analysis of base and non-base sectors, and analysis of changes, shifts in the economic sector and conditions of competitiveness rice production. This data was obtained from the Central Statistics Agency (BPS) of the Kerinci Regency, the Kerinci Regency Forestry and Plantation Office.

The analytical method used is Klassen Typology. The GRDP sector classification according to the Klassen Typology as listed in Table 1.

Table 1. Classification of the GRDP sector according to the Klassen Typology

Quadrant I	Quadrant II
Sectors that are developed and growing rapidly (Developed Sector)	Advanced but depressed sector (Stagnant Sector)
si> s and ski> k	si <s and skis> sk
Quadrant III	**Quadrant IV**
Potential or still developing sector (Depeloping Sector)	Relatively lagging sector (UnderdevelopedSector)
si> s and ski <sk	si <s and ski <sk

Source: Sjafrizal, 2009: 180

This Location Quotion (LQ) analysis is used to see the sectors included in the category of leading sectors. The results of the LQ calculation can help in seeing the strengths and weaknesses of the region compared to relative to a wider area (Tarigan, 2005: 82).

$$LQ = \frac{xi/_{GRDP\ Kerinci\ Regency}}{Xi/_{GRDP\ Jambi\ Province}}$$

Information:
xi : Sector I GRDP value in Kerinci Regency
Xi : Sector I GRDP value in Jambi Province

Based on the formula above, there are three possible LQ values that can be obtained, namely:

If the value of LQ = 1, it is independent; If the LQ value> 1, the base sector; If the LQ value <1, the non-base sector.

The determination of the leading sectors in the Kerinci Regency in this study was carried out (1) using the Analytical Hierarchy Process (AHP) method. The following hierarchical structure is used in determining leading economic sectors in Kerinci Regency based on the conditions in Table 1.
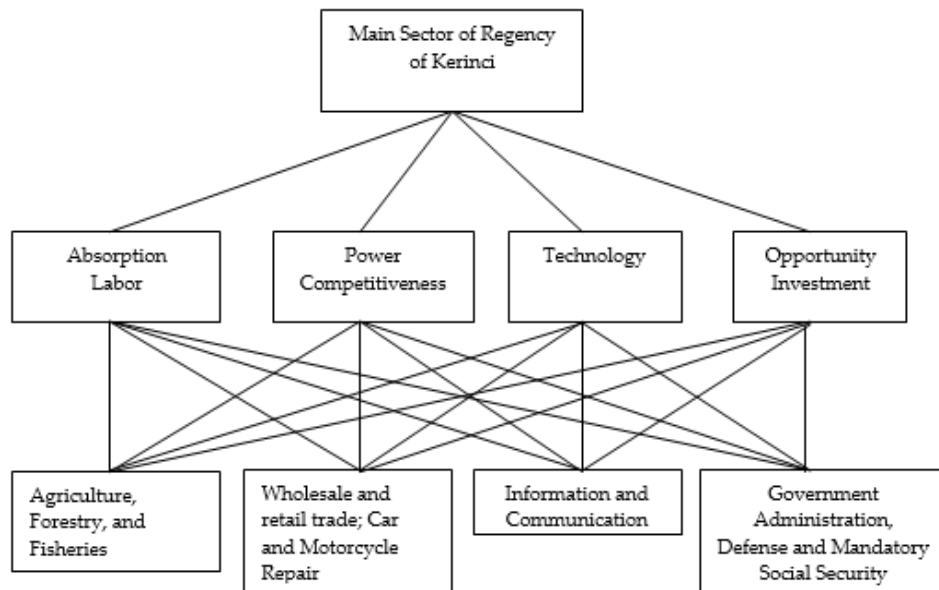
Figure 1. AHP Hierarchical Structure of the Kerinci Regency Leading Sector

Analysis of the determination of the leading sectors of Kerinci Regency with this AHP uses Expert Choice 11 software.

*Shift share analysis*is an analysis to find out the shift in the share of economic sectors in Kerinci Regency. From the Enders category it will be seen if there is a value of the total number (Gij) of a positive sector while there is an overall sum value (Gij) of a negative sector then it can be said that the area has experienced a shift in the economic sector. For example, if the overall total value (Gij) of the Kerinci Regency industrial sector is positive while the overall total value (Gij) of the Kerinci Regency agriculture sector is negative, it can be said that the Kerinci Regency has experienced a shift in the economic sector from the agricultural sector to the industrial sector.

3. RESULTS AND DISCUSSION

a) Development Sector Classification in Kerinci Regency According to Klassen's Typology

When looking at changes in the quadrant of development sectors in Kerinci Regency from 2014 - 2018 based on the Klassen Typology classification it can be seen that the development sectors in Kerinci Regency are relatively good. This condition can be seen from the increase in the Forward and Growing Sectors in 2017 which previously in 2014 amounted to 2 sectors, now there are 4 sectors. While the Potential sectors and the Relatively Underdeveloped sector the numbers from 2014 - 2018 still remain the same. Thus, it can be said that development in Kerinci Regency from 2014 - 2018 has become better.

The results of this study are in accordance with previous studies which found leading sectors based on the Klassen Typology method. As research by Abysvales (2018) there are 1 sector in Quadrants I and II, there are 3 sectors that are in Quadrant III and there are 4 sectors that are in Quadrant IV. In that year Abysvales only saw 9 sectors in the economy of Ukraine. The same thing was done by Jane (2014) in determining the leading sectors in Croasia. Based on Typology Klassen Hajeri found that there are 3 sectors that are in Quadrant I, there are 5 sectors that are in Quadrant

II, and there are 1 sector that is in Quadrant IV. The results of this study are also supported by research by Jane (2014) and Hendrick (2009) who found that there were 15 sectors in Quadrant IV and 6 sectors in Quadrant I in Croatia and in Brazil there were many sectors in Quadrant IV and a few sectors in Quadrant I.

a) Development Sector Classification in Kerinci Regency According toBase and Non-Base Sector Criteria

The results of the LQ calculation for Kerinci Regency from 2014 - 2018 show that from 17 sectors forming the Kerinci Regency GRDP from 2014 - 2018 there are on average9 sectors forming the Kerinci Regency GRDP that have a value of LQ> 1 or the Base sector. The sectors are 1) sectors Agriculture, Forestry, and Fisheries, 2) Water Supply, Waste, Waste and Recycling, 3) Wholesale and Retail Trade; Car and Motorcycle Repair, 4) Information and Communication, 5) Real Estate, 6) Government Administration, Mandatory Defense and Social Security, 7) Educational Services, 8) Health Services and Social Activities and 9) Other service sectors. This condition means that all 9 sectors have a rolethe size of Kerinci Regency is compared with the role of the same sector at the provincial level. This indicates that the sector has a fairly good economic role in the Kerinci Regency, where the region is able to meet its own needs within the scope of its territory. In addition, these sectors have the potential to be exported out of the region, at least exported in the areas closest to the Kerinci Regency so as to increase the economic value growth of the Kerinci Regency.

While there are 8 sectors categorized as Non Basis with LQ value <1. These sectors are 1) Mining and Excavation, 2) Manufacturing Industry, 3) Electricity and Gas Procurement, 4) Transportation and Warehousing Construction, 5) Transportation and Warehousing, 6) Provision of Accommodation and Food and Beverage, 7) Financial Services and

Insurance, and 8) Company Services. This means that these sectors have a role in the Kerinci Regency compared to the role of the same sector at the provincial level.

The results of this study are relevant to previous studies. Previous researchers also concluded that there were several sectors that were classified as basis and non-base in each of the areas studied. Clarck (2016) for example concluded that there are 3 sectors that are categorized as bases and 6 sectors that are categorized as non-based in the economy of Canada Regency. The results of this study are also supported by Guimarães (2009) who concluded that in the economy of Bulukumba Regency there are 2 sectors that are categorized as bases and 7 sectors that are categorized as non-basis. The same thing was also shown by Herath (2017) who found that there were 4 sectors categorized as bases and 13 sectors categorized as non-bases in the Virginia Regency. Similar results were also found by Stevenson (2011) and Toriq (2017) that in Serbia there are 26 base sectors and 14 non-base sectors and in Pakistan there are more base sectors compared to non-base sectors.

b) Development Sector Classification in Kerinci Regency According to Analytical Hierarchy Process (AHP)

From all evaluations carried out on the 4 criteria used in determining leading sectors using the AHP method in this study such as employment, competitiveness, technology and investment opportunities, which are then multiplied by priority vectors, obtained priority or leading sectors in Kerinci Regency are The Agriculture, Forestry, and Fisheries Sector with a weight of 0.330 or 33.0% then followed by the Information and Communication sector with a weight of 0.288 or 28.8% and so on by the Wholesale and Retail Trade sector; Car and Motorcycle Repair with a weight of 0.197 and finally the Government

Administration, Defense and Social Security

Obligatory sectors with a weight of 0.186 or 18.6%.

Figure 2. Overall Value
Source: Processing with Expert Choice 11

The AHP calculation results are in line with the LQ calculation in Table 4.8 which shows the average LQ value of the 17 development sectors in Kerinci Regency from 2014 - 2018. In the table, the four sectors with growth and contribution above the average in 2017 are consistent with the results

of the AHP and LQ calculations. This means that the position of the order with the highest LQ value is occupied by the same sector as the AHP value calculation as shown in Table 4.2.

Table 2. Sectoral Match Based on LQ and AHP Value

No	Sector Name	LQ	AHP
1	Agriculture, Forestry, and Fisheries	1.97	0.330
2	Information and Communication	1.90	0.288
3	Wholesale and retail trade; Car and Motorcycle Repair	1.05	.197
4	Government Administration, Defense and Mandatory Social Security	1.76	.186

Source: LQ and AHP calculations

The results of this study are also related to previous studies that determine leading sectors based on the AHP method. Bison (2007) based on the results of the Analytical Hierarchy Process of the leading economic sectors in Canada Regency during 2010-2014 namely the wholesale and retail trade economic sectors; car and motorcycle repair; wholesale and retail trade economic sectors; car and motorcycle repair workers are capable of absorbing high labor. The results of this study are supported by the findings of Yuin (2011) and Bison (2007) that AHP can be used to determine the regional superior sectors. Yuin found that the leading sector in Poland was Industry while Bison

found that the leading sector in Canada was Services.

c) Pergonomic share of economic sectors in Kerinci Regency According to Shift Share Criteria

Based on the Enders category, there are 12 sectors included in rank 1 in Kerinci Regency. The sectors are 1) Mining and Quarrying, 2) Processing Industry, 3) Water Supply, Waste, Waste and Recycling Management, 4) Wholesale and Retail Trade; Car and Motorcycle Repair, 5) Transportation and Warehousing, 6) Information and Communication, 7) Financial Services and

Insurance, 8) Corporate Services, 9) Government Administration, Mandatory Social Security and Protection, 10) Educational Services, 11) Health Services and Social Activities, and 12) Other services. These 12 sectors are very strong sectors in Kerinci Regency based on the Enders category.

There are 4 sectors included in rank 2 based on the Enders category in Kerinci Regency. The sectors are 1) Electricity and Gas Procurement, 2) Construction of Transportation and Warehousing, 3) Provision of Accommodation and Food and Beverage, and 4) Real Estate. It means ke 4 This sector is a strong sector in Kerinci Regency based on the Enders category. While there is one sector according to the Enders category that is ranked 5. That sector is the sector Agriculture, Forestry, and Fisheries. Ranking 5 means that sector Agriculture, Forestry, and Fisheries included in the category of weak sectors.

So based on the calculation of shift share above, it can be concluded that the economy of Kerinci Regency has shifted from the agricultural sector to the industrial and service sectors. This can be seen from the low ranking of the sector Agriculture, Forestry, and Fisheries based on the Enders category and the high ranking of the industrial and service sectors.

The results of this study are in accordance with the results of previous studies. Harry (2016) concluded that the sector which is a superior sector in the state regions in the USA is the financial sector, leasing and business services because besides being a base sector, this sector has a positive shift value. Guimarães (2009) concluded that the sectors that provided the greatest competitiveness in Pakistan Regency were the agriculture sector, the industrial sector, and the construction sector. The agricultural sector based on shift share (SS) results has a competitive advantage because there is an absolute increase in the agricultural sector. This can be seen with the results of Shift Share where the economy of the agricultural sector is included in the seed and becomes a driver of regional economic performance. Yuin (2011) and Abysvales (2018) also found shift-share as one of the methods in determining leading sectors in India and in Ukraine.

4. CONCLUSIONS

Based on the discussion in the previous chapter, this research concludes that: Based on the Klassen Typology it can be seen that the development sectors in Kerinci Regency are relatively good. This condition can be seen from the increase in the Forward and Growing Sectors in 2017 which previously in 2014 amounted to 2 sectors, now there are 4 sectors. While the Potential sectors and the Relatively Underdeveloped sector the numbers from 2014 - 2018 still remain the same. Thus, it can be said that development in Kerinci Regency from 2014 - 2018 has become better. From 17 sectors forming the Kerinci Regency GRDP from 2014 - 2018 there were on average9 sectors forming the Kerinci Regency GRDP that have a value of LQ> 1 or the Base sector. While there are 8 sectors which are categorized as Non Base with LQ value <1. While there are 4 leading sectors based on AHP calculation. These sectors are 1) Agriculture, Forestry, and Fisheries, 2) Information and Communication, 3) Wholesale and Retail Trade; Car and Motorcycle Repair, and 4) Mandatory Government, Defense and Social Security Administration. Based on the calculation of shift share, it can be concluded that the economy of Kerinci Regency has shifted from the agricultural sector to the industrial and service sectors. This can be seen from the low ranking of the sector Agriculture, Forestry, and Fisheries based on the Enders category and the high ranking of the industrial and service sectors.

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