Research Article

Analysis Of Regional Inequality In The Province Of South Sulawesi

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Abstract:

This paper proposes to analyze the inequality of economic development between regions in South of Sulawesi in 2010 - 2019 by using the Williamson Index. Equipped with a descriptive analysis to describe the supporting sectors of the economy in South Sulawesi Province.

By using the Williamson Index, the results show that the level of Regional Inequality in South Sulawesi in 2010 - 2019 is highly about 0.639. But if the city of Makassar is excluded from the measurement, the number dramatically decreases to 0.285. This is indicated that Makassar City is the cause of the high level of Regional Inequality in South Sulawesi. The reason is that the economic structure of Makassar City has been dominated by the manufacturing sector, not by the agricultural sector, compare to the other regions. In total, the economy in South Sulawesi is supported by four main sectors of business, there are Agriculture (21.14 %), Wholesale and Retail Trade (14.71 %), the Manufacturing Industry (13.84 %), and the Construction sector (12, 13 %). The Large and Retail Trade Sector contributed 20.46 % to the Provincial GRDP, while the manufacturing sector contributed 18.31 %. In fact, the agricultural sector is only 0.48 %.

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INTRODUCTION

Development is a multidimensional process involving various fundamental changes in social structures, social behaviors, and social institutions, in addition to accelerating economic growth, reducing income inequality, and eradicating poverty (Todaro & Smith, 2012). Development is one of the systematic efforts to create welfare for the people in a certain area. Area-based development is a process of continuous improvement that utilizes existing resources (Aprianoor & Muktiali, 2015). Regional development is not only limited to one aspect but includes various aspects of society, both economic and non-economic aspects (Yunisti, 2012).

Each region has different resources, so the development capability carried out in each region is different. This lies in the imbalance of development between regions. Inequality of development between regions is a phenomenon of unequal development process caused by differences in the resources owned by each region, thus giving birth to developed regions and relatively underdeveloped areas (Sjafrizal, 2008). Factors that affect regional inequality, for example, economic development, the political situation, fiscal decentralization, accessibility issues, nationality factors, and market failures such as excessive migration (Baransano et al., 2016).

Regional Inequality can be measured at the regional, national, and global levels. Differences in the level of development can be found in any country or region based on the rich, poor, and middle of its community. When development is carried out unevenly in an area, there is an imbalance that varies from country to country or region (Rofiuddin & Firmansyah, 2018). Indonesia is a country that varies greatly in terms of geography and resources. This is one of the problems of Regional Inequality in Indonesia which continues to nowadays. When viewed by region, the western part of Indonesia has a higher income compared to the eastern part of Indonesia (Nugraha & Prayitno, 2020).

Not only happen between provinces and between islands in Indonesia, but Regional Inequality also occurs at the district/city level. South Sulawesi has 24 regencies-cities with different economies, demographics, and natural resources. South Sulawesi plays an important role as the gateway to Eastern Indonesia. The role of South Sulawesi is very strategic in supporting this island as a center for production and processing of agricultural, plantation, fishery, and nickel mining products, particularly as a food agriculture node, fisheries node, and

industrial cluster. In addition, South Sulawesi has an international port which further improves its strategic position (Iskandar & Saragih, 2018).

The motivation to make South Sulawesi an object of research is because from 2010 to 2019, the economic growth rate of South Sulawesi has always been above the national economic growth rate. In 2010, the economy of South Sulawesi grew by 8.19% while the national economic growth was only 6.4%. In 2019, economic growth has decreased to 6.92%, yet it is still above average National economic growth of 5.02%. As well as the proportion of poor people in South Sulawesi always below the national level and experiencing a downward trend. In 2010, the proportion of poverty in South Sulawesi was 11.40%, while the proportion of the nationals was 13.33%. In 2019, the proportion of poverty in South Sulawesi decreased to 8.69%, while the proportion of national poverty was in the range of 9.41%. Economic growth and poverty in South Sulawesi Province have continued to improve. On the other hand, inequality still occurs, this is indicated by the data on the contribution of district / municipal GRDP to the total GRDP of South Sulawesi in 2010 to 2019 which is still dominated by Makassar City, namely 34.10% in 2010 then increased to 35.29%. in 2019, the contribution outside Makassar City was 65.89% in 2010 and decreased to 64.70% in 2019. This condition is an irony when economic growth and poverty in South Sulawesi continue to improve but the phenomenon of regional inequality is not undergoing improvement. Inequality is a direct portrait of the phenomenon of poverty conditions and economic growth. Inequality is a sign that warns of mistakes in policy formulation and at the same time affirms the growth of the relationship between economy and poverty. This paper aims to analyze development disparities between regions in South Sulawesi Province in 2010 - 2019, in contrast to previous studies, we analyze development disparities between regions in South Sulawesi by including Makassar City and without including Makassar City, as well as analyzing the economic support sector in South Sulawesi.

I.   LITERATURE REVIEW

Regional Inequality is a problem where the development between regions is not evenly distributed. In many countries, the unequal distribution of economic development has created new social, economic, and cultural problems. Hence, most countries direct their development policies to reduce Regional Inequality (Todaro & Smith, 2012). Inequality is a concept that describes unequal conditions, especially in terms of status, rights, and opportunities (Warda et

al., 2019). Income inequality is the difference in people's ability to own goods or services, and more broadly it is a problem of community welfare (Rofiuddin & Firmansyah, 2018).

According to the growth theory, Regional Inequality depends on mobility between capital and labor. Capital will move to areas where labor wages are low. The labor will move in the opposite direction to the more developed areas. This flow will continue until capital and labor become the same in each region (Svetikas, 2014).

According to the Neo-Classical hypothesis at the beginning of the development process of a country, Regional Inequality tends to increase. This process will take place until the imbalance reaches a breaking point. After that, if the development process continues, then gradually the Regional Inequality will decrease. Based on this hypothesis, it can be drawn from a provisional report that in developing countries the Regional Inequality tends to be higher, while in developed countries the inequality will be lower. In other words, the development inequality curve between regions is an inverted U-shape (Reverse U-shape Curve) (Sjafrizal, 2008).

Economic inequality can be interpreted as the structure of the economic structure of a region when compared to other regions. According to (Kuncoro, 2010), economic inequality can at least be seen from 3 dimensions. First based on the level of modernity that is the inequality between the modern sector and the traditional sector. The modern sector is generally located in urban areas, while the traditional sector is generally located in rural areas. Second, regional inequality is an imbalance that occurs between an area that has high economic potential and an area with low economic potential. Third, the imbalance that occurs in ethnicity, ethnicity, ethnicity, and non-natives.

The general method used in the study of inequality is by measuring inequality (Daryanto & Hafizrianda, 2010):

1. Lorenz curve, measuring inequality based on the shape of the income distribution curve. The Lorenz curve is two-dimensional, where the horizontal axis shows the cumulative proportion of the population that has income while the vertical axis shows the cumulative proportion of total income.
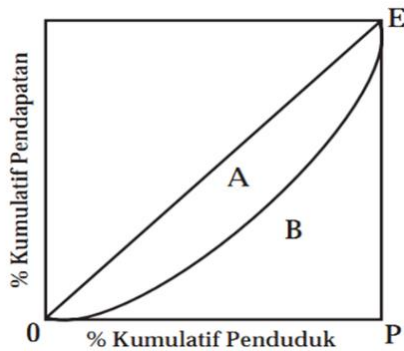
Picture 1. Lorenz Curve

If the income distribution is perfectly even, then the Lorenz curve will be a diagonal line OE. Conversely, if the income distribution is uneven (perfectly lame), the Lorenz curve is in the form of a triangle OPE. Thus, the smaller the shape of the Lorenz curve or the area A, the income will be evenly distributed.

2. Gini Ratio measures the inequality based on the Lorenz curve area. The Gini Value Ratio ranges from 0 to 1. A value of 0 indicates that the distribution is evenly distributed across society, while a value of 1 indicates that all income is only owned by one person or one unit in the entire distribution. Low inequality has a 0.4 Gini Ratio value or below while Inequality is above the that (Kuncoro, 2010).

3. Theil Index or Generalized Entropy Measure (GEM) is often used in studies to measure household income inequality. The advantage of the Theil Index compared to other indices is that it can be decomposed into the inequality between household groups. Theil Index concept from distribution, in reality, is an application of the concept of information theory in measuring economic inequality and industrial concentration (Kuncoro, 2010).

4. Index L is a measure of inequality derived from the development of the Theil Index. The index L is often referred to as the log mean deviation measure because it provides the standard deviation from log (y).

5. Williamson index is the coefficient of variation (CV) or known as the standard deviation divided by the mean. The Williamson Index uses Gross Regional Domestic Product (GRDP) as the base data. The reason is that what is being compared is the level of development between regions (Sjafrizal, 2008).

II. RESEARCH METHODS

This research is a quantitative study using secondary data sourced from BPS. The data used in this study are PDRB data at Current Price (PDRB ADHB) and population per district/city in South Sulawesi published by the Indonesia Central Bureau of Statistics for the period 2010 – 2019, as well as other secondary data which are published by the South Sulawesi Government. The research locations included 24 Regencies / Cities in South Sulawesi Province (BPS, 2020a) (BPS, 2020c).

Data analysis in this study used the Williamson Index method and descriptive analysis in order to explain the support sector in regencies/cities in South Sulawesi, with an explanation of each analysis tool as follows:

Williamson Index

In this research, Regional Inequality in South Sulawesi was calculated using the Williamson Index. This index is Statistically a coefficient of variation commonly used to measure a difference. Unlike the Gini Ratio which is commonly used in measuring the distribution of income, the Williamson Index uses the Gross Regional Domestic Product (GRDP) per capita as the basic data. The reason is clear because what is being compared is the level of development between regions and not the level of prosperity between groups. The Williamson Index formulation is as follows (Sjafrizal, 2008):

$$V_w = \frac{\sqrt{\sum_{i=1}^{n}(y_i - y)^2 \left(f_i/n\right)}}{y}, \qquad 0 < V_w < 1$$

which

y_i = GRDP per capita regency – i

y = GRDP per capita on average for all regions

f_i = population of area i

n = total population of the all area

The limit of the level of Regional Inequality uses the Williamson Index measure, namely (Aswar, 2018):

a) $V_w > 1$, maximum inequality occurs

b) $0,6 \le V_w \le 1$ there is a high inequality

c) $0,4 \le V_w \le 0,6$ there is a moderate inequality

d) $V_w < 0,4$ low inequality

III. RESULTS AND DISCUSSION

In general, the Regional inequality indicated by the Williamson Provincial Gap Index value in Indonesia during the period 2006 - 2011 tends to increase (Mahardiki & Santoso, 2013). Regional inequality in Indonesia was relatively large during 1993-2002, there was a convergence of growth in conditional income per capita. The determinants of growth in provincial income per capita are physical capital savings, open trade, and the contribution of the oil and gas sector (Resosudarmo & Vidyattama, 2006).

Income and expenditure inequality in Indonesia show the same pattern before 1950, then after the 1950s, expenditure inequality went much faster than income inequality. Then in the 20th century, there was a significant decrease in inequality due to several factors. The share of services and manufacturing in total employment increases with agricultural income, which leads (for various reasons related to production) labor productivity in agriculture, and thereby reduces urban inequality. It also implies that a more productive urban sector accounts for nearly 50% of the workforce and contributes to a reduction in overall inequality (by Leeuwen & Földvári, 2016).

Analysis of the level of Region inequality in South Sulawesi is known through the Williamson Index value with the help of Microsoft Excel 2019. The results of the Williamson Index analysis are shown in Graph 1.

Graph 1. Williamson Index of South Sulawesi Province 2010-2019 (with Makassar City)
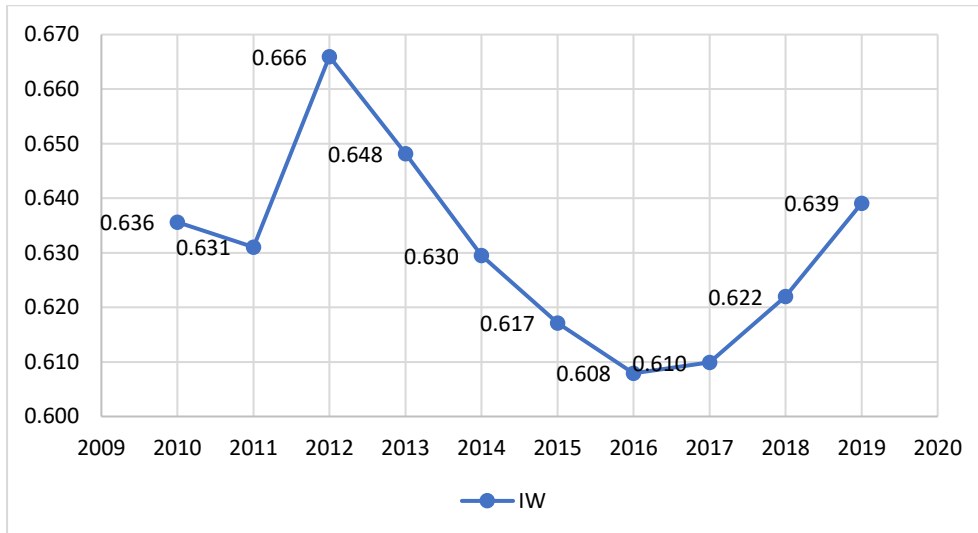
Source: author's analysis(2021)

The graph above shows the dynamics of the Region inequality rate as measured by the Williamson Index. In 2011-2012, inequality has increased, then from 2012 to 2016, the figure for inequality has decreased significantly. One of the reasons is that since 2012 the implementation of regional autonomy in South Sulawesi has been running effectively, this has increased with the economic growth in the Regency/City of South Sulawesi. The direction of development is invincible with the interests and potential of each region so that each region is generally in a better condition in terms of facilities and infrastructure as well as the quality of human resources (Iskandar & Saragih, 2018). Aswar (2018) found that the ratio of regional expenditure to total expenditure and average education level of the community had a direct effect on regional inequality in South Sulawesi in 2002 - 2016, while the ratio of road length to the area had no direct effect on regional inequality.
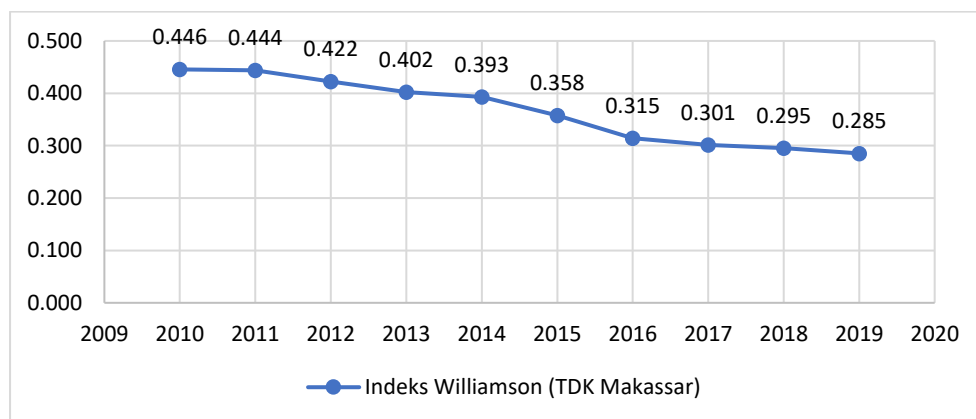
The Regional inequality rate of South Sulawesi increased again from 2016 to 2019. One of the reasons is that the share of Makassar City in the South Sulawesi economy continues to increase (Agussalim, 2020). Although it had experienced a decline and then increased again, the rate of Regional inequality between districts/cities in South Sulawesi is high (IW> 0.60).

According to Razak, (2011) some of the obstacles faced by several districts in realizing equitable regional development in South Sulawesi Province are (1) limited ability to provide investment funds (2) limited available infrastructure, especially electricity and transportation; (3) there is no definite legality and (4) the lack of coordination between region so that it has not been able to realize the efficiency and effectiveness of public services, synergy and cooperation between districts that are mutually beneficial as stated in the Law. 32, 2004, Article

195. Furthermore, referring to the results of the calculation of regional inequality in South Sulawesi Province in 2010 – 2019 by excluding Makassar City, the results were quite different from the previous calculation which included Makassar City.

Graph 2. Williamson Index of South Sulawesi Province 2010-2019 (Without Makassar City)

Source: author's analysis(2021)

The graph above shows the dynamics of regional inequality in South Sulawesi by excluding Makassar City. The results of calculations using the Williamson Index, is that the development inequality between districts / cities tends to decline from 2010 to 2019. The inequality rate of development shown by the Williamson Index is classified as mild to moderate (IW <0.50).

The results of this calculation show that Makassar City still dominates in terms of income in South Sulawesi Province in 2010 - 2019. In 2019, according to BPS, 35, 29% of South Sulawesi Province GRDP was held by Makassar City, with a GRDP of Rp. 178,430,057.22 million and a population of 1,526,677 people, the GRDP per capita of Makassar City is Rp. 116.87 million. The comparison of the GRDP of Makassar City with other districts / cities in South Sulawesi can be seen in graph 3.

Graph 3. GRDP of districts/cities in South Sulawesi Province in 2019
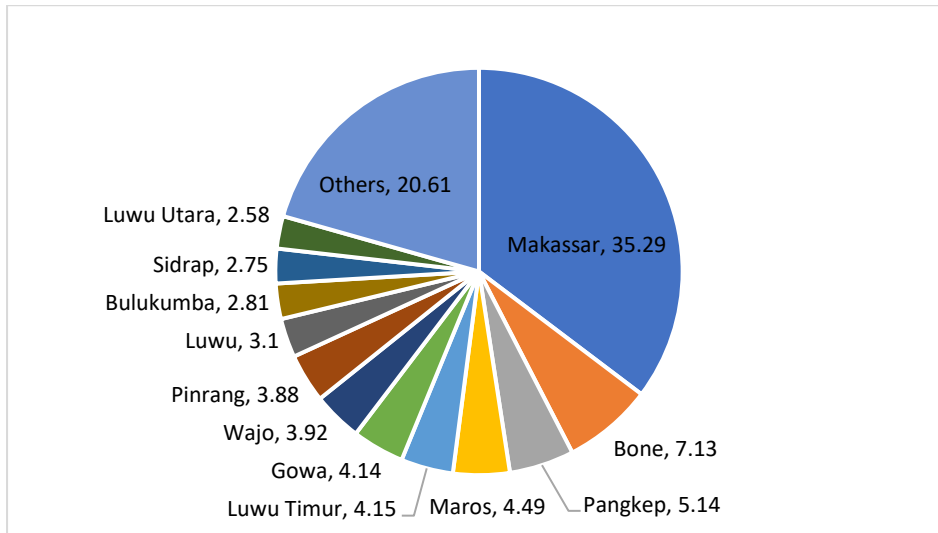
Source: author's analysis(2021)

Supporting Sector in South Sulawesi

For the last five years, the economic development in South Sulawesi has been supported by four main business sectors, there are the agriculture sector (21.14 percent), the wholesale and retail trade sector (14.71 percent), the manufacturing sector (13.84 percent) and the construction sector. (12.13 percent) (Kanwil DJPB South Sulawesi Province, 2020).

Graph 4. Percentage Distribution of Gross Regional Domestic Product of Sulawesi Selatan Province at Current Market Prices by Industry, 2015-2019
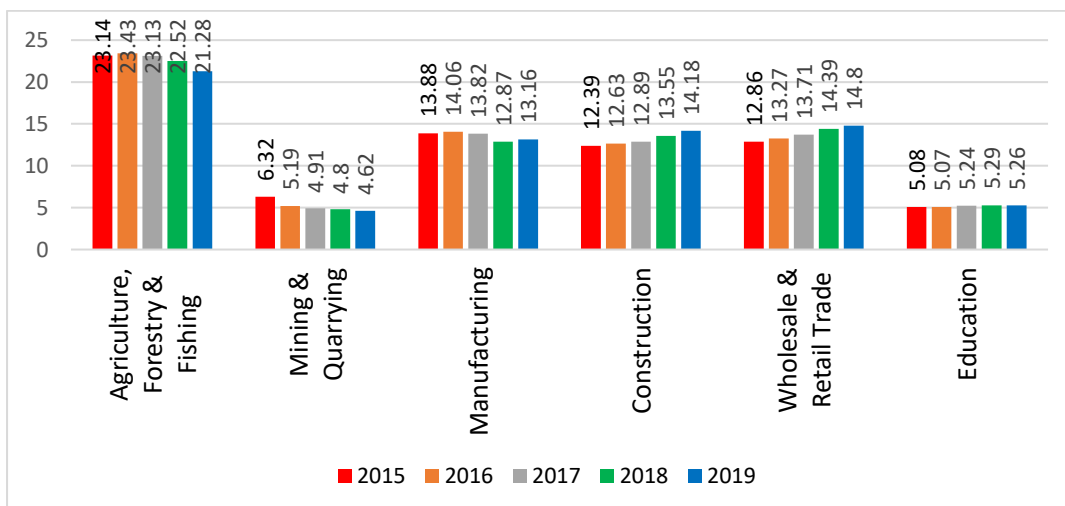
Source: author's analysis(2021)

In the graph, we can see the development of the business sector in South Sulawesi from 2015-2019 which was processed from the Central Statistics of South Sulawesi. This shows the

structure of the economy in the South Sulawesi that is supported by the agriculture. Currently, there is a shift in the growth of its economic structure. This shift process is due to structural transformation from the growth of primary production sectors such as Agriculture to secondary production sectors such as Manufacturing Industry, Wholesale and Retail Trade and Services, and Construction. Where the distribution trend of the agricultural sector is decreasing compared to the manufacturing sector and the wholesale / retail trade, car and motorcycle repair sector.

One of the causes of the declining role of Agriculture, Forestry, and Fisheries is the reduced area of land in these business fields. The flooding that occurred in 13 districts/cities in South Sulawesi was one of the causes of the decline in harvested area and rice production from the previous year. In addition, in terms of plantation crops, cocoa and coffee production in South Sulawesi also decreased during 2019. The slow increase in the price of these business products compared to other products has also caused the decline in the role of Agriculture, Forestry and Fisheries (BPS, 2020b).

The manufacturing sector in South Sulawesi has nominally grown from IDR 47.25 trillion to IDR 66.43 trillion in 2015. However, its growth has fluctuated throughout 2015 - 2019. Manufacturing industry growth of 9.91 percent in 2019 increased from only 0.94 percent in 2018. In 2019, only three business fields experienced a contraction, those are Tobacco Processing (-16.23 percent), Leather Industry, Leather Goods and Footwear (-7.45 percent), Chemical Industry, Pharmaceuticals and Traditional Medicine (-1.75 percent). In addition, other sub-sectors experienced positive growth, with the highest growth in the Basic Metals Industry sub-sector with growth of 61.99 percent. This happened because of the smelter factory in Bantaeng Regency which started operating at the end of 2018.

Wholesale and Retail Trade Sector; Repair of cars and motorbikes has increased throughout 2015 to 2018, then slowed down in 2019. One of the causes of the increase in the contribution of the trade sector to the GRDP of South Sulawesi is the high number of vehicle sales in South Sulawesi and the rise of e-commerce is one of the driving forces for the excitement of the trade sector as well as car and motorcycle repairation.

Supporting Sector of Makassar and Areas Outside Makassar

For the last five years, the economic development in Makassar City has been supported by three main business sectors, those are wholesale and retail trade (20.46%), manufacturing

industry (18.31%) and construction (18.22%). Meanwhile, the economic structure outside Makassar City is still supported by the agricultural sector as the main sector.

Graph 5. Comparison of the Distribution of the Percentage of GRDP in Makassar City and Outside Makassar City at Current Market Prices by Industry, 2019
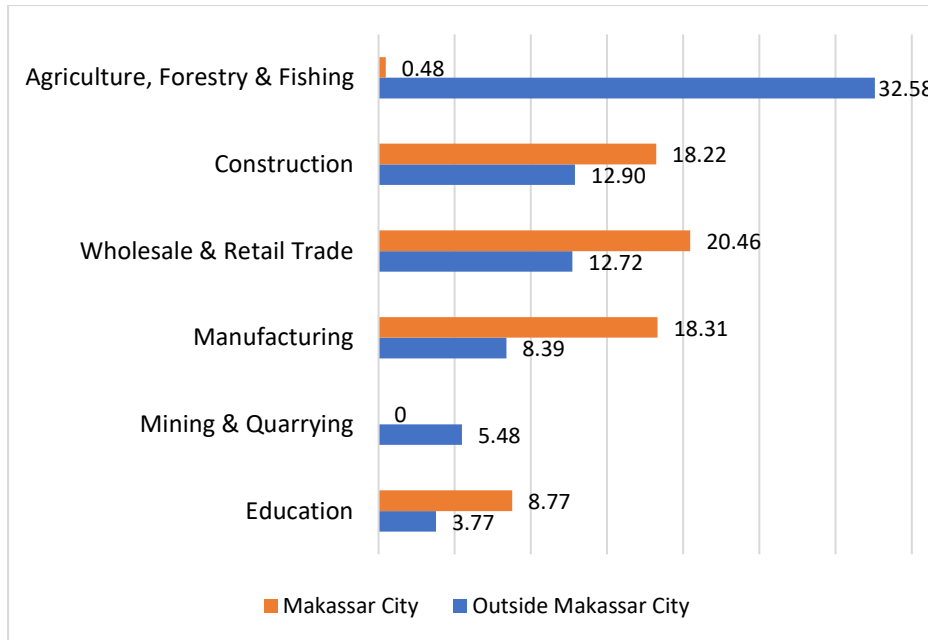
Source: author's analysis(2021)

One of the causes of Regional Inequality in South Sulawesi, when including Makassar City is the economic structure of Makassar City which is supported by the secondary production sector, the Processing Industry, which has high economic potential and can be said to be a modern economic sector. A region can be said to be a developed region if its economic structure is dominated by the modern sector. The manufacturing industry is the largest contributor to GRDP during 2010 – 2019. This has triggered regional inequality in South Sulawesi, Makassar city has high economic potential while other districts/cities have low economic potential.

IV. CONCLUSION

Based on the results of the analysis and discussion, the conclusions that can be obtained from this research regarding the regional inequality in South Sulawesi are:

1. By using the Williamson Index method, the level of development inequality between regions in South Sulawesi in 2010-2019 is classified as high at 0.639 in 2019. However,

if Makassar City is excluded from the calculation, the level of development inequality between regions in South Sulawesi, which is lower to 0.285, which is classified as low.

2. This shows that Makassar City is one of the causes of the high regional inequality in South Sulawesi.

3. Makassar City is the cause of inequality in South Sulawesi because the economic structure of Makassar City has been dominated by the industry sector which has high economic potential, no longer by the agricultural sector such as areas outside Makassar.

4. Overall, the economy in South Sulawesi is supported by four main sectors of business, those are the Agriculture sector (21.14 percent), the Wholesale and Retail Trade sector (14.71 percent), the Manufacturing Industry sector (13.84 percent) and the Construction sector (12, 13 percent).

5. Based on the description above, it can be conveyed suggestions to the government to reduce regional inequality in the South Sulawesi, the government needs to encourage a shift in the economic structure of regencies/cities outside Makassar to the secondary economic sector, such as the manufacturing, trade and construction sectors. This is also useful for increasing economic growth in the area so that development can be carried out.

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