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Determinants of Regional Inequality (Literature Review Perspective)

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Abstract

The objectives of this research are to see the factors that influence regional inequality from the perspective of literature studies. The method used in this study is to conduct critical reviews in journals related to regional inequality. Then filtering is carried out through titles and alphabets related to the determinants of regional inequality. the results of this research are expected to be implemented and provide practical solutions in solving the problem of regional inequality in Indonesia. This study will be a reference for all parties, both the government, local government, the legislature, and other wider communities, whether fiscal decentralization and the formation of new regions or regional expansion accompanied by quality spending will be beneficial for the welfare of people in Indonesia or other words regional inequality will be reduced.

Keywords: regional inequality, growth, fiscal decentralization, openness, investment, Indonesia

1. Introduction

Regional inequality became an essential issue with the development of the New Growth Theory or Endogenous Growth Theory, which identifies the prevailing direction of convergence in economic growth in various countries, where high-income countries will grow faster than underdeveloped countries(Azzoni, 2001; Sanjaya *et all.*, 2019). Inequality is caused by differences in demographic content in each region (Sjafrizal, 2012; Ginting, 2012; Lessmann, 2012; Calderon&Serven, 2010; Kurniasih, 2017).

From various empirical research, there is indeed a tendency to reduce inequality between countries globally. However, in some countries, inequality is even higher in some developed member countries OECD (***Organization for Economic Cooperation and Development***) (Nuzzo et al., 2015; Ezcurra&Rodríguez-Pose, 2013; Milanovic, 2005; Mahardiki&Santoso, 2013;

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Ginting, 2012; Firdaus, 2013; Lessmann, 2012). Wei&Liu (2003) assert that in China, the overall regional gap decreased in the 1980s but increased in the 1990s.

Regional inequality can be measured based on Williamson Index values (Hidayat et al., 2019; Williamson, 1965; Yasari, 2021). Bappenas (2013) classifies regional inequality into three categories based on Williamson Index values, low inequality (Williamson Index value < 0.3), medium inequality (Williamson Index value between 0.3-0.7), and high (Williamson Index value > 0.7). Inequality can also be measured by the Theil Index (Bickenbach&Liu, 2013; Hidayat, 2014; Soseco, 2010).

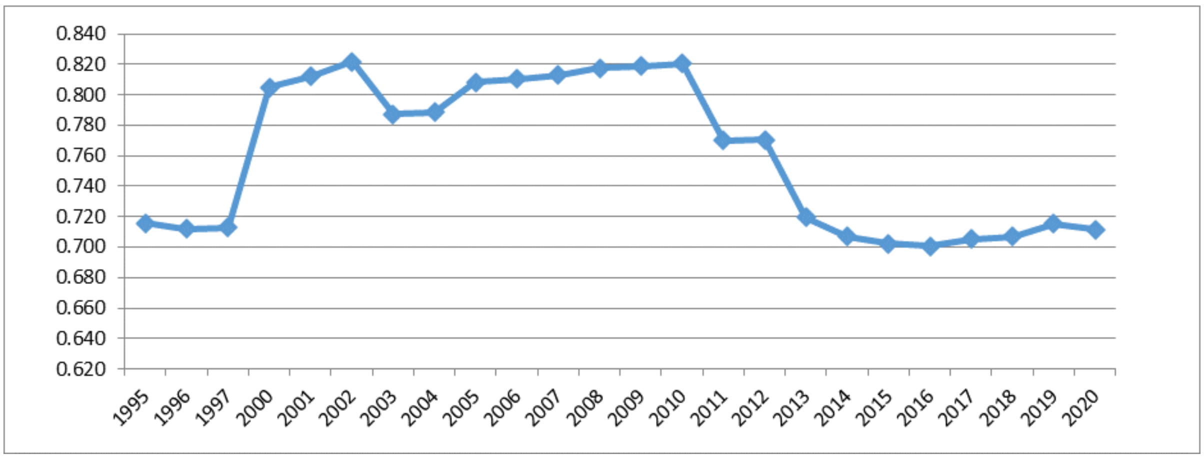

Figure 1. Williamson Index 1995-2020.
Source: Data processing, 2022

The phenomenon of regional inequality in Indonesia during 2000-2020 shows a relatively high increase in inequality since 1999, caused by, among others, the economic and monetary crisis. The peak occurred in 2002, when the Williamson index reached 0.83, meaning the economy was very unequal. This crisis period was one of the toughest and brought significant political changes from the New Order government to the reform period and the rolling era of regional autonomy and fiscal decentralization in Indonesia. Thus, it can be stated that during the period of restricted freedom of almost 25 years, the level of regional inequality in Indonesia is still in the classification of high inequality. The inequality of per capita income distribution between provinces in Indonesia in 2000 was 0.420 and the highest in 2003. The imbalance of per capita income distribution shows a downward trend, as seen from the declining value of the Theil Index. The increase in income distribution inequality between provinces in Indonesia occurred again in 2014 by 0.377. This shows fluctuations in the gap in per capita income distribution between regions. In addition, the problem of regional inequality and income distribution gap is still a problem faced and explored the contributing factors. Therefore, this study was conducted to see the factors that influence regional inequality from the perspective of literature studies.

2. Method

The method used in this research is literature research. Literature research is a review based on evaluation, criticism, and result of review the previous studies, which aims to identify the main ideas of a research topic to determine the development of new hypotheses and models in a study (Snyder, 2019; Kitchenham et al., 2009). The literature study also provides a comprehensive overview of the topics and methods and synthesizes previous studies as a knowledge base (Paul&Criado, 2020; Linnenluecke et al., 2020). In this study, we reviewed 64 articles related to determinants of regional inequality. The determinants of regional inequality that we reviewed were economic growth, infrastructure, human resources, investment, decentralization, economic openness, population, and spending on pro-poor growth functions.

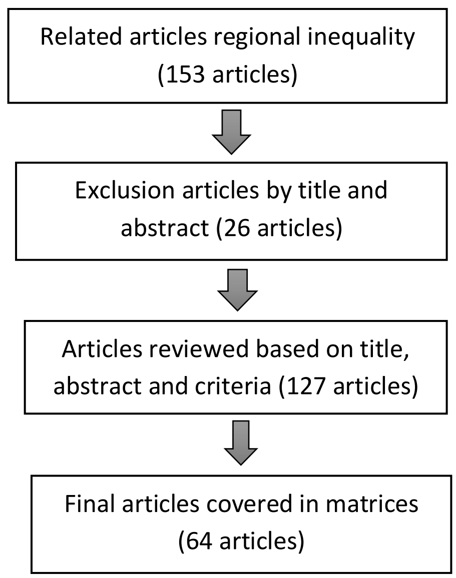

Figure 2. The outline of literature research

3. Results

Regional inequality in Indonesia

The average regional inequality that occurred in Indonesia from 2002 – 2021 is shown in Figure 3. Based on the value of the Williamson index, it is known that there is 12 per cent of provinces have a Williamson index value of <0.3, which means low inequality. The region of South Sumatra, Riau Islands, Central Java, East Java, West Nusa Tenggara, and Papua have a Williamson index value of > 0.7 or have high regional inequality. As for the disparity of the medium category, the area is the most. Thus each province must continue to strive so that the value of the Williamson index does not increase, which will result in high regional inequality.

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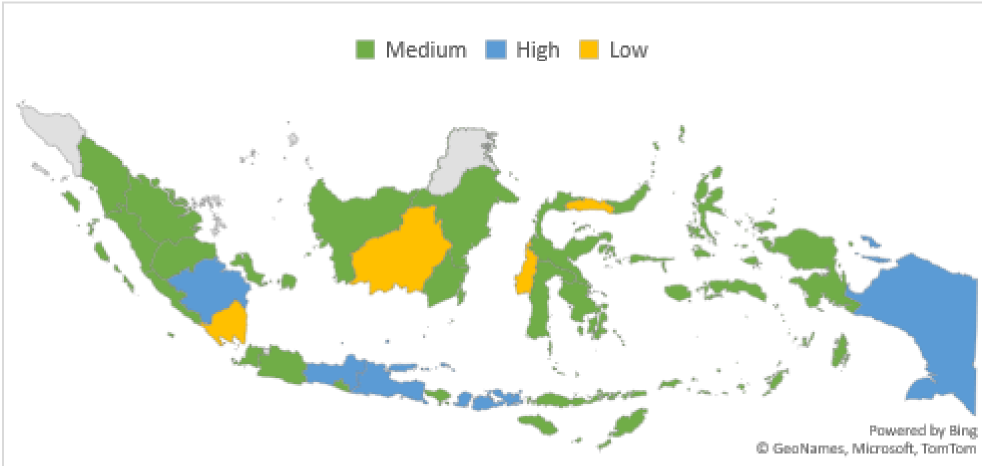

Figure 3. Regional Inequality in Indonesia in 2002 -2021
Source: Data processing, 2023

Main Finding
Theoretically, many experts have researched and acknowledged the relationship between economic growth and regional inequality. The substantiation of the Kuznets (1955) and Williamson (1965) hypotheses became an exciting study of researchers in various countries as carried out (Lessmann, 2014; Kisiała&Suszyńska, 2017; Anand & Kanbur, 1993; Martínez-Navarro et al., 2020). There is an increase in regional inequality at a time of high economic development (Lessmann, 2014; Anand&Kanbur, 1993; Martínez-Navarro et al., 2020). Based on classical economic growth models, various studies prove the direction of convergence or indicate a narrowing level of inequality, such as (Barro&Sala-I-Martin, 1992; Cuaresma et all., 2008; Banerjee&Kuri, 2015). However, several other studies have obtained different results, such as (Siriopoulos&Asteriou,1997; Sachs, Bajpai&Ramiah, 2002; Wei&Liu, 2003) in yunani dan China. Based on the results of the data article search, the main findings in the determinants of regional inequality are known in table 1.

Table 1. Determinants of regional inequality

No	Researchers	Method	Data	Findings/Results
1. Economic Growth and Regional Inequality				
1	(Kisiała & Suszyńska, 2017)	Regression	1995-2014	Williamson's inverse U hypothesis between economic growth and inequality between countries
2	(Higgins & Williamson, 2002)	Quantitative descriptive	1960-1990	Regional inequality follows the inverse U-pattern of Kuznets.

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No	Researchers	Method	Data	Findings/Results
				Openness increases regional disparities.
3	(Petrakos et al., 2011)	seemingly unrelated regression equations (SURE)	1981-1997	Regional inequality has a procyclical pattern because dynamic, developed regions grow faster in periods of expansion and slower in periods of recession.
4	(Y. D. Wei, 2015)	Literature Review		The inverse U-model shows that regional inequality tends to increase during the early stages of development and decrease as economies mature.
5	(Banerjee & Jesenko, 2015)	Panel data regression	1996-2010	GDP per capita and labour utilization have widened in Slovenia since 1999, especially in the capital region and underperforming and middle-income and poorer regions
6	(Lessmann 2014)	Panel data regression	1980-2009	Spatial inequality increases in the transition from an agricultural economy to an industrial economy.
7	(Istrate & Horea-Şerban, 2016)	Quantitative descriptive	1995-2014	There is an adjustment of economic structure, both from a territorial and temporal perspective.
8	(Artelaris, 2021)	Panel data regression	1981-2015	Areas with higher regional growth rates will tend to experience higher levels of intra-regional inequality.
9	(Sachs et al., 2002)	Regression	1980, 1998	In India, urbanization can affect economic growth. There is no convergence conditional in the 14

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No	Researchers	Method	Data	Findings/Results
				states in India.
10	(Wei and Liu 2003)		1980-2001	There is no convergence between inland and coastal areas.
2. Infrastructure and regional inequality				
1	(Chatterjee&Turnovsky, 2012)	numerical simulations		Government spending on public capital will increase inequality.
2	(Fan and Zhang 2004)	Regression	1996	Government spending on public capital will increase inequality
3	(Iqbal, Rifin, and Juanda 2019)	Panel data regression	2011-2015	Variables that significantly affect the inequality of regional economic development in Aceh Province are electricity and education variables.
4	(Sukwika, 2018)	Panel data regression	2011-2015	Strong positive correlation between the GDP per capita and infrastructure gaps between provinces.
5	(Démurger, 2001)	Regression	1985-1998	Transportation is a differentiator in the economic growth gap.
6	(Calderón & Servén, 2014)	Literature study		Infrastructure development has a positive effect on income and equity.
7	(Makmuri, 2017)	Panel data regression	2007-2013	The relationship between the infrastructure index and the income gap is positive, which means that infrastructure widens the income gap.
8	(Fleisher, 2005)	Panel data regression	1986-2003	FDI has a positive effect on infrastructure development.
9	(Hidayat et al., 2020)	Generalized Method of	2011-2017	Equalization funds and electricity infrastructure

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No	Researchers	Method	Data	Findings/Results
		Moment (GMM)		significantly reduce inequality.
3. Quality of Human Resources and Regional Inequality				
1	(Fleisher et al., 2010)	Panel data regression	1986-2003	physical capital, people, and infrastructure, as well as differences in foreign direct investment (FDI) flows, affect economic growth. Human capital investment lowers regional inequality.
2	(Iqbal et al. 2019)	Panel data regression	2011-2015	Variables that significantly affect the inequality of regional economic development in Aceh Province are electricity and education variables.
3	(Hidayat 2014)	Regression	2003-2013	The human development index and infrastructure budget are determinants of development inequality in Riau province.
4	(Naftaly, 2021)	Panel data regression	2014-2017	Public investment, government consumption, electricity infrastructure, governance quality, and institutions are the main determinants of regional growth in the long run.
5	(Syahrial et al., 2015)	Panel data regression	2005-2012	Simultaneously and partially, three independent variables (GDP per capita, Human Development Index growth, and Infrastructure Expenditure Ratio) have a significant and positive effect as the primary source of regional disparity in West Sumatra Province.

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No	Researchers	Method	Data	Findings/Results
6	(Islami & SBM, 2018)	multiple linear regression (OLS)	2001-2015	Investment variables, labour force and HDI, affect regional inequality.
7	(Li & Wei, 2010)	Regression	1990, 2000 and 2008	regional inequality China is sensitive to multi-mechanism spatial-temporal hierarchies
4. Investment and Regional Inequality				
1	(Lessmann 2013)	Panel data regression	1980–1984 until 2005–2009).	Foreign investment can lead to inequality in low- and middle-income countries
2	(Li and Wei 2010)	Panel data regression	1978–2007	Inequality between provinces decreases along with the decreasing disparity between coastal areas and cities. The spatial concentration of regional development increases, especially in the eastern region.
3	(Zhang and Fan 2004)	Panel data regression	1978-1995	Public investment in education and agricultural R&D has an impact on reducing regional inequality.
4	(Iranto and Solehati 2020)	Regression	2010-2017	GRDP has a negative and significant effect on regional inequality, and foreign investment has a positive and significant impact on regional disparities.
5	(Wei, Yao, and Liu 2009)	Regression	1979–2003	FDI increases regional inequality
6	(Ribeiro et al., 2020)	inter-regional CGE model	2013-2017	There has been a decrease in regional inequality among Northeastern states
7	(Wako, 2021)	Error-Correction	1972-2014	Economic, institutional and natural resource

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No	Researchers	Method	Data	Findings/Results
		Model (ECM)		growth has a positive effect on FDI.
8	(Maskanudin & Wibowo, 2018)	Panel data regression	2007-2016	Private investment and DAK do not affect economic development inequality.
9	(Mansyur et all., 2021)	Multiple linear regression	2010-2019	Investment has a negative and significant effect on Regional inequality
10	(Sukardin, 2018)	Panel data regression	2006-2012	Investment does not affect development inequality
5. Fiscal Decentralization and Regional Inequality				
1	(Lessmann 2012)	Regression	1980-2009	Decentralization could lead to higher regional inequalities in developing countries.
2	(Rodriguez and Ezcurra 2009)	Regression	1990-2006	In low- and middle-income countries, fiscal decentralization leads to a significant increase in regional inequality.
3	(Liao and Wei 2016)		1952-2013	Regional inequality in China is affected by three transitions, namely decentralization, marketization and globalization.
4	(Kyriacou, Muinelo-Gallo, & Roca-Sagalés, 2017)	SEM	1984-2005	Fiscal decentralization, accompanied by measures to improve the quality of governance, will be an effective strategy to reduce regional inequality.
5	(Suwanan 2009)	Panel data regression	2005-2008	The significant result of this study is that a high degree of decentralization is connected with low regional disparities. Hence, poor regions have no disadvantages from

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No	Researchers	Method	Data	Findings/Results
				decentralization; quite the contrary.
6	(Yushkov, 2016)	Panel data regression	2005-2012	Decentralization of excessive expenditure in the regions, which is not accompanied by the degree of decentralization of their respective revenues, is significantly and negatively associated with regional economic growth. In contrast, regional dependence on intergovernmental fiscal transfers from the federal centre positively correlates with economic growth.
7	(Ezcurra and Rodríguez-pose 2012)	Regression	1995-2008	There is a positive relationship between the determinants of regional inequality.
8	(Maličká n.d.)	Regression	2000-2016	The decline in tax decentralization contributes to higher regional disparities.
9	(Cardoso et al., 2022)	CGE model	2014-2018	Fiscal adjustment will widen regional inequality in Brazil.
6. Openness and Regional Inequality				
1	(Purnomo, 2020)	Regression	2000-2017	e-Trade Openness (TO) and Foreign Direct Investment (FDI) model have a positive and significant effect on ASEAN Economic Growth (G)
2	(Daumal, 2013)	Regression	1985-2004	Trade openness reduces inequality in Brazil, in contrast to India.

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No	Researchers	Method	Data	Findings/Results
3	(Zulkarnaen 2017)	Regression	1984-2011	The high level of political and economic openness has indeed increased the economic development of China and Indonesia.
4	(Duran and Erdem 2017)	Regression	2004-2011	Initially, poorer regions that experience export-based liberalization tend to grow faster than more prosperous regions.
5	(Kumo et al., 2018)	Panel data regression	1990-2010	High economic openness to foreign trade will increase inequality in income distribution.
6	(González Rivas, 2007)	Regression	1940-2000	Trade openness is more beneficial to regions with low education levels, thus reducing regional inequality.
7	(Zhang and Zou 2012)	Literature review	1978-1998	Economic and policy variables influence regional growth. Regional inequality can be caused by government policies, openness to world markets (FDI and exports), market integration, public infrastructure, educational attainment, geographical factors and migration.
8	(Sugeng Setyadi,2018)	Regression	2000-2012	Economic globalization has a positive and significant effect on the level of income inequality in ASEAN countries,
7. Population and regional inequality				
1	(Didia 2016)	Panel data regression	2008-2013	The population has a significant effect on inequality in the Kedungsepur Area.
2	(Juliana and Soelistyo	Panel data	2010-2016	The population has a

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No	Researchers	Method	Data	Findings/Results
	2019)	regression		positive and significant effect on development inequality.
3	(Kumo et al., 2018)	Regression	1990-2000	Population Growth Positively Affects Inequality
4	Ningrum, Evita Retno, 2018	Regression	2010-2018	The population has a significant positive effect on regional disparities in East Java Province.
8. Spending function for pro poor growth Against inequality				
1	(Hamzah, Masbar, and Syahnur 2013)	Panel data regression	2000-2010	Government policy interventions to improve education, health, and consumer purchasing power are needed to reduce disparities.
2	(Amalia 2017)	Multiple regression	2009-2013	The results showed that original local income and general allocation funds affect Regional Expenditure and regional disparities between the two regions. In other words, there has been a flypaper effect on regional shopping in urban districts in Indonesia.
3	(Harun and Maski 2000)	Multiple regression	2007-2011	Local Government Expenditure has a negative and significant effect on Regional Development Inequality, and Economic Growth has a positive and significant impact on Regional Development Inequality.
4	(Basuki et al., 2019)	Panel data regression	2010-2015	Fiscal policy is not effective in encouraging

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No	Researchers	Method	Data	Findings/Results
				economic growth.
5	(Mansyur, Nurisni, and Hamrullah 2021)	Regression	2010-2019	Economic growth has a positive but not significant effect on regional development inequality in South Sulawesi Province. Investment negatively and significantly impacts regional development inequality in South Sulawesi Province. Government spending can have a substantial impact on low regional development inequality in South Sulawesi
6	(Lee and Rogers 2019)	Regression	1991-2011	Central government spending tends to be greater in regions with low regional inequality. A more dispersed economic distribution will make aid widely distributable and impact increasing budgets. Conversely, in conditions of high impoverishment, the budget policy will focus more on the target group (rather than on all citizens), which causes overall government spending to be not too large.
7	(Luintel et al. 2020)	Regression	1978–2016.	Spending on education and health contributed more significantly to growth and convergence than capital expenditure.

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4. Discussion

Infrastructure development and economic openness are largely more likely to lead to increased regional inequality. Study (Arrow, 1970; Barro, 1990; Chatterjee&Turnovsky , 2012; Barkman et all., 2002; Calderón&Servén, 2014; Makmuri, 2017; Artadi&Sala-i-martin,2003; Sukwika, 2018; Iqbal et all., 2019) has found a positive direction or increased inequality caused by infrastructure development. On the other hand (Zhang&Fan, 2002; Démurger, 2001) precisely found the opposite result. Differences in the availability of public infrastructure can lead to differences in inequality between regions. Provision of public infrastructure, according to (Arrow, 1970; Barro, 1990; Chatterjee&Turnovsky, 2012), can affect productivity and economic growth (Barkman et al., 2002; Calderón&Servén, 2014; Makmuri, 2017; Artadi&Sala-i-martin, 2003; Iqbal et al., 2019).

Likewise, in terms of the impact of economic openness, where we are of the view that a higher level of openness tends to widen the gap between regions, as the study results from González Rivas, 2007; Daumal, 2013; Paluzie, 2001; Rodríguez-Pose&Sotiriou, 2021. Generally, trade liberalization is carried out more in developed and underdeveloped regions, so regional gaps will widen. According to Duran&Erdem (2017), Areas experiencing export-based liberalization tend to grow faster than import-rich regions. Economic openness affects regional inequality and can result in economic growth. Purnomo, 2020; Zulkarnaen, 2017 found a positive and significant relationship between openness and economic growth.

Moreover, (Setyadi, 2017) found that economic openness significantly positively affects income inequality in ASEAN countries. The impact of export and import trade on regional inequality is also expressed by (Rodríguez-Pose&Sotiriou, 2021), which saw trade between the said States and the poorer Countries in Greece. Pose states that trade openness has a positive relationship, and his research shows different results where economic exposure is harmful in Greece, in affluent areas, but in low-income areas. Likewise, the results of (Zhang&Zou, 2012) research show that the strength of exports has no significant effect and widens regional inequality. As for (Duran & Erdem, 2017), poorer regions that experience export-based liberalization initially tend to grow faster than import-rich areas.

In line with the influence of variable infrastructure and economic openness, we also believe that increasing investment in the regions tends to widen regional gaps. Because investment tends to come to areas that have already developed, with good infrastructure and adequate quality of human resources, additional investment will widen the income distribution gap. This condition can be found in studies by Wei et all., 2009; Lessmann, 2013; Wei&Ye, 2004; Iranto&Solehati, 2020). Although in other studies**,** Ginting (2012) and (Mansyur et all., 2021) get different results. Investment is an essential factor that plays a role in the economic growth of a region. Both domestic investment (domestic investment) and foreign investment (Foreign investment) as one component of national income will have a multiplier impact on a region's economy. Investment is a driver of economic development and can create regional inequality. (K. Wei et al., 2009) proved that foreign direct investment had been an essential factor in causing regional growth differences in China. The uneven distribution of foreign investment leads to regional economic growth differences and increases regional inequality. The study's results (Lessmann, 2013)

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suggest that foreign direct investment in low- and middle-income countries can increase regional disparities. (Y. D. Wei & Ye, 2004) found that foreign investment has widened the gap between northern and southern Jiangsu and is likely to accelerate inequality between countries in the future. Findings (Zhang & Fan, 2004) Showing similar results, Zhang looked at the contribution of public investment to regional disparities. All types of investment in less developed areas reduce regional inequality, while additional investment in coastal areas exacerbates regional inequality.

Empirical studies of the effect of investment on regional inequality are also conducted in Indonesia.(Iranto&Solehati, 2020) In Eastern Indonesia, foreign investment positively and significantly affects regional inequality. Instead (Ginting, 2012; Mansyur et al., 2021) found that investment negatively and significantly affects regional inequality in South Sulawesi province. Research (Sukardin, 2018) shows contrasting results where investment does not significantly affect regional inequality in Sumbawa. Similarly, (Maskanudin & Wibowo, 2018) found that private investment did not affect regional inequality in Kedu Residency.

The uneven distribution of the population can make regional inequality higher.(Alvaredo et al., 2019) Suggests that inequality in countries rich in natural resources is lower than in countries with large populations. In our opinion, the concentration of more population in the central area than in the regions will further widen the gap. The population is more concentrated in the western part of Indonesia than in the eastern province of Indonesia, making the gap even higher. Study results (Barika,2012; Didia,2016; Ningrum, 2018; Juliana&Soelistyo, 2019; Karaalp-Orhan, 2020) also support this, where it is found that there is a positive influence between population size and regional inequality.

Furthermore, as in the study, various studies have also found the benefits of human resource quality in reducing regional inequality. Fleisher et all., 2010; Iqbal et al., 2019; Hidayat, 2014), although the opposite result was found in the study by (Qian&Smyth, 2008), where disparities in accessing education are the leading cause of educational inequality in China. In this study, we argue that improving the quality of human resources can reduce regional inequality in Indonesia, and this is partly due to the development of information technology and digitalization to encourage equitable receipt of information, knowledge and education in various regions that have the potential to reduce inequality. Several studies in the regional context have also found the benefits of quality human resources in reducing regional disparities in Indonesia.

Other variants of concern to regional inequality in Indonesia are fiscal centralization and regional expansion. Since the reforms rolled out, fiscal decentralization has become one of the main agendas of the government, along with the formation of new autonomous regions that have occurred so massively. Even the expansion of territory in Indonesia is one of the fastest and largest in the world (Firman, 2009; Niazi, 2012; Zulyanto et al., 2019). Several empirical studies show that in high-income countries, increased fiscal decentralization reduces regional inequality (Rodriguez&Ezcurra, 2009; Lessmann, 2012). Fiscal decentralization accompanied by improved governance quality will be an effective strategy to reduce regional inequality (Kyriacou, Muinelo-Gallo, and Roca-Sagalés, 2015).

Nevertheless, implementing fiscal decentralization in Indonesia tends to increase regional inequality. Areas that are richer or have more natural resources will be able to grow faster than poorer areas that depend more on central government transfers. Indeed, there is a General Allocation Fund transfer to overcome fiscal inequality. Still, most General Allocation Fund is allocated more for employee expenditure than capital expenditure, so the effect on development is relatively limited. The percentage of capital expenditure to total spending in several regions is still relatively small, approximately 15% (Tradinatama&Solikin, 2023). Low regional fiscal capacity, which is the cause of increasing inequality in Indonesia, can also be found in the study of (Ashfahany et al., 2020).

Decentralization is an important aspect of reform and modernization in various countries because it can encourage economic development and Democratization (Faust et al., 2008). Nonetheless, according to (Hill, 2014; Phelps et al., 2014), decentralization can lead to inequality between regions, especially in developing countries. (Rodriguez&Ezcurra, 2009; Lessmann, 2012, Liao&Wei, 2016; Lessmann, 2012) proving that decentralization can lead to higher regional inequality in emerging and developing economies. (Maličká, 2019) found regional inequality occurred in Czech and Slovak countries. Regional inequality is highly dependent on development and fiscal redistribution capacity. Decentralization in high-income countries will reduce regional disparities (Rodriguez&Ezcurra, 2009; Lessmann, 2012). It also found that wealthy countries benefit from decentralization as they achieve equality in regional income distribution. As (Kyriacou et al., 2015), It is argued that the process of fiscal decentralization accompanied by measures to improve the quality of governance will be an effective strategy to reduce regional inequality in line with (Suwanan, 2009) which sees that provinces that have a high level of decentralization have low territorial gaps.

One of the government's efforts in overcoming poverty, worsening inequalities between regions and individuals, and the low quality of education, health, and infrastructure services still dominating regional problems is to multiply government spending based on function. (Bibi&Rim Chatti, 2005; Rambe et al., 2022) states that spending on education, health, economy, social protection, and infrastructure combines pro-growth and poor spending (Harun&Maski, 2000; Mansyur et al., 2021).

Government spending is one of the most effective tools of government intervention in the economy. Government expenditure is the government's consumption of goods and services and financing for government administration and development activities (Sukirno, 2002). The role of government reflected through government spending is an essential factor in increasing economic growth through increasing aggregate demand. More lavish government spending will positively impact economic growth in the area. Government spending can be an injection of the economy through programs or activities to boost the productivity of existing resources, reducing the level of development inequality in a region (Dhyatmika, 2013). Studies related to government expenditure and regional disparities are carried out by (Luintel et al., 2020), which found that government spending on education and health contributed more significantly to growth and convergence. (Lee&Rogers, 2019) More emphasis on the allocation of central government expenditures to local governments. Lee pointed out that significant government spending tends

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to be greater in areas with low regional inequality. A more dispersed economic distribution will make aid widely distributable and impact increasing budgets. Conversely, in conditions of high impoverishment, the budget policy will focus more on the target group (rather than on all citizens), which causes overall government spending to be less significant. In Indonesia, the effect of government spending on regional inequality shows mixed results. (Hamzah et al., 2013; Basuki et al., 2019) finding no impact of government spending on regional disparities. Hamzah et al., (2013) noted that the effect of government spending through the General Allocation Fund and Special Allocation Fund not significant for regional inequality, as well as (Basuki et al., 2019) which states that the short-run government spending, especially spending on education, does not affect economic growth. These results differ from the findings (of Harun&Maski, 2000; Mansyur et al., 2021), which found the negative influence of government spending on regional inequality. (Harun&Maski ,2000) found that Local Government Expenditure significantly negatively affects Regional Development Inequality. (Mansyur et al., 2021) suggest that government spending can substantially affect the low inequality of regional development in South Sulawesi. Research results (Amalia, 2017) show the difference between original local revenue and general allocation funds involving regional expenditure

5. Conclusion

Theoretically, the research results contribute ideas and are helpful for scientific development, namely regional economics and public economy, primarily related to the study of factors that affect the level of regional inequality in Indonesia, as well as the influence of regional expansion and fiscal decentralization on regional inequality in Indonesia. This study provides comprehensive research by involving the variable expenditure function, which is one of the novelty or novelty studies. Thus, this study will enrich and clarify the relationship of various related variables. Practically, the results of this research are expected to be implemented and provide practical solutions in solving the problem of regional inequality in Indonesia. This study will be a reference for all parties, both government, local government, legislature, and other wider communities, whether fiscal decentralization and the formation of new regions or regional expansion accompanied by quality spending will be beneficial for the welfare of people in Indonesia or other words regional inequality will be reduced.

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