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SPATIAL ANALYSIS OF INCLUSIVE ECONOMIC DEVELOPMENT IN INDONESIA IN 2019, 2020 AND 2021

ABSTRACT

Economic development is not only seen from the quantity of growth but also the quality of development. Inclusive economic development is an indicator that can see the quality of development. This research was conducted in all provinces in Indonesia by looking at the spatial inclusive economic development index in 2019, 2020 and 2021. The method of analysis in this study is descriptive analysis that describes the distribution of the inclusive economic development index in all provinces in Indonesia and inferential analysis shown by spatial regression models with spatial effects of the inclusive economic development index. The results showed that the distribution of the inclusive growth index in Indonesia has a spatial effect in 2019, 2020 and 2022. The clustering of high growth index is in Java Island while the low one is in eastern Indonesia. The spatial regression model shows that the inclusive economic development index has a significant spatial effect in 2019, 2020 and 2021. The variables life expectancy, average years of schooling, gross fixed capital formation and open unemployment rate have a significant influence on inclusive economic development in 2019. In 2020 and 2021 the variables average years of schooling and gross fixed capital formation have a positive influence and significant to the inclusive development index. Furthermore, it is necessary to collaborate between local governments in an effort to increase the inclusive growth index given the spatial influence. This is one of the efforts so that economic development can be enjoyed inclusively by all residents in Indonesia.

Key Words: Inclusive Growth, Development, Spatial Analysis

JEL Classification: O11, R11, Q01, O47

INTRODUCTION

Economic development is a process of change towards overall economic improvement in a region.

Economic development does not only refer to growth values but also looks at the standard of living of the community. Bachtler (2001) reveals that one of the development paradigms refers to the

equalization of economic development. The equalization of development and the improvement of community welfare remain a major issue in Indonesia, considering the still high income inequality that exists.

In 2021, the pandemic continued to impact several provinces in Indonesia

such as West Papua and Bali with growth rates of -2.77 percent and -3.63 percent respectively. Fajri and Iriani (2022) explain that the economic growth in Bali is significantly influenced by the unemployment rate.

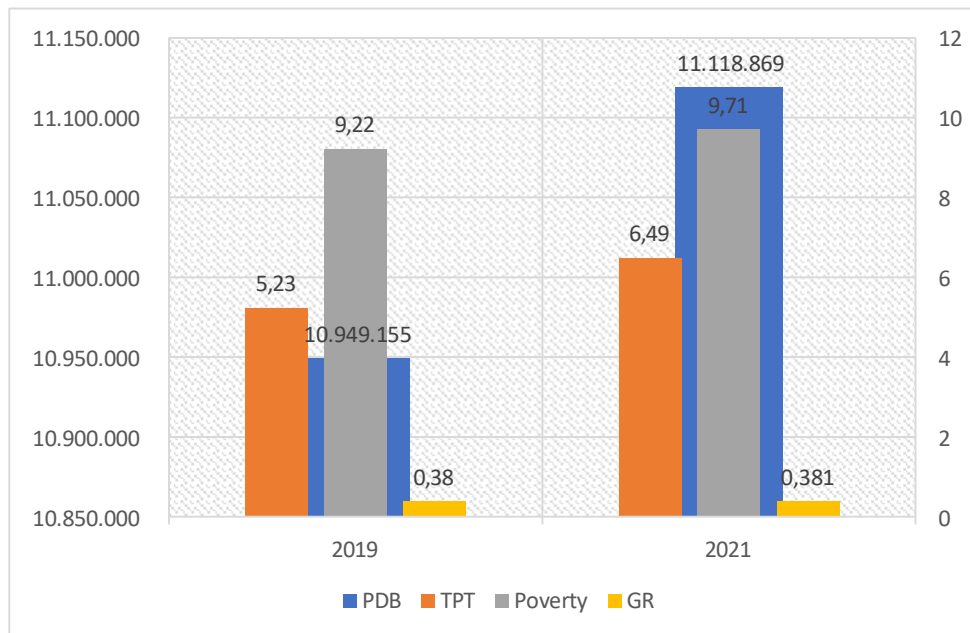


Figure 1. GRDP, Unemployment Rate, Poverty Rate and Gini Ratio in Indonesia 2019 and 2021

Source: BPS Statistics (processed)

Based on the graph, it can be seen that the GDP value in 2021 compared to 2019 has increased. However, this is not

supported by other development indicators such as the unemployment

rate, poverty rate, and economic equality.

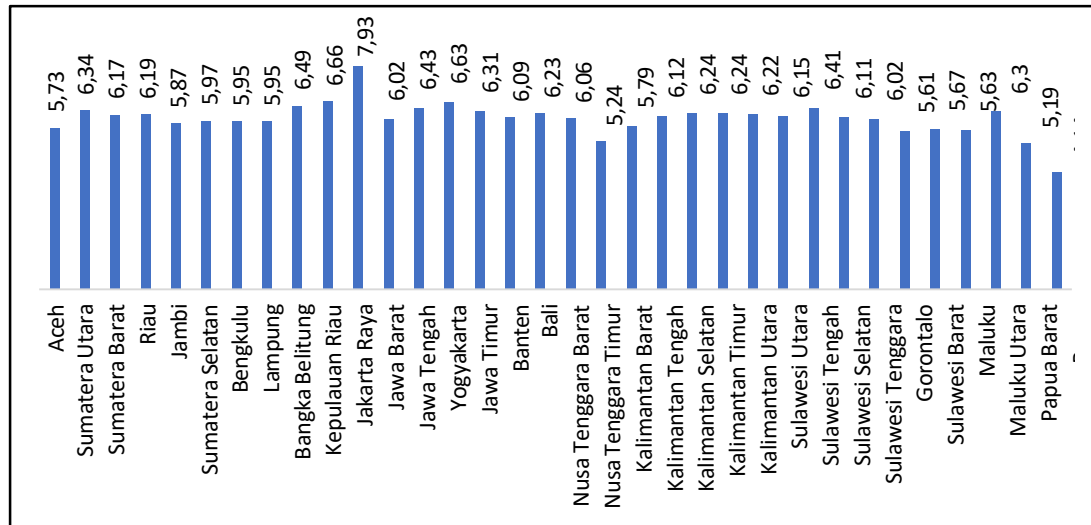
This indicates that GDP growth alone cannot be a perfect measure to describe the conditions in a region. Therefore, it is necessary to have a measure that can be used to assess the economic situation in a region more comprehensively, namely the inclusive economic development index. Ali & Son (2007) explain that inclusive economic development is growth that creates new economic opportunities and provides equal opportunities for all layers of society.

Inclusive economic development, according to Kakwani and Son (2008), is a measure that can assess the condition of a region from several aspects, namely employment absorption, level of equality, and poverty rate of a region. In 2021, all provinces already have index values above 4 or fall into the satisfactory category, but there are no provinces classified as very satisfactory or with an inclusive economic development index value of more than 8.00. Based on Figure 1.2, the value of

the inclusive economic development index in each province in Indonesia in 2021 can be seen. The value of the inclusive economic development index in eastern Indonesia tends to be low, while in Java Island it tends to have higher growth index values, with values greater than 6.00.

Spatial dependence reflects a situation where the values observed in one location or region depend on the values of neighboring observations in the nearest location (Lesage, 2009). Spatial analysis can show how the interdependence between regions and the influence of neighboring regions. The diversity of values of inclusive economic development between provinces in Indonesia indicates that there are differences in the achievement of development quality in each province. Dependency between provinces indicates that development cannot be achieved without cooperation between regions. Thus, inclusive economic development needs to be analyzed spatially by considering the

influence of neighboring regions geographically.



Source: Bappenas data

Figure 2. Inclusive Economic Development Index in Indonesia 2021

Source: BPS Statistics (processed)

RESEARCH METHOD

Classical Economic Growth

Economic growth is defined as the increase in the number of goods and services produced as a result of the development of economic activities carried out by the community (Sukirno, 2006). It is called growth because there is an increase in the ability to produce goods and services from year to year. There are several theories of economic growth. Based on classical theory, there are four factors that influence economic growth. The four factors include the amount of labor seen through the population, the amount of capital stock,

land area, and the level of technology (Sukirno, 2006). Sukirno also explained that economic development does not only look at economic growth but also its changes.

Growth Center Theory

In the analysis of spatial effects, regional aspects will be closely related to growth centers. The existence of spatial effects causes the influence of other neighboring regions (with a certain distance) on a region. Spatial effects can increase growth in other regions, but can also decrease growth in other regions. As one of the regional economic conditions discussed by Cappelo (2007, 2009) in Pasaribu (2015)

regarding the Spread Effect and Backwash Effect. Likewise in Myrdal (1957) which explains how the backwash effect occurs, the backwash effect is explained how the growth of a region increases but at the expense of the surrounding or adjacent regions.

Inclusive Economic Development

The concept of inclusive growth is a development of the concept of Pro Poor Growth, which previously existed as one of the policies implemented in developing countries (Ali, 2007). If the concept of Pro Poor Growth emphasizes growth that can provide greater benefits to the poor, then the concept of inclusive growth has a more complex scope.

The phenomenon of high economic growth followed by an increase in inequality has led to a decline in the level of public welfare, which is the main goal of development (Klasen, 2010). Developing countries are able to drive high economic growth but fail to reduce inequality (Todaro & Smith, 2011). This condition changes the traditional economic view that believes that high economic growth can be used as an indicator of successful economic development. Under these conditions, it is necessary to change the strategy from Pro Poor Growth to Inclusive Growth (Ali, 2007).

Inclusive economic growth can be said to be a new approach in growth theories (Huang & Quibria, 2013). This is in accordance with the UNDP (2017) definition that inclusive economic growth is growth that increases community participation so that the

benefits of growth are enjoyed by all parties. Singh (2017) states that inclusive economic growth is growth that is able to reduce inequality between the agricultural and non-agricultural sectors. Thus, it can be said that inclusive economic growth is not only the pursuit of high growth rates but also equality as measured by a decrease in income inequality. The long-term perspective also emphasizes sustainable growth, where inclusiveness refers to equality of opportunity in terms of access to markets, resources, and a regulatory environment that does not favor individuals (Durand, 2015). Meanwhile, Anand et al. (2013) stated in their study that there are two dimensions of inclusive economic growth, namely sustainable growth and increased community participation in the economy.

Literature Review

Based on the results of research conducted by Diaurochmah and Mulyanto (2021), it is explained that until 2019 most provinces in eastern Indonesia and western Indonesia have good inclusive growth indicators, except for Papua Province. The inclusive economic development index has a positive spatial effect according to research conducted by Tanjung (2022) with a customized migration spatial weight. Research conducted by Ji Long and Pasaribu (2017) also proves the existence of positive spatial autocorrelation in inclusive economic development. Positive spatial autocorrelation indicates that high inclusive growth tends to be

surrounded by areas with high inclusive growth as well.

Research by Afriliana (2022) found that the level of health has a positive influence on building inclusive economic development. According to research conducted by Damayanti (2021), it is shown that health levels have a significant and positive influence on inclusive growth in Indonesia. Kristyanto et al. (2018) and Hapsari (2019) in their research indicate that the UHH variable becomes an important variable in improving inclusive economic development. Safitri et al. (2021) also suggest that UHH becomes a variable that describes the quality of human resources. The study conducted by Prabandari (2018) also explains that one of the important variables in influencing inclusive growth is the level of education. His research explains that RLS (Average Years of Schooling) has a positive and significant impact on accelerating inclusive growth in East Java. Raheem, dkk (2018) juga menjelaskan bahwa tingkat pendidikan menjadi kunci penting dalam meningkatkan pembangunan ekonomi inklusif.

Another important variable that influences inclusiveness is investment. With investment in an area, development in an area will be realized. This is also in line with research conducted by Lestari et al (2021), namely investment has a positive influence to encourage an increase in inclusive growth in a country. Cili and Alkhaliq (2021) explained that investment can be a better stimulus to

increase economic growth. Tju Ji Long (2019) and Kusumaningrum (2019) also explain that the investment variable represented through PMTB has a positive and significant influence on inclusive economics. Infrastructure development drives economic growth which can improve access to job opportunities and more equitable income distribution (Panjaitan et al., 2019).

Research by Hartati (2019) and Safitri et al. (2021) shows that the open unemployment rate has an influence on inclusive economic development. Yustie (2017) and Rohmah et al. (2022) demonstrate that the poverty rate (TPT) becomes a variable that affects the poverty level in a region.

METHODS

The scope of the study includes the unit of observation in the study, namely all provinces in Indonesia. The observation unit was chosen for all provinces in Indonesia by looking at the spatial effects that occur between provinces. The analysis was also conducted on the spatial effects of inclusive economic development between provinces in Indonesia during the period before the 2019 pandemic, during the 2020 pandemic, and after the 2021 pandemic. Based on the research conceptual framework, the variables used in this study are as follows.

1. The Dependent Variable is the Inclusive Growth Index sourced

from the National Development Planning Agency (Bappenas).

2. Independent Variables are Life Expectancy (UHH), Average Years of Schooling (RLS), The level of investment represented by the PMTB variable (Gross Fixed Capital Formation), and the employment condition variable represented by the TPT (Open Unemployment Rate).

Variable Definition

The inclusive economic growth index is a tool to measure and monitor the level of inclusiveness of Indonesia's development at the national, provincial and district/city levels. The index figure consists of 3 Pillars and 8 Sub-pillars as well as 21 indicators forming the inclusive economic growth index. Life Expectancy (UHH) is the average years of life that will still be lived by someone who has reached a certain age with a mortality condition in the environment. BPS explained that life expectancy is a variable that can be used to see the level of welfare of a region and can specifically see how the health conditions in the region.

Average Years of Schooling (RLS). Based on the concept of the Central Bureau of Statistics, RLS is defined as the length of time the population takes formal education on average in a province. Economic theory defines investment as expenditure to purchase capital goods and production equipment with the aim of increasing future production capacity (Wiyono et al., 2017). The Open Unemployment

Rate (TPT) is the percentage of unemployed individuals compared to the total labor force. BPS explains that the TPT can indicate the economy's ability to create jobs capable of absorbing the existing labor supply.

Data Analysis Method

The data analysis techniques used in this research can be divided into two, namely descriptive analysis and syntactic analysis which are described as follows:

Descriptive Analysis

Descriptive analysis was conducted by describing the conditions of inclusive growth through thematic maps with ArcGIS 10.4 software. The presentation of thematic maps shows differences in the level of inclusive growth in each province in Indonesia. Descriptive analysis in describing inclusive growth in each province can also be seen through the presentation of Local Indicators of Spatial Association (LISA) statistics. Anselin (2005) explains that testing for local spatial autocorrelation can be done with LISA. The classifications built from LISA are high-high, high-low, low-high and low-low.

Spatial Autocorrelation

Before conducting inferential analysis, descriptive analysis is first carried out to see indications of spatial effects that appear. After constructing the spatial weights used in the study, then testing the spatial effect on the dependent variable with the Global Moran's I statistic is carried out. If the

resulting p-value is smaller than α (significance level) then there is a spatial effect on the dependent variable. After obtaining an indication, it will be known how the direction of spatial analysis will be built.

Spatial Regression Model

Inferential analysis in this study is used to determine the factors that influence inclusive growth can be done by building a spatial regression model with a threshold distance weighting. Building a spatial regression model can be done with Geoda software.

Building a spatial regression model to see the best model that can explain inclusive growth in Indonesia. In building a spatial regression model, the tests used are the LM (Lagrange Multiplier) test and the RLM (Robust Lagrange Multiplier) test both on the dependent spatial and on the spatial error.

The spatial regression model that has been formed can then identify the factors that influence inclusive growth in Indonesia. To see the influencing factors can be done with the Wald test with a normal distribution approach. If the p-value is smaller than the alpha value, the independent variable significantly affects the dependent variable. The Wald test hypothesis is as follows:

$$H_0 : \beta_k = 0$$

$$H_a : \beta_k \neq 0$$

With β_k is the parameter for the k^{th} independent variable and the test statistics used are as follows:

$$Wald_k = \frac{\hat{\beta}_k}{SE(\hat{\beta}_k)} \sim N(0,1)$$

Where $SE(\hat{\beta}_k)$ is the standard error of the parameter coefficient of each k^{th} variable. H_0 will be rejected if $|Wald_k| > Z_{\alpha/2}$ which indicates that with a significance level of α , the k^{th} variable has a significant effect on the dependent variable. The regression model to be built in this study is a spatial regression model. The spatial regression model that can be written in this study is as follows:

Spatial Durbin Model

$$Ik_i = \beta_0 + \rho \sum_{j=1, j \neq i}^n W_{ij} Ik_j + \beta_1 UHH_i + \beta_2 RLS_i + \beta_3 PMTB_i + \beta_4 TPT_i + \varepsilon_i$$

Ik_i : Inclusive growth for i-th province
 UHH_i : Life Expectancy Rate for i-th province
 RLS_i : Average Years of Schooling for i-th province
 $PMTB_i$: Investment for i-th province
 TPT_i : Unemployment rate for i-th province

RESULT AND DISCUSSION

1. Empirical Results

Provincial Inclusive Growth Index in Indonesia

In Figure 3, you can see the distribution of the inclusive economic development index across all provinces in Indonesia in 2019, 2020, and 2021. All provinces in Indonesia experienced an increase in index values in 2021. This increase in the inclusive economic development index values indicates an overall improvement in economic conditions. In 2021, the provinces with the highest index values were DKI Jakarta, Riau Islands, and DI Yogyakarta with values of 7.93, 6.66, and 6.63 respectively. Provinces with the lowest inclusivity values are in Papua, West Papua, and East Nusa Tenggara with values of 4.14, 5.19, and 5.24

respectively. The level of diversity in values in 2021 also increased, with a standard deviation reaching 6.062 or higher compared to the conditions in 2019 and 2020. Papua, North Maluku, and Central Sulawesi provinces saw the highest increases in the inclusive economic development index, with increases of 28.57 percent, 16.24 percent, and 12.06 percent compared to 2019. The distribution of the inclusive economic development index values in each province in Indonesia in 2019, 2020, and 2021 indicates clustering, with higher values tending to be around Java Island and lower values in eastern Indonesia. The unevenness of inclusive economic development achievements is indicated by the higher achievements of inclusive economic development in western Indonesia compared to eastern Indonesia (Sholihah et al., 2013).

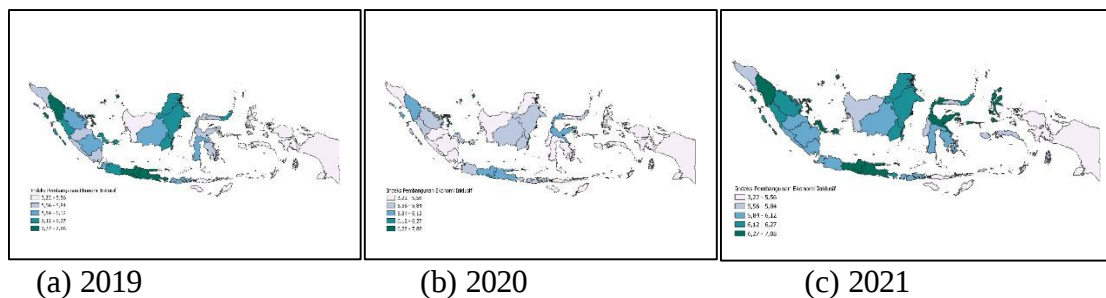


Figure 3. Inclusive Growth Index
Source: Bappenas (processed)

Spatial Testing of Inclusive Growth Index

The general or global spatial distribution pattern will be observed by conducting a Global Moran's I test. The Global Moran's I statistic is used to test

spatial autocorrelation in a variable within a specific distribution (Sukarna, 2019). A positive Global Moran's I value indicates that neighboring areas tend to

have similar values, while areas close to each other with values that tend to differ will have a negative Moran's I value (Pfeiffer, 2008).

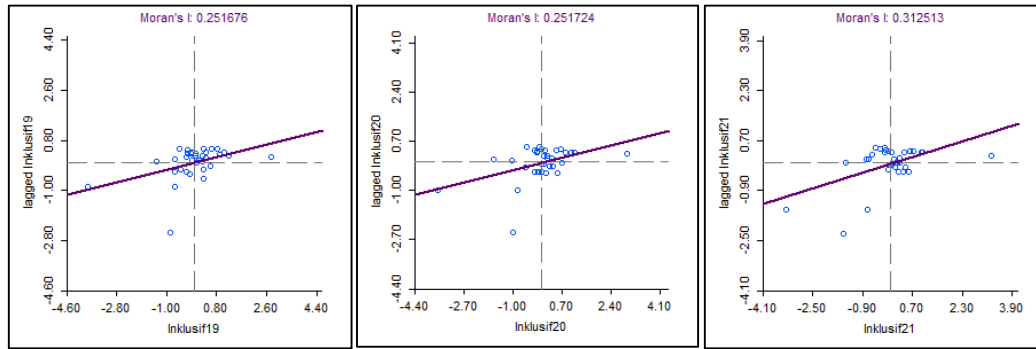
Table 1 Moran's I

Variable (1)	Global Moran's I (2)	P-Value (3)	Result (4)
Inclusive Economic Development Index 2019	0.251676	0.003000	Reject H0
Inclusive Economic Development Index 2020	0.251724	0.001000	Reject H0
Inclusive Economic Development Index 2021	0.312513	0.001000	Reject H0

Source: processed data 2023

In Table 1, the values of Moran's I index can be seen for the inclusive economic development index in each year. In 2019, the global Moran's I value reached 0.251676 and continued to increase until 2021 to 0.312513. This indicates that the spatial clustering indication of inclusive economic development among regions is increasing. In 2019, 2020, and 2021, the global Moran's I index shows positive values, indicating that

provinces with adjacent geographical areas tend to have similar values of inclusive economic development. Based on the test results, it is also shown that the test decision is to reject the null hypothesis (H0). This means that with a significance level of alpha 5%, it can be concluded that there is spatial autocorrelation or spatial effects on the inclusive economic development index in Indonesia in 2019, 2020, and 2021.



Source: Bappenas data

Figure 4. Local Moran's I

The depiction of Moran's scatter plot will also provide indications of the direction of spatial effects whether positive or negative, and show indications of the strength of spatial autocorrelation. Moran's scatter plot can be a tool to measure how similar observation values are to their neighboring observations (Mailanda et al., 2022). Based on the depiction of the Moran scatter plot above, we can see the distribution of the inclusive economic development index values in 2019, 2020, and 2021.

The provinces of Bangka Belitung, DKI Jakarta, Riau Islands, Central Java, East Java, Yogyakarta, South Kalimantan, West Sumatra, and Bali consistently remain in quadrant I in both 2019, 2020, and 2021. This indicates that these areas are solid regions that exhibit high spatial effects distribution. South Sumatra, West Kalimantan, Aceh, Bengkulu, Lampung, Jambi, Banten, West Sulawesi, and East Nusa Tenggara consistently remain in quadrant II. This indicates that these areas receive less

influence from neighboring provinces. North Sumatra and North Sulawesi consistently fall into quadrant III, indicating that they have high inclusive development values but are surrounded by relatively low-performing areas. This suggests that in the future, North Sumatra and Sulawesi need to increase their influence on neighboring regions. The provinces of Maluku, Papua, West Papua, and Southeast Sulawesi consistently remain in quadrant IV.

Inclusive Growth Spatial Regression Model

Comparing the results of spatial regression modeling of the inclusive economic development index between 2019, 2020, and 2021 needs to be done to gain a deeper analysis of economic dynamics. The economic conditions before the pandemic, during the pandemic, and one year after the pandemic indicate different economic dynamics.

Table 2. Estimated Coefficient Parameters of Spatial Regression Model for the Years 2019, 2020, 2021

Variable	2019	2020	2021
(1)	(2)	(3)	(4)
$W \times$ Inclusive Economic Development Index	0.517 ***	0.495 ***	0.601 ***
Intercept	-8.242 ***	-5.968 ***	-5.777 ***
Life Expectancy	0.058 .	0.037	0.029
Average Length of Schooling	0.577 ***	0.430 ***	0.447 ***
Ln (Gross Fixed Capital Formation)	0.131 .	0.142 *	0.131 **
Open Unemployment Rate	-0,107 *	-0.049	-0.055

Source: translated processed data 2023

Based on the spatial autoregressive model, variables such as life expectancy, average length of schooling, gross fixed capital formation, and open unemployment rate have a significant influence on inclusive economic development in 2019. In 2020 and 2021, the variables of average length of schooling and gross fixed capital formation have a positive and significant influence on the inclusive development index. The life expectancy variable has a positive but not significant influence, while the open unemployment rate has a negative but not significant influence. The spatial lag coefficients on the inclusive economic development index have a positive and significant influence in both the 2019, 2020, and 2021 models.

Spatial Lag Effect

The spatial effects of the significant dependent variable occur in the inclusive economic development index both in the pre-pandemic year of 2019, during the pandemic in 2020, and

in the year 2021. This is consistent with research conducted by Tju Ji Long (2019) and Tanjung (2022), which indicates that there are spatial effects in the analysis of inclusive economic development, characterized by positive spatial autocorrelation values and significant spatial lag variables of inclusive economic development. This means that the inclusive economic development of neighboring areas has a significant influence on the inclusiveness of economic development in a region. The consistent results of the significance of spatial effects in inclusive economic development indicate that under any circumstances, the inclusiveness of economic development can affect the inclusive economic development of neighboring regions. Inclusive economic development refers to economic development that aims for equitable distribution of development outcomes and better development outcomes. Development should also focus on people with policies and development measures aimed at serving society and improving its quality of life (Dorffell

and Schuhmann, 2020). The spatial regression coefficients show positive values for all three years, indicating that the improvement of inclusive economic development in a region also has a positive impact on its surrounding areas. This phenomenon illustrates the existence of spread effects from the increasing economic development in a region (Pasaribu, 2014). Spread effects can occur when there is an economic flow between regions (Qibti and Hendarto, 2020).

The spread effect can occur due to the mobility of skilled labor. The spread effect arises as a result of labor mobility, thereby reducing the unemployment rate in the home area (Damayanti, 2017). When skilled labor moves to a certain area, it can enhance economic development in that area, which also impacts the welfare improvement of the workers. The improved welfare of the workforce will lead to an increase in transfers to their home areas, especially to families in the home area. This can also enhance economic development in their home areas. Labor migration contributes to increased income in the home area (Purnomo, 2009). Commuting workers can also be a cause of spread effect in increasing the index of inclusive economic development. Commuting workers can work across provinces and return on the same day or return on holidays. The welfare gained at work will spread to their home areas and can improve the welfare of their home areas (Pakpahan and Manalu, 2020). Inclusive economic development can also increase due to increased economic activities in the home area, which boosts economic

growth. The income of commuting workers is also described as having an impact on increasing consumption and savings in the home area (Sinurat et al., 2022). The economic growth of one region can drive the economic growth of surrounding regions (Wibisono and Kuncoro, 2015).

From the perspective of producers, the spread effect can occur due to business expansion. The success of business development in one area can lead to the creation of new branches built in surrounding areas such as neighboring provinces. The establishment of new business developments will increase the demand for labor, which impacts the increase in economic activity in neighboring areas and can serve as an instrument in poverty alleviation (Imanullah, 2012). Another factor that can drive the spread effect is the flow of trade between regions. Qibti and Hendrato (2020) also explain that the spread effect can be triggered by the flow of trade and demand between regions. When there is trade cooperation between provinces, the relationship between regions becomes closer. When there is an increase in economic activity in one area, it will impact the surrounding areas that also serve as marketing or trade distribution destinations. The flow of products and capital can create more developed economic conditions. Similarly, when there is an economic downturn in one area, it will also affect the decrease in economic activity in areas that are destinations for trade distribution. Trade cooperation between provinces usually occurs with neighboring areas because access can be

easier and the cost of shipping goods can be cheaper and more affordable. Spatial trade connectivity between provinces has an impact on inequality (Yusuf, 2019). In their analysis, it is explained that areas with strong spatial trade connectivity are the Kalimantan and Java regions or show a "hotspot" pattern, while Sulawesi, Maluku, and Papua regions show a "cold-spot" pattern with weak connectivity. The increase in trade phenomena is further boosted by technological advancements such as the presence of online trading platforms and the increasing number of expedition businesses.

From the government's perspective, the spread effect can occur due to cooperation between governments in realizing the goals of inclusive economic development. Cooperation can occur in various areas such as improving infrastructure development, enhancing the quality of human resources, attracting investments, and distributing aid. Based on in-depth interviews with Mr. I Gede Putu Dama Suyasa, Head of the Planning and Financing Sub-Division of the Regional Development Planning Agency (Bappeda) of Bali Province, there are several focus areas for enhancing inclusive development.

The Effect of Per Capita Expenditure Variables on the Inclusive Growth Index

Life expectancy is an indicator that can be used to describe the health conditions in a region. Throughout the years 2019 to 2021, life expectancy only significantly influenced the inclusive

economic development index in 2019. An increase in life expectancy indicates an improvement in the health quality of that area. Improved health quality will impact the quality of human resources (Azizah, 2015). Life expectancy has a significant effect on the increase of inclusive economic development in 2019, as evidenced by research conducted by Kristyanto et al. (2018) and Hapsari (2019). The increase in life expectancy indicates that the health quality of the area has also improved, which also affects the quality of the workforce in a region. When the health conditions of the workforce in that area are good, the quality of human resources is also good. This will result in increased output and added value to the economy of a region. High-quality human resources will also lead to increased productivity of workers, which can create economic efficiency. When the population is healthy, all layers of society can participate and are ready to work. Maintaining health conditions will also affect the allocation of funds for other needs such as education and investment in economic activities. This shows that health factors are important in influencing inclusive economic development (Afriliana, 2022). In 2020 and 2021, the health conditions of the Indonesian population began to be disrupted due to the pandemic. This not only affects the physical condition but also the mental condition of the people. In-depth interviews conducted with Ms. Ida Rafida as a Community Health Educator in the Health Promotion and Community Empowerment Work Team at the Bali

Provincial Health Office also support the research findings.

Effect of Average Years of Schooling on Inclusive Growth Index

The level of education in a region, represented by the indicator variable of average years of schooling, is described as a key factor influencing inclusive economic development. According to BPS, the higher the average years of schooling, the higher the level of education of the population in a region. Average years of schooling (RLS) have a significant and positive impact on the inclusiveness of economic development in a region. The positive influence of average years of schooling on the inclusive economic development index remains consistently significant in the years 2019, 2020, and 2021. This indicates that the education level of the population in a region is one of the crucial keys to its advancement (Raheem et al., 2018). Prabandari (2018) also revealed that the level of education is one of the variables influencing inclusive economic development. However, if we observe the coefficient values from the spatial regression modeling from 2019 to 2021, there is a decrease. In 2020, during the pandemic, the regression coefficient of average years of schooling decreased from 0.577 to 0.430. This decrease might be due to numerous adjustments in educational governance during the pandemic, leading to remote learning and teaching practices affecting educational quality.

However, in 2021, it increased again to 0.447, indicating that students and educators had adapted well enough to enable better learning processes. High educational attainment also determines the quality of human resources in that area (Suratini, 2017). Individuals with higher levels of education tend to work in the formal sector (Maulana, 2020), leading to higher incomes. Workers in the formal sector generally have higher incomes (Desanti, 2022). Higher incomes can contribute to better economic development by boosting consumer spending and improving economic turnover. Education levels not only affect employment and income but also innovation development, creating new opportunities for business expansion.

Effect of Investment on Inclusive Growth Index

Investment plays a crucial role in the economic development of a region. According to Todaro (2000), investment in capital formation plays a vital role in increasing productivity. Gross Fixed Capital Formation (PMTB) is one of the components in increasing the economic value of a region. The PMTB value indicates spending on capital goods owned by a region, where the capital goods referred to have a lifespan of more than one year. Gross Fixed Capital Formation has a significant and positive influence on the inclusiveness of economic development in a region. Investment variables represented by PMTB in the research by Tju Ji Long

(2019) and Kusumaningrum (2019) also have a positive and significant impact on inclusive growth. Investment is also evident from infrastructure development, which can drive economic growth, improve job opportunities, and distribute income more evenly (Panjaitan et al., 2019). This investment variable also has consistent effects both before the pandemic, during the pandemic, and one year after the 2021 pandemic. This indicates that Gross Fixed Capital Formation is a vital component in increasing the index of inclusive economic development in a region. Investment and technological roles have a positive impact on inclusive economic development (Prawesti, 2023). The increase in capital goods indicates that the economic conditions in the region are improving, and the higher the formation of capital, the greater the impact on the production process. The increase in the availability of capital goods has a higher multiplier effect on economic development. An increase in output goods can expand markets and boost economic growth. The formation of capital goods in the government sector will lead to a reduction in economic inequality. This reduction can occur because the fixed capital formation by the government will become public assets that can be enjoyed by the entire population. These public assets can include infrastructure development such as roads, buildings, and machinery that can be enjoyed by all members of society without exception. Thus, the multiplier effect of

investment can be felt by all segments of society.

Effect of Unemployment Rate on Inclusive Growth Index

Labor absorption is one of the critical factors in determining the inclusiveness of economic development in a region. The open unemployment rate in 2019 had a significant negative impact on changes in inclusive economic development. The higher the unemployment rate in the region, the lower the index of inclusive economic development. Research by Hartati (2019) and Safitri et al. (2021) shows that the open unemployment rate has an influence on inclusive economic development. If the unemployment rate (TPT) increases, it indicates low labor absorption, which suggests that the community's access to job opportunities is still not maximized, leading to a decrease in the index of inclusive economic development. Inclusive economic development can be achieved if the community is provided with high opportunities and chances in development, such as contributing to job opportunities (Maryam and Irwan, 2022).

significant effect on the inclusive development index. Life expectancy has a positive but not significant effect,

CONCLUSION

The distribution of the inclusive economic development index in Indonesia is uneven, where in 2019 it tended to be high in Java Island, while it was relatively low in eastern Indonesia. The distribution of inclusive economic development in 2020 was more even due to the decrease in 2020 caused by the COVID-19 pandemic. In 2021, the distribution of the inclusive economic development index tended to be high again in Java Island and several provinces in Sumatra, while in eastern Indonesia, it tended to be low. In both 2019, 2020, and 2021, the distribution of inclusive economic development indicates clustering.

Based on the results of the global Moran's I test, the distribution of the inclusive economic development index in 2019, 2020, and 2021 significantly exhibits spatial effects. The spatial effects of the inclusive economic development index produced are positive. The positive spatial effects in 2019, 2020, and 2021 indicate that regions or provinces that are geographically close tend to have similar values of the inclusive economic development index.

Based on the spatial autoregressive model, the variables of life expectancy, average length of schooling, gross fixed capital formation, and open unemployment rate have a significant influence on inclusive economic development in 2019. In 2020 and 2021, the variables of average length of schooling and gross fixed capital formation have a positive and

while the open unemployment rate has a negative but not significant effect. The spatial lag coefficients on the inclusive economic development index have a positive and significant effect in the models for 2019, 2020, and 2021.

Badan Pusat Statistik. (2020). Persentase Penduduk Miskin (P0) Menurut Provinsi dan Daerah. Jakarta: Badan Pusat Statistik.

REFERENCES

- Ali, I., and Son, H. (2007). Measuring Inclusive Growth. *Asian Development Review*. 24(1), 11-31
- Anand, R., Mishra, M.S. dan Peiris, S.J. (2013). Inclusive Growth: Measurement and Determinants. *International Monetary Fund* (Issues 13-135).
- Anselin, Luc. (2005). Exploring Spatial Data with GeoDa: A Workbook. Urbana: University of Illinois.
- Anselin, Luc. (1988). Spatial Econometrics: Methods and Models. Netherlands: Kluwer Academic Publisher.
- Ardianti, et al. (2015). Faktor-faktor yang Memengaruhi Angka Harapan Hidup di Kabupaten Jember. *Jurnal Artikel Ilmiah Mahasiswa*. 1-6.
- Badan Pusat Statistik. (2020). Tingkat Pengangguran Terbuka Menurut Provinsi. Jakarta: Badan Pusat Statistik.
- Badan Pusat Statistik. (2020). Gini Ratio Menurut Provinsi dan Daerah. Jakarta: Badan Pusat Statistik.

- Badan Pusat Statistik. (2023). Produk Domestik Regional Bruto Provinsi-Provinsi di Indonesia Menurut Lapangan Usaha 2018-2022. Jakarta: Badan Pusat Statistik.
- Bappenas. (2022). Indeks Pertumbuhan Inklusif. Jakarta: Badan Perencanaan Pembangunan Nasional.
- Bachtler, John et al. (2001). Policies and Strategies for Regional Development: A Shift Paradigm. *Regional and Industrial Policy Research Paper Number 46*
- Cili, M. R., & Alkhaliq, Barkah. (2022). Economic Growth and Inflation: Evidence from Indonesia. Signifikan: Jurnal Ilmu Ekonomi, 11(1), 145-160. <https://doi.org/10.15408/sjie.v11i1.19848>
- Damayanti et al. (2021). Analisis Pertumbuhan Inklusif Dalam Kemiskinan di Indoneisa. *Journal of Economic Vol 3 No 3*
- Diaurrochmah and Mulyanto. (2021). Analisis Indeks Pertumbuhan Inklusif di Kawasan Barat Indonesia dan Kawasan Timur Indonesia. *Jurnal Ekonomi dan Kebijakan Publik Volume 8, No 2*
- Durand, M. (2015). The OECD better life initiative: How's life? And the measurement of well-being. *Review of Income and Wealth*, 61(1), 4-17.
- Fathy, Rusydan. (2019). Modal Sosial: Konsep, Inklusivitas dan Pemberdayaan Masyarakat. *Jurnal Pemikiran Sosiologi Volume 6 No 1*.
- Fischer, Manfred M and Getis, Arthur. (2009). *Handbook of Applied Spatial Analysis*. New York: Springer.
- Fitrianasari, Rezaneri N et al. (2022). Analisis Dampak Kebijakan Makroekonomi Terhadap Pertumbuhan Ekonomi Inklusif Provinsi di Pulau Sumatera Tahun 2015-2020. *Jurnal Kajian Ekonomi dan Kebijakan Publik*, Vol 7 (1)
- Ginting, Andi Lopa. (2023). Mengukur Dampak Pendidikan, Pengangguran, Pengeluaran Perkapita, Inflasi terhadap Kemiskinan dan Gini Ratio di Kota Makasar. *Jurnal Ilmiah Universitas Baranghari Jambi* 23, 1 (2023): 348-361
- Huang, Y dan Quibria, M. (2013). The Global Partnership for Inclusive Growth. *Wider Working Paper* (No 9292306367)
- Ji Long dan Pasaribu. (2019). Analisis Spasial Determinan Pertumbuhan Inklusif Kabupaten/Kota di Provinsi Jawa Tengah Tahun 2017. Jakarta: Politeknik Statistika STIS.
- Kakwani, Nanak dan Hyun H. Son. (2008). Pro-poor Growth: Concepts and Measurement with Country Case Studies. *The Pakistan Development Review Vol. 42 No 4*
- Klasen, Stephan. (2010). Measuring and Monitoring Inclusive Growth: Multiple Definitions, Open Question, and Some Constructive Proposals. *Asian Development Bank*

- Sustainable Development Working Paper Series No 12*
- Kristyanto, V. S. & Kaluge, D. (2018). Peningkatan Inklusivitas Ekonomi Melalui Pembiayaan Investasi Modal Manusia. *Jurnal Ekonomi Kuantitatif Terapan* Vol. 11 No.2.
- Lesage, James dan Pace, R Kelley. (2009). *Introduction to Spatial Econometrics*. Boca Raton: CRC Press.
- Lestari, dkk. (2021). Keterkaitan Globalisasi dengan Pertumbuhan Inklusif pada Negara-negara Asean Berpendapatan Menengah. Jakarta: Badan Kebijakan Perdagangan Kementerian Perdagangan
- Myrdal, G. (1957). *Economic Theory and Underdeveloped Regions*. London: Duckworth
- Panjaitan, Hendra Andy Mulia, dkk. (2019). Analisis Dampak Pembangunan Infrastruktur Terhadap Pertumbuhan Ekonomi Inklusif Provinsi Sumatera Utara. *Jurnal Ekonomi dan Kebijakan Pembangunan*, 8(1): 43-61.
- Pasaribu, Ernawati. (2015). Dampak *Spillover* dan Multipolaritas Perkembangan Wilayah Pusat-Pusat Pertumbuhan di Kalimantan. Bogor: Institut Pertanian Bogor.
- Prabandari, Niken. (2018). Analisis Inklusivitas Pertumbuhan Ekonomi di Jawa Timur dan Faktor-faktor yang Memengaruhinya. Malang: Universitas Brawijaya
- Purba, dkk. (2021). *Ekonomi Pembangunan*. Medan: Yayasan Kita Menulis
- Raheem, I.D., Isah, K.O. & Adedeji, A.A. (2018). Inclusive Growth, Human Capital Development and Natural Resource Rent in SSA. *Economic Change Restruct* 51, 29-48.
- Safitri, M. I. D., Ananda, C. F., & Prasetya, F. (2021). Analisis Dampak Belanja Pemerintah Daerah Terhadap Pertumbuhan Ekonomi Inklusif Jawa Timur. *Indonesian Treasury Review: Jurnal Perbendaharaan, Keuangan Negara, dan Kebijakan Publik*, 6(2), 85-96.
- Sholihah, Dyah Hapsari Amalina, Hutagaol, Manuntun P & Asmara, Alla. (2013). Pertumbuhan Inklusif: Fenomena Pertumbuhan Inklusif di Kawasan Indonesia Bagian Barat dan Indonesia Bagian Timur. *Jurnal Ekonomi dan Kebijakan Pembangunan* Vol 2 No 2.
- Singh, Kanwal D.P. (2017). Inclusive Growth and Poverty Reduction: a Case Study of India. *Indian Journal of Public Administration* Vol. 63 (No 4).
- Sukirno, Sadono. (2006). *Ekonomi Pembangunan Proses, Masalah dan Dasar Kebijakan* (Edisi Kedua). Jakarta: Kencana
- Todaro, Michael P and Stephen C Smith. (2009). *Pembangunan Ekonomi* Jilid I (Edisi Kesebelas). Jakarta: Erlangga

UNDP. (2017). UNDP's Strategy for Inclusive and Sustainable Growth: New York: UNDP.

World Bank. (2014). Indonesia: Menghindari Perangkap. The World Bank Office Jakarta.