Jurnal Ekonomi, Bisnis dan Pendidikan (JEBP), 2(5), 2022, 528-544
ISSN: 2798-1193 (online)
DOI: 10.17977/um066v2i52022p528-544

Analysis of factors affecting development inequality in East Java Province 2015-2019

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Paper received: 2-5-2022; revised: 20-5-2022; accepted: 27-5-2022

Abstract

One indicator of community welfare in an area is the increase in GRDP per capita. However, if the increase in GRDP is not balanced with equitable development, it will cause development inequality problems. This study describes development inequality in districts/cities in East Java using the Williamson Index. The purpose of this study is to explore the conditions of development inequality in districts/cities in East Java with the Williamson Index and its influencing variables. This study uses panel data regression analysis from 38 provinces in Indonesia for 5 years. The secondary data used were in the form of GRDP and population data in 38 regencies/cities, Locally Generated Revenue data, HDI, and Workforce in each Regency/City in East Java from 2015-2019. These panel data were then processed using Ms. Excel and Eviews10. The results of this study indicate that the level of inequality in East Java has increased every year. GRDP and LFPR have a positive effect, while Locally Generated Revenue and HDI have a negative effect. Variables that have a significant effect on alpha 0.05 or 5% are GRDP and HDI. While Locally Generated Revenue and TPAK are at a significance level of more than alpha 0.05

Keywords: development inequality; GRDP; williamson index; east java

Abstrak

Salah satu indikator kesejahteraan masyarakat di suatu daerah adalah peningkatan PDRB per kapita. Namun, jika peningkatan PDRB tidak diimbangi dengan pemerataan pembangunan, maka akan menimbulkan masalah ketimpangan pembangunan. Penelitian ini menggambarkan ketimpangan pembangunan di kabupaten/kota di Jawa Timur dengan menggunakan Indeks Williamson. Tujuan dari penelitian ini adalah untuk mengetahui bagaimana kondisi ketimpangan pembangunan di kabupaten/kota di Jawa Timur dengan Indeks Williamson dan apa saja variabel-variabel yang mempengaruhinya. Penelitian ini menggunakan analisis regresi data panel dari 38 provinsi di Indonesia selama 5 tahun. Data sekunder yang digunakan berupa data PDRB dan jumlah penduduk di 38 kabupaten/kota, data Pendapatan Asli Daerah, IPM, Angkatan Kerja di setiap Kabupaten/Kota di Jawa Timur selama tahun 2015-2019 yang kemudian data panel tersebut diolah dengan menggunakan Ms. Hasil dari penelitian ini menunjukkan bahwa tingkat ketimpangan di Jawa Timur mengalami peningkatan setiap tahunnya. PDRB dan LFPR berpengaruh positif, sedangkan Pendapatan Asli Daerah dan IPM berpengaruh negatif. Variabel yang berpengaruh signifikan pada alpha 0,05 atau 5% adalah PDRB dan IPM. Sedangkan PAD dan TPAK berada pada tingkat signifikansi lebih dari alpha 0,05

Kata kunci: pemerataan pembangunan; PDRB; Indeks Williamson;Jawa Timur

1. Introduction

Economic growth is one indication of the success of economic development. In general, economic development is defined as a process that results in an increase in people's per capita income in the long term. One of the success factors of development in a country is the existence of equitable development. Equitable development is not an easy matter, seen from the many indicators that must be met in order to achieve an equitable welfare and development. However, if rapid economic growth is not balanced with equitable development, it will result

in a problem commonly referred to as inequality. Inequality is a common thing that occurs in every country, both developed and developing countries. The only difference is the level of inequality itself.

In general, inequality also occurs due to differences in resources and differences in demographic conditions in each region. As a result of this difference the ability of a region in the development process also becomes different, therefore it is not surprising that in an area there are usually developed areas and underdeveloped areas. (Mopangga, 2011). Economic inequality is often used as an indicator of differences in average income per capita, between income level groups, between employment groups, and or between regions.

According to Arsyad (1999) regional or regional economic development is a process in which local governments and communities manage available resources and form a collaboration between local governments and the private sector to create new jobs and stimulate the development of economic activity (economic growth). in the region. The success of regional economic development is largely determined by development policies that are based on efforts to increase economic growth that are able to create employment opportunities optimally in terms of quantity, productivity and efficiency. In determining policy, it must take into account both internal conditions and external developments. The difference between internal and external conditions is only in area coverage, where internal conditions cover regional/regional areas, while external conditions cover national areas.

East Java is one of the provinces in Indonesia which is an industrial center. East Java has 29 regencies and 9 cities. Regional economic development is a process in which the Regional Government and the community manage existing resources, by establishing partnership patterns between the Regional Government and the private sector for job creation, and can stimulate economic growth in the region concerned. Regional economic development aims to increase the number and types of opportunities for local communities. In addition, regional development is also aimed at improving the quality of the community, optimal economic growth and equity, and improving people's living standards. In essence, development inequality is an economic inequality that leads to inequality and poverty.

The population in each district/city in the East Java Province greatly affects the amount of per capita income in each economic sector and besides that it can also be influenced by high or low GRDP. The difference in the level of GRDP per capita owned by each Regency/City causes inequality. This is indicated to cause inequality between regencies/cities in East Java Province. According to data published by the Central Statistics Agency (BPS) of East Java Province, the population in East Java has increased every year. In 2015 the population in East Java amounted to 38,847,561 people, in 2016 it was 39,075,152 people, in 2017 it reached 39,292,971 people, in 2018 it was 39,500,851 people, and in 2019 the population of East Java was equal to 39,698,631 inhabitants. The population in the East Java region continues to increase every year, due to the addition of production factors in an area and economic growth in an area can be seen through GRDP per capita. GRDP is defined as the amount of added value produced by all business units in a region, or is the total value of final goods and services produced by all economic units in a region and one of the tools to measure economic success in a region is regional economic growth. itself. (Sukirno, 2006).

Areas that become economic centers and developing economies with high trade traffic and demand will attract investment. However, a fairly high concentration of economic activity

in one particular area will affect development inequality between regions (Sjarifzal, 2012). Inequality in East Java is still high. This indicates that the distribution of development in East Java is still not optimal. It can be seen from the calculation of the 2015-2019 williamson index below.

Figure 1. East Java Williamson Index
Source: BPS East Java Province (Processed)

In 2015 the inequality rate in East Java according to the Williamson index was 0.957. Then in 2016 it increased to 0.958. Furthermore, in 2017 it also increased by 0.961. In 2018 there was another increase of 0.965. The last one in 2019 experienced a fairly high increase from 0.965 to 0.971. Based on the following inequality level criteria:

Williamson index > 0.5	= high inequality
Williamson index 0.35 – 0.5	= moderate inequality
Williamson index < 0.35	= low inequality

This is not a good thing, because the high inequality rate means that equity development is still not implemented properly and there are still gaps between regions.

Inequality in development between regions can also arise because the HDI between regions is different. The HDI calculation is obtained from three indicators, namely the level of health, education level, and a decent standard of living, where these indicators are interrelated with one another. Dumairy stated that the HDI has an influence on regional inequality caused by the quality of human development in an area that will affect the productivity of the population. If the HDI increases, it will affect economic growth which will have an impact on reducing development inequality. This is in accordance with the endogenous theory of *human capital* that economic growth is the result of the decisions of economic actors who invest in the field of knowledge (Arsyad, 1999).

Another factor that can affect development inequality is local revenue. The ability of a region to generate income varies greatly, depending on the conditions of each region concerned whether it has a wealth of resources or not, or an area with a high or low intensity of economic activity. As a result of this difference the ability of a region in the development process also becomes different, therefore it is not surprising that in an area there are

usually*developed regions*and*underdeveloped regions*. Inequality in development can also be seen vertically, namely differences in income distribution and horizontally, namely differences between developed and underdeveloped regions (Sjafrizal, 2012).

Based on the explanation above, inequality in development occurs because of the factors that influence it. To find out what variables affect development inequality, further research is needed on development inequality in East Java which will later be used as a basis for taking steps to minimize inequality in East Java.

Economic Growth Theory

According to Boediono (1985), economic growth is the process of increasing output per capita in the long run. Here, the process gets emphasis because it contains a dynamic element. Today's development science theorists are still refining the meaning, nature, and concept of economic growth. These theorists state that economic growth is not only measured by the increase in GDP and GRDP, but is also given immaterial weights such as enjoyment, satisfaction, happiness, security, and peace felt by the wider community (Arsyad, 1999).

Regional economic growth is the increase in community income that occurs in an area, namely the increase in all added value that occurs in the area (Tarigan, 2005). The calculation of regional income was initially made at current prices, but in order to be able to see from time to time it must be expressed in real values, meaning in constant values. Regional income describes the remuneration for production factors operating in the area (land, capital, labor and technology), which roughly describes the prosperity of the area.

Economic Development Theory Economic

Development is a series of activity processes carried out by a country to develop economic activities or activities to increase living standards or prosperity (per-capita income) in the long term (Subandi, 2011). Economic development is also a process in which the per capita income of a country increases over a long period of time, provided that the number of people living below the absolute poverty line does not increase and the distribution of income does not become more unequal (Kuncoro, 1919).

In economic development, supporting factors are needed so that the development process can run according to development goals. According to Jhingan (2000), one of the main factors in economic development is the formation or accumulation of capital. Capital formation includes both material and human capital. There are various opinions, that in economic development only material capital is needed, but there are also those who argue that human capital is also needed in economic development. With the formation of capital, it is hoped that the main goals of development will be created.

Regional Development Theory

granting of greater authority to local governments is intended so that the development process is adapted to the main problems experienced. The main problem in regional development lies in the emphasis on development policies that are based on*endogenous development*by using the potential of human resources, institutions and physical resources locally (Arsyad, 1999). Meanwhile, the success of regional development, apart from being a form of contribution to national development, is also aimed at optimizing the potential

possessed by the region, creating new job opportunities and stimulating an increase in economic activity.

Regional development efforts can be in the form of regional prosperity, community prosperity or both. As explained in Sjafrizal (2012), development in realizing regional prosperity (*place prosperity*), is intended to make the physical condition of the area better. Such as, facilities and infrastructure, housing and residential environment, community economic activities, social service facilities in the fields of education and health, environmental quality, etc. Increasing regional prosperity can encourage rapid increase in economic growth and employment, this is because good regional conditions can attract investors to invest their capital.

Theory of Development

Inequality Inequality appears along with the development process. Based on the Neo-Classical hypothesis, at the beginning of the development process in a country, inter-regional development tends to increase. This process will occur until the inequality reaches a peak, if the development process continues then the development inequality between regions will gradually decrease. Inequality of economic development between regions is a phenomenon that occurs in the process of regional economic development. One of the objectives of regional economic development is to reduce disparities. The increase in per capita income does indicate the level of economic progress of a region. However, the increase in per capita income does not always indicate that the distribution of income is more equitable. Often in developing countries, the economy emphasizes the use of capital rather than labor so that the benefits from the economy are only enjoyed by some people. If it turns out that national income is not enjoyed equally by all levels of society, it can be said that inequality has occurred.

According to Williamson (1965) with regard to regional economic development, regional inequalities become larger and development is concentrated in certain areas. At a more advanced stage, judging from the economic growth, it appears that the balance between regions and disparities is significantly reduced. Inequality between regions is a common aspect in the economic activities of a region. This inequality occurs due to differences in the content of natural resources and differences in demographic conditions found in each region. This difference causes the ability of a region to encourage the development process to also be different. Therefore, in each region there is usually a developed region and an underdeveloped region. Theoretically, the problem of inequality between regions was first raised by Douglas C. North in his analysis of Neo Classical Growth Theory. In this theory, a prediction is made about the relationship between the level of national economic development of a country and the inequality of development between regions. This hypothesis became known as the Neo Classical Hypothesis. According to this hypothesis, at the beginning of a country's development process, development inequality between regions tends to increase. If the development process continues, the development gap between these regions will gradually decrease.

To measure the existence of disparity or inequality, it is necessary to first distinguish between measuring inequality in the distribution or distribution of income and measuring inequality in economic development between regions. In general, to determine the magnitude of inequality in the distribution of income used measuring tools such as the Gini Ratio, Lorenz Curve. Meanwhile, to determine the level of development inequality between regions, measuring instruments such as the Williamson Index and Theil's Entropy Index are used.

Williamson

Index The Williamson index is a measuring tool to measure regional inequality or development disparities in an area which was introduced by Williamson & Swanson (1966) According to Sjafrizal (2008), the Williamson inequality index is an analysis used as an index of regional inequality, with using the Gross Domestic Product (GDP) per capita as the basic data. The Williamson index can be measured by the following formula:

$$IW = \frac{\sqrt{\Sigma\,(Y_i - Y)^2 \; {fi}/{n}}}{Y}$$

IW = Williamson Index
Yi = Per capita GRDP in the Regency/City of East Java Province
Yi = GRDP of East Java Province
Fi = Total population in the Regency/City of East Java Province
n = Total population in East Java Province

The Williamson index ranges from 0 < IW < 1, where if the calculation results are close to zero, it means that the inequality of development in the area is relatively small. Meanwhile, if it is close to number one, the inequality of development in the area studied will be even higher.

Locally Generated Revenue

Revenue Definition of Locally Generated Revenue, Locally Generated Revenue is the revenue obtained by the region from sources within its own territory which is collected based on regional regulations in accordance with applicable laws and regulations. The regional income sector plays a very important role, because through this sector it can be seen how far a region can finance government activities and regional development. Sources Locally Generated Revenue, namely: (a) Regonal Taxes, Regional. (b) Retribution, consisting of: General Service Retribution, Business Services Retribution, and certain Licensing Retribution. (c) The results of regionally owned companies and the results of the management of regional assets are separated. (d) Other

legitimate Locally Generated Revenue, namely: Unseparated proceeds from the sale of regional assets, undivided utilization or utilization of regional assets, demand deposit services, interest income, claims for compensation, gains on the difference in the exchange rate of the rupiah against other currencies foreign countries, and commissions, discounts, or other forms as a result of the sale and/or procurement of goods and or services by the regions.

Human Development Index

Index The Human Development Index (HDI) is an indicator used to measure one of the important aspects related to the quality of economic development outcomes. The economic theory of human capital theory was pioneered by the Nobel Prize winners for economics, namely Gary Becker, Edward Dension and Theodore Schultz. This theory explains that people who have a higher level of education as measured also by the length of time in school, will have jobs and higher wages than those with low education. If wages reflect productivity, the more people who have higher education, the higher the productivity and the result will be a higher economy (Jhingan, 2000).

In development practice in many countries, at least in the early stages of development generally focus on increasing production. Although there are many variants, basically the keyword in development is capital formation. The definition of human capital formation according to Harbison (1962) is the process of obtaining and increasing the number of people who have the skills, education and experience that are decisive for the economic and political development of a country. Human capital formation is therefore linked to investment in people and their development as a creative and productive resource.

According to Tambunan (2001), HDI can also be used as a social indicator to measure the level of development disparities between regions. Hypothetically, it can be said that the better the development in an area, the higher the HDI of the area.

Labor Force

Amount of labor supply in the community is the number of people who offer their services for the production process. Some of them are already active in their activities that produce goods and services, which are called working groups or *employment persons*. Others are classified as ready to work and are trying to find a job called job seekers/unemployed. In this case, the increase in population growth will greatly affect the growth in the labor force. The greater the number of people of working age, automatically the number of workers will also increase. The workforce can also be interpreted as a population aged 10 years and over who are able to be involved in a production process. A person who is classified as a worker, namely those who are already active in their activities in producing goods or services or those who do work or work for a week with the intention of earning at least 1 hour a week should not be interrupted (Subri, 2003). The number of people who work and job seekers is called the *labor force* (Simanjuntak, 1985).

2. Method

This research used quantitative research. The type of data used in this study is secondary data in the form of panel data, which is a combination of time series data from 2015 to 2019 (5 years) and cross section data from 38 regencies and cities in East Java province.

The data collection technique in this study uses a documentary study technique, namely by taking data from the publications of the Central Statistics Agency nationally and regionally covering 38 regencies and cities in the province of East Java. This study uses the Williamson Index to measure development inequality. Meanwhile, to measure the effect of the dependent variable on the independent variable using panel data regression equation analysis with the Fixed Effect Model (FEM) model through the Eviews10 software.

The Williamson index is used to determine the condition of development inequality in 38 districts and cities in East Java province with the following formula:

$$IW = \frac{\sqrt{\Sigma\,(Y_i - Y)^2 \; {fi}/{n}}}{Y}$$

IW = Williamson Index
Yi = GRDP city/district
Yi = Provincial GDP
Fi = total population in city/district

n = Total population in province

Williamson Index values range from 0 – 1 (positive). The greater the index value, the greater the level of income disparity between regions. On the other hand, the smaller the index value, the smaller the level of inequality in the region. High inequality occurs at index values above 0.50. Meanwhile, inequality is said to be low if the index value is below 0.50.

Meanwhile, to measure the effect of the dependent variable on the independent variable, the panel data equation is used as follows:

$$\mathbf{Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e}$$

Description:

Y	= Williamson's index
a	= constant
b1-b7	= regression coefficient of independent variables
X_1	= Gross Regional Domestic Product
X_2	= Locally Generated Revenue
X_3	= Human Development Index
X_4	= Labor Force

study uses several tests to select the best model. The Chow test was used to choose between the CEM (Common Effect Model) and and FEM (Fixed Effect Model) models, while the Hausman test was used to choose between the FEM (Fixed Effect Model) and and REM (Random Effect Model) models. Meanwhile, the classical assumption test carried out in this study was in the form of normality test, heteroscedasticity test, multicollinearity test, and autocorrelation test. The hypothesis test carried out in this study is the T test to determine the partial effect between each independent variable on the dependent variable, the second test is the F test, which is to determine whether there is a mutual influence between the independent variables on the dependent variable. Then test the analysis of the Coefficient of Determination (Adjusted R Square) to determine the percentage of the influence of the independent variable as a whole on the value of the dependent variable.

3. Results and Discussion

3.1. Inequality of development

Inequality in East Java is still high. This indicates that the distribution of development in East Java is still not optimal. It can be seen from the calculation of the 2015-2019 williamson index below. The increase in the value of the Williamson index is caused by changes in the Gross Regional Domestic Product (GDP) per capita and the population which continues to increase every year.

In 2015 the inequality rate in East Java according to the Williamson index was 0.957. Then in 2016 it increased to 0.958. Furthermore, in 2017 it also increased by 0.961. In 2018 there was another increase of 0.965. The last one in 2019 experienced a fairly high increase from 0.965 to 0.971. Based on the following inequality level criteria:

Williamson index > 0.5	= high inequality
Williamson index 0.35 – 0.5	= moderate inequality
Williamson index < 0.35	= low inequality

This indicates that inequality in East Java starts from 2015-2019 increased. This is not a good thing, because the high number of inequality means that equitable development has not been implemented properly and there are still gaps between regions.

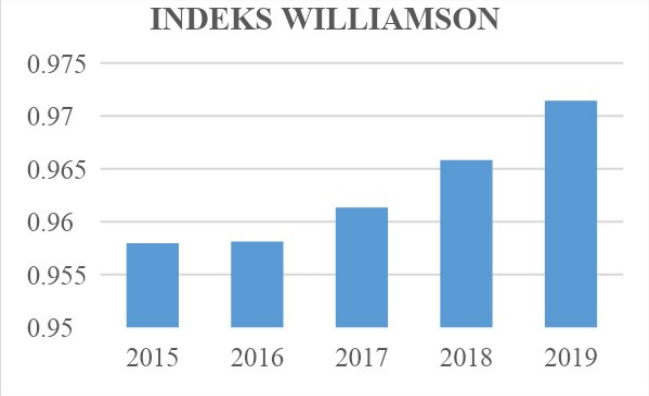

Figure 2. East Java Williamson Index
Source: BPS East Java Province (Processed)

3.2. Factors Affecting Development Inequality in East Java

Based on panel data estimation using eviews10, the model selection was carried out through two tests, namely the Chow test and the Hausman test with results as shown in the Table 1:

Table 1 Model Selection

Jenis Uji	Effect Test	Prob	Hasil
Chow	CEM-FEM	0.0000	FEM
Hausman	FEM-REM	0.0038	FEM

Source: Processed data (2021)

Based on the Chow test the value of the Prob Cross Section chi square is 0.0000 which means less than 0.05 or 5%, then the FEM model is more suitable to be used in this study. Based on the Hausman test, the value of the Prob Cross Section chi square 0.0038 , which means less than 0.05 or 5%, then the FEM model is more suitable to be used in this study.

From the two tests above, it can be concluded that the FEM model is the best model of this research. With the FEM model, the results of the regression analysis obtained are as follows:

Table 2. Analysis of Regression Results Using FEM

Variable	Coefficient	Probability
GRDP	0.073029	0.0091
LOCALLY GENERATED REVENUE	-0.000943	0.8519
HDI	-0.002029	0.0374
LFPR	4.31E-05	0.7906
C	-0.075892	0.2311
R Square		0.998949
Adjusted Square		0.998658
F-Statistic		3430.497

Prob (F-Statistic)	0.000000

From the *Fixed Effect Model (FEM),* the equation model is obtained as follows:

Y = -0.075892 + 0.073029X1 -0.000943X2 -0.002029X3 + 4.31E-05X4 +e

From the data above, it can be seen that the panel data regression uses the *Fixed Effect Model (FEM)* and the results show that the Williamson Index has a negative coefficient of -0.075892 , which means that if GRDP, Locally Generated Revenue, HDI, and LFPR are zero (0) then the Williamson Index is -0.075892% . If GRDP has increased by 1%, the Williamson Index has increased by 0.073029% and vice versa. If Locally Generated Revenue has increased by 1%, the Williamson Index has decreased by 0.000943% and vice versa. However, if the HDI increases by 1%, the Williamson Index also decreases by 0.002029% and vice versa. Then if the LFPR increases by 1%, the Williamson Index also increases by 4.31E-05% and vice versa.

Based on the results of the T test, it is known that the GRDP variable has a probability of 0.0091, so it can be interpreted that GRDP has a significant effect on the Williamson Index because the probability value is less than 0.05 or 5%. Then, the Locally Generated Revenue variable has a probability of 0.8519, so it can be interpreted that Locally Generated Revenue has no significant effect on the Williamson Index because the probability value is more than 0.05 or 5%. Then the HDI variable has a probability of 0.0374, so it can be interpreted that the HDI has a significant effect on the Williamson Index because the probability value is less than 0.05 or 5%. Meanwhile, the LFPR variable has a probability of 0.7906, so it can be interpreted that the LFPR has no significant effect on the Williamson Index because the probability value is more than 0.05 or 5%.

Next, the F-test from the Table 2, it can be seen that the F-count value is 3430,497 with a probability of 0.000000. so that it can be interpreted that simultaneously GRDP, Locally Generated Revenue, HDI, LFPR have a significant effect on the Williamson Index, because the probability value is smaller than 0.05 or 5%. The coefficient of determination shows the value of R^2 in this study is 0.998949. This means that the percentage that can be explained by the independent variable is 99% and the remaining (100%-99%) 1% is explained by other variables outside the model.

Classical Assumption Test used to determine whether this research is feasible or not to use is normally distributed residuals (normality test), between independent residuals (autocorrelation test), and homogeneity of residual variance (heteroscedasticity test), and between independent variables not correlated (multicollinearity test).). The results of the classical assumption test in this study are as follows:

3.2.1. Normality Test

	LOG_GDRP	LOG_PAD	IPM	TPAK
LOG_PDRB	1.000000	0.766073	0.180695	-0.257971
LOG_PAD	0.766073	1.000000	-0.163583	-0.046623
IPM	0.180695	-0.163583	1.000000	-0.299556
TPAK	-0.257971	-0.046623	-0.299556	1.000000

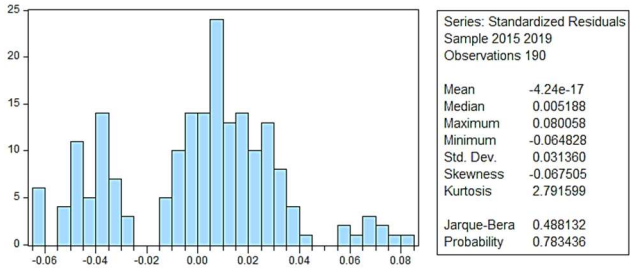

Figure 3. Standardized Residuals Sample

From the Figure 3, it can be seen that the results of Jarque Bera have a value of 0.488132 and a probability value of 0.783436. This study is said to be normally distributed because the probability value is above 0.05 or 5%.

3.2.2. Multicollinearity

Table 3. Coefficient Correlation of The Variables

From the table 3, it can be seen that the correlation coefficient between the independent variables studied has a value less than 0.85. therefore it can be concluded that there is no symptom of multicollinearity between the independent variables in the study.

3.2.3. Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.029485	0.030310	0.972780	0.3322
LOG_PDRB	-0.022914	0.013267	-1.727097	0.0862
LOG_PAD	0.003487	0.002421	1.440377	0.1519
IPM	0.000770	0.000464	1.661180	0.0988

Table 4. Coefficient Correlation Of Heteroscedasticit Symptoms

TPAK	-6.03E-05	7.77E-05	-0.775847	0.4391

From the Table 4, it can be seen that in all variables there are no symptoms of heteroscedasticity because the probability value for each independent variable is above 0.05 or 5%.

3.2.4. Autocorrelation Test

Autocorrelation Positive	Area Doubtful	No Autocorrelation	Area Doubtful	Autocorrelation Positive
dL	dU	4-dU	4-dL	
1.7089	1.8168	**2.142196**	2.1832	2.2911

The data above explains the Durbin Watson value of **2.142196**. In the Durbin table, it is explained that the dL value is 1.7089 and the dU value is 1.8168. From the picture above, it can be concluded that the regression model does not have autocorrelation symptoms because Drubin Watson's results are at the "no autocorrelation" point and are between dU and 4-dU points.

3.3. The Effect of Gross Regional Domestic Product (GRDP) on Development Inequality

results show that GRDP regression has a positive effect on development inequality. The GRDP variable coefficient of 0.073029 with a probability of 0.0091 explains that a 1% increase in GRDP will be followed by an increase in development inequality of 0.073029%. Partially, the GRDP variable has a probability value of 0.0091 which is smaller than = 5% (0.0033 < 0.05) which means that there is an influence between GRDP partially on the analysis of factors that influence inequality in economic development in East Java Province.

The early stages of a region's economic growth, the distribution of income tends to deteriorate, then at a later stage the distribution of income between regions will improve. The size of the population of an area affects the value of GRDP per capita, while the size of the value of GRDP per capita is highly dependent on the potential of natural resources of production factors found in a particular area. The increase in real GRDP per capita can be seen from the per capita GRDP figure based on constant prices with the base year 2010. Namely GRDP per capita quotient of GRDP calculated using fixed prices in one particular year as the basis divided by the total population in one particular year. .

GRDP has an effect on inequality due to differences in the economic driving sectors in each region. Differences in economic driving sectors will have an impact on different GRDP

growth rates in each region. This difference occurs because the growth process is too focused on expanding sectors that have high productivity, such as the trade sector, industrial sector, and tourism sector. Cases like this will result in developed regions and underdeveloped regions. Economic growth carried out to improve people's welfare often runs quickly, but is not balanced with equity. This is a trigger for inequality. In addition, the positive relationship between GRDP and inequality can also be caused by the increase in people's per capita income which is still not evenly distributed.

3.4. The Effect of Locally Generated Revenue on Development Inequality

From the regression results, it is known that the Locally Generated Revenue variable coefficient is -0.000943 with a probability of 0.8519. When compared to the 5% significance level, the probability is greater than the significance level. This shows that Locally Generated Revenue has a negative and insignificant effect on inequality in economic development. This means that a 1% increase in the value of Locally Generated Revenue will be followed by a decrease in inequality in economic development by 0.000943%. This is in line with research conducted by Nurhuda, et al (2013) which revealed that Locally Generated Revenue has a negative effect on development inequality. The role of Regional Original Revenue in reducing inequality is considered incapable because Locally Generated Revenue itself is allocated more for routine expenditures such as: personnel expenditures, goods expenditures and others that are routine every one fiscal year, not for investment development spending so that it is useful in the future.. In contrast to Ahmad Raafi, Dedi Budiman Hakim, & Eka Intan Kumala Sari (2018) who have the opinion that Locally Generated Revenue has a positive effect on regional inequality but is not significant. Locally Generated Revenue is a source of regional income originating from regional taxes, regional levies, BUMD results and other legitimate regional original revenues. The role of Locally Generated Revenue is as a source of revenue and financing for local governments because it is a benchmark in the implementation of regional autonomy. East Java Regional Original Income has increased significantly every year. With the increase in Locally Generated Revenue, it is hoped that it will reduce the number of development inequality in East Java.

3.5. The Effect of Human Development Index on Development Inequality

From the regression results, it is known that the HDI variable coefficient is -0.002029 with a probability of 0.0374. When compared with the 5% significance level, the probability is smaller than the significance level. This shows that HDI has a negative and significant effect on inequality in economic development. This means that a 1% increase in HDI value will be followed by a decrease in inequality in economic development by 0.002029%.

Good quality human resources in East Java can promote better economic activities. The level of health and education level of the community will produce quality human resources to support significant economic movements. If the quality of human resources in an area is better, this will trigger good economic growth as well. The Human Development Index as a measure of the success of an area in human development can have an effect on increasing the level of economic growth which in turn can reduce development inequality and produce security and welfare among citizens and have an impact on economic growth. This is in accordance with the Human Capital Theory, namely that education has an influence on economic growth and will reduce income disparities. This result is also in accordance with research conducted by Yosi,

et al (2013) that HDI has a significant effect on income inequality. The Human Development Index can reduce development inequality because human development can improve aspects of education, health and public spending. These results are reinforced by the theory of Todaro and Smith (2004) which states that there are factors such as health and education that can overcome the existing gaps. By improving the quality of human resources, it will increase regional per capita income and reduce inequality.

3.6. The Effect of Labor Force Participation Rate (LFPR) on Development Inequality

Based on the regression results, it is known that the LFPR variable coefficient is 4.31 with a probability of 0.7906. When compared to the 5% significance level, the probability is greater than the significance level. This shows that LFPR has a positive but not significant effect on inequality in economic development. This means that a 1% increase in the LFPR value will be followed by an increase in inequality in economic development of 4.31%. According to Sukirno (2006), the labor force is the number of workers in an economy in a certain period. The workforce itself consists of 2 groups, namely the working group and the unemployed group. In society, there are those who are not counted or included in the labor force category, such as residents who are still attending school, those who take care of the household and groups of people who receive income. Judging from the fluctuations that occurred in the LFPR and the results of the study, it can be said that in the 2015-2019 period the labor force did not have an influence on reducing development inequality. This can happen because the research period is not too long, so that if the components in the LFPR, such as the labor force and the number of people of working age, do not experience significant changes. Positive and insignificant results of LFPR on development inequality indicate an increase in the number of LFPR which increases inequality insignificantly.

The Labor Force Participation Rate (LFPR) is an indicator used to measure how much of the working age population is actively involved in the economy. This indicator is a comparison between the labor force and the working age population. In 2019, the LFPR in East Java was recorded at 69.45 percent, which means there are around 69 people in the workforce for every 100 working age population. This figure increased compared to LFPR in the previous year (69.37 percent). The 2019 LFPR according to districts/cities in East Java shows a diversity that ranges from 63.11 percent to 79.55 percent. The highest LFPR (79.55 percent) occurred in Pacitan Regency, and the lowest LFPR occurred in Bangkalan Regency (63.11 percent).

According to Sukirno (in Hidayat, 2014), production in general is not always followed by an increase in the production of goods and services of the same magnitude. With a workforce that can fulfill and increase the production of goods and services, it will increase the GRDP per capita of the area. According to Solow's theory (in Najiah, 2013) which suggests that the combination of the amount of capital and labor used will produce different levels of output and different levels of efficiency. The level of labor force participation is one of the factors that affect the amount of output of an economic activity, so that the more people are productive, it will produce high output which affects GRDP as well as per capita income, increasing LFPR in an area.

The increase in population will affect the number of the workforce in East Java. The larger the population, the higher the labor force. The high number of labor force if it is not

balanced with the availability of jobs and good employment, it will cause problems, namely the increase in the number of unemployed due to limited employment opportunities. This can trigger development inequality. The increase in labor is not matched by the increase in job opportunities created by new economic activities and the expansion of companies by expanding the company, it will increase the number of unemployed so that it can hamper regional economic growth.

4. Conclusion

From the analysis conducted by researchers regarding the effect of GRDP, Locally Generated Revenue, Human Development Index, LFPR on Development Inequality, it can be concluded as follows: (1) Based on the calculations in this study it was found that the variables GRDP, Locally Generated Revenue, HDI, and LFPR simultaneously have a significant effect to development inequality. Partially GRDP has a positive and significant effect on development inequality. This means that every increase in GRDP will increase economic growth in an area. The increase in real GRDP per capita can be seen from the per capita GRDP figure based on constant prices with the base year 2010. Namely GRDP per capita quotient of GRDP calculated using fixed prices in one particular year as the basis divided by the total population in one particular year. Differences in economic driving sectors will have an impact on different GRDP growth rates in each region. This difference occurs because the growth process is too focused on expanding sectors that have high productivity. This will result in developed and underdeveloped areas. Economic growth carried out to improve people's welfare often runs quickly, but is not balanced with equity. This is a trigger for inequality. In addition, the positive relationship between GRDP and inequality can also be caused by the increase in the income per capita of the people in East Java which is still not evenly distributed. (2) Locally Generated Revenue has a negative and insignificant effect on inequality in economic development. The role of Regional Original Revenue in reducing inequality is considered incapable because Locally Generated Revenue itself is allocated more for routine expenditures such as: personnel expenditures, goods expenditures and others that are routine every one fiscal year, not for investment development spending so that it is useful in the future. (3) The Human Development Index has a negative and significant effect on inequality in economic development. The Human Development Index as a measure of the success of an area in human development can have an effect on increasing the level of economic growth which in turn can reduce development inequality and produce security and welfare among citizens and have an impact on economic growth. (4) The Labor Force Participation Rate has a positive but not significant effect on inequality in economic development. The high number of labor force if it is not balanced with the availability of jobs and good employment, it will cause problems, namely the increase in the number of unemployed due to limited employment opportunities. Then the suggestions that can be given are Simultaneously GRDP, Locally Generated Revenue, Human Development Index (HDI) and Labor Force Participation Rates have a significant effect on inequality in economic development in East Java Province. By utilizing the economic potential of each region, the regional government of East Java Province needs to encourage regional development so that it is evenly distributed so as to increase community productivity and economic activities run smoothly. The regional government of East Java province needs to pay attention to lagging regencies and cities and allocate more to reduce development inequality so that lagging regions can compete with developed regions. Not only that, providing the widest possible job opportunities, either by creating new jobs that are more oriented towards labor-intensive programs or expanding from previous employment opportunities or

also by providing people with business opportunities, is a policy to reduce unemployment which in turn can increase growth. economy and reduce development disparities between districts and cities in the province of East Java. Furthermore, increasing domestic production and public awareness is needed to use domestically produced goods by campaigning for local products. So that the more the population increases, the public consumption will also increase which will increase the GRDP Per Capita.

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