ANALYSIS OF THE EFFECT OF INDUSTRIAL AGGLOMERATION, ECONOMIC GROWTH, HUMAN DEVELOPMENT INDEX (HDI), AND OPEN UNEMPLOYMENT RATE ON REGIONAL INEQUALITY IN EAST JAVA PROVINCE

Farida Rahmawati
Refsy Ayu Yuniarti

ABSTRACT

The purpose of this study is to analyze the effect of industrial agglomeration, economic growth, human development index (HDI), and open unemployment rate on regional inequality in East Java Province. Open Unemployment Rate is known as TPT in Indonesian Language and later in this study will be written by TPT. The background of this study is that the success rate of development in an area can be measured by economic growth, economic structure, and also the smaller inequality of income between residents, between regions, and between sectors. However, in reality, economic growth is not always followed by adequate equity. Secondary data was obtained from the Badan Pusat Statistik (BPS) Jawa Timur website in the 2014-2018 period with 38 districts/cities total. The research method used is quantitative with a descriptive approach, using panel data regression analysis techniques with Eviews 9. The panel data regression analysis model used is the Fixed Effect Model (FEM) and the classic assumption test conducted in the heteroscedasticity test and the multicollinearity test. A normality test was not carried out because the data used in this study were more than 30 observations (n>30), so it was assumed that the data were normally distributed. From the results of the study, it can be concluded that: 1) Industrial agglomeration variables have a positive and significant effect on Regional Inequality both simultaneously and partially; 2) Economic Growth Variable has a negative and significant effect on Regional Inequality; 3) The Human Development Index (HDI) variable has a positive and significant effect on Regional Inequality; and 4) Open Unemployment Rate (TPT) variable has a negative and significant effect on Regional Inequality.

Key words: Industrial Agglomeration, Economic Growth, Human Development Index, Open Unemployment Rate, Regional Inequality

INTRODUCTION

The process of economic development of a country is carried out in order to achieve better public welfare. In his book, (M. Todaro & Smith, 2004) states that the success of economic development in a country is shown by 3 main values, that is: 1) the development of people's ability to meet their basic needs (sustenance), 2) an increase in self-esteem society as a human being, and 3) increasing the ability of the community to choose (freedom of servitude) which is one part of human rights. Regional economic development is a process in which the government and its people have every available resource and form a partnership pattern between the local government and the private sector to create a new work structure and encourage the development of economic activity (economic growth) in the region (Arsyad, 2010).

The level of development success can be measured by economic growth, economic structure and the diminishing income gap between residents, between regions and between sectors. However, in reality economic growth is not always followed by adequate equity (Arifin, 2009). In other words, good economic growth does not necessarily increase the level of people's welfare and the level of inequality decreases. (Barrios et al., 2006) in (Arsyad, 2010) examines the relationship between regional disparities and economic development using EU GDP data processed by the econometric method to explain the pattern of the relationship between GDP and regional disparities in the form of an inverted U curve. The results of this study provide strong evidence that countries that are members of the European Union have a pattern of regional disparities in the form of an inverted U curve, which is in line with the Kuznets Hypothesis. Kuznets' hypothesis states that development in a country at certain limits can lead to economic disparities among its citizens.

Apart from economic growth, there are several other factors that influence regional imbalances. In a study conducted by (Yusica et al., 2018) entitled "Analysis of the Effects of Economic Growth, Agglomeration and Unemployment Rate on Inequality between Regencies / Cities in East Kalimantan Province" concluded that the level of regional inequality based on the analysis of relative GDP per capita in Kalimantan Province East is still in the weak category, but there are also some regions that have quite high levels of inequality. For the Economic Growth variable, the result of the statistical test is that economic growth has a negative and significant effect on regional inequality in East Kalimantan Province, then for the Agglomeration variable the results of the statistical test are that agglomeration has a positive and significant effect on regional inequality in East Kalimantan Province, and the Unemployment Rate variable is based on the results. Statistical test is a positive and significant effect on regional inequality in East Kalimantan Province. Then in a study entitled "The Effect of PDRB Per Capita, Investment and HDI on Inequality of Income Between Regions in Yogyakarta Province 2011-2015" by (Hartini, 2017), concludes that simultaneously GDP per capita, investment and human development index have a significant effect on inequality. Income between regions in the Province of Yogyakarta Special Region.

Differences in the results of research conducted by previous researchers and the existence of the hypothesis put forward, therefore this study aims to determine the effect of industrial agglomeration, economic growth, human development index (HDI), and open unemployment rate (TPT) on regional inequality in East Java Province. 2014-2018.

REGIONAL INEQUALITY IN EAST JAVA PROVINCE

Inequality in development between regions is a common aspect of economic activity in a region. This imbalance is basically caused by differences in the content of natural resources and differences in demographic conditions in each region (Sjafrizal, 2008).

The Neo Classical Hypothesis put forward by Douglas C. North states that at the beginning of a country's development process, development inequality between regions tends to increase. If the development process continues, the development disparity between these regions will gradually decrease. Based on this hypothesis, a temporary conclusion can be drawn that the development inequality between regions in developing countries tends to be higher, while in developed countries it is lower.

When the development process begins in developing countries, the opportunities and opportunities for development that exist are exploited by regions whose development conditions are already better. Meanwhile, regions that are still underdeveloped and underdeveloped are not able to take advantage of this opportunity due to limited infrastructure and facilities and the low quality of human resources. This obstacle is caused by various factors, such as economic and socio-cultural factors, resulting in an increasing inequality of development between regions because economic growth tends to be faster in areas with better conditions, while underdeveloped regions have not progressed much.

The truth of this Neo Classical Hypothesis was then tested for truth by Jeffrey Gale Williamson in 1966 through research on development disparities between regions in developed and developing countries using time series and cross-section data. The research shows that the theoretically formulated Neo Classical Hypothesis is proven to be empirically correct. This means that the development process within a country cannot automatically reduce development inequality between regions, even at the initial stage the opposite occurs, namely increasing inequality.

Table 1: Regional Inequality in East Java 2014-2018

Years	Williamson Index
2014	0.95315
2015	0.955668
2016	0.957686
2017	0.960611
2018	0.969993

Source: (BPS Jatim, 2020), processed.

Table 1 shows the magnitude of the level of regional inequality that occurred in East Java Province which had the highest level of inequality during 2014 to 2018. Regional inequality was calculated using the Williamson Index calculation method, this index indicates that the number that is getting further away from zero indicates that the level of inequality in the Java region The East is getting higher. From these data, it can be observed that the level of inequality fluctuates and tends to be high, as evidenced by the numbers that are getting further away from zero and closer to number 1.

FACTORS AFFECTING REGIONAL INEQUALITY

a. Industrial Agglomeration

Regional imbalances can occur as a result of the concentration of economic activity in an area. This happened because during the economic development process, the expenditure budget for this was only borne by the regional government so that economic activity did not run smoothly and resulted in inequality. Agglomeration means that economic activity is centred in a certain area so that the rate of economic growth is uneven. Agglomeration is the spatial concentration of economic activity in urban areas due to savings due to proximity (economies of proximity) associated with spatial clusters of firms, workers and consumers (M Kuncoro, 2002). According to (Bonet, 2006), argues that the agglomeration (concentration of activities) of production is one of the variables used to determine regional disparities. Agglomeration of production can directly affect regional disparities, namely when there are barriers to labor mobility between regions, or when there is a labor surplus in the economy.

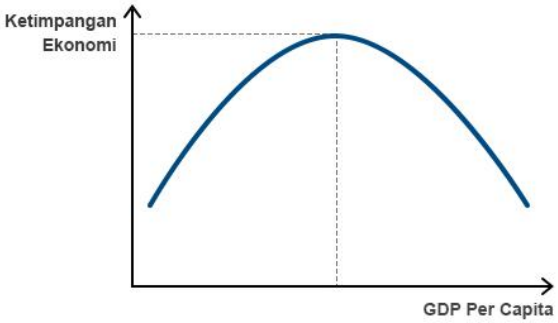
b. Economic growth

Economic growth is also one of the factors that influence regional imbalances in a region as seen from the value of GRDP (Gross Regional Domestic Product). Successful economic growth is needed to boost the pace of economic development. The higher the level of economic growth, the better the level of social welfare. With high economic growth, development problems such as unemployment, poverty, and inequality in development distribution will be overcome.

However, in the Kuznets Hypothesis, the relationship between economic growth and income inequality is negatively correlated. Kuznets' hypothesis gave birth to a new discourse that development in a country at certain limits can actually trigger economic disparities among its citizens. This analysis uses a cross-section country, where the analysis is carried out in many countries at a certain point in time, not discussing one country in a long period of time. The results of Kuznets' analysis found a relationship between the level of income gap and the level of income per capita in the form of an inverted U, which states that at the beginning

of the growth stage, the distribution of income or welfare tends to deteriorate. However, in the next stage, the income distribution will improve along with the increase in per capita income (Arsyad, 2010).

Figure 1: Inverted Kuznets "U" Curve



Source: (M. P. Todaro, 2000), processed.

c. Human Development Index

Economic development can be said to be successful if a region / region can succeed in increasing economic growth and increasing the standard of living of its people equally or what is better known as the Human Development Index (HDI). Low or high HDI will have an impact on the productivity level of the population, which means that the lower the HDI, the lower the productivity of the population will be, and then low productivity will have an effect on low income. On the other hand, the higher the HDI, the higher the level of population productivity which then drives the income level even higher. However, the different HDI values in each region are a problem, this makes HDI one of the factors that affect income inequality between regions / regions (Hartini, 2017).

d. Open Unemployment Rate

The unemployment rate in a region can affect regional inequality. The greater the unemployment rate in a region means a decrease in the level of productivity which will trigger a decline in economic growth in the region, welfare. Unemployment that occurs will have an impact on social life, namely increasing levels of crime and violence, this will affect stability and economic development will be hampered and community welfare will decrease (Nurcholis, 2014).

RESEARCH METHODOLOGY

A. TYPES OF RESEARCH AND RESEARCH DATA

This research uses a quantitative research method with a descriptive approach, in which this study provides a general picture of the subject matter that will be examined in the form of numbers or data that will later be analyzed, classified, and interpreted in the form of clear descriptions. The data used are secondary data with the census method obtained from the official website of the Badan Pusat Statistik Jawa Timur. The population of this study is 38 districts / cities in the province of East Java in the period 2014-2018, the sample used is the entire population because of the data collection method is census. The dependent variable in this study is Regional Inequality (Y), while the independent variables are Industrial Agglomeration (X1), Economic Growth (X2), Human Development Index (X3), and Open Unemployment Rate (X4). The methods used in data processing include:

1. Williamson Index

Used to measure Regional Inequality, according to (Mudrajad Kuncoro, 2003) formulated:

$$Williamson\ Index = \frac{\sqrt{\sum(yi - y)^2\ fi/n}}{y}$$

Where i is a Disctrict / City in East Java, with yi is the regional per capita GRDP i, y is the provincial average per capita GRDP, fi is the number of district / city residents of region i, and n is the population of the province i. If the Wiliamson Index is close to zero, then the level of income or regional distribution disparities in a region will get smaller (more evenly distributed). But otherwise, if the Wiliamson Index value is getting further from zero, it means that the gap is widening or higher.

2. Balassa Index

Used to measure industrial agglomeration, according to (Sbergami, 2002) formulated:

$$Balassa\ Index = \left(\frac{E_{ij}}{\sum_j E_{ij}}\right) \Big/ \left(\frac{\sum_i E_{iJ}}{\sum i \sum_J E_{ij}}\right)$$

Where i here is the manufacturing industry sector, while j is the district / city area in East Java, and J is the province of East Java. E_{ij} is labor in sector i in region j, $\sum_j E_{ij}$ is labor in area j. $\sum_i E_{iJ}$ is a labor in sector i in region J, $\sum i \sum_J E_{ij}$ is labor in region J. The more centralized an industry is indicated by the value of the Balassa Index. Balassa index can be said to be strong if the index value is 4 or more, said to be average or moderate if the index value is between 2 to 3, and weak if the index value is between 1 to 2. And if there is no industrial agglomeration in the region, then the value the index is between 0 and 1 and indicates the region has no comparative advantage for the occurrence of industrial agglomeration (Sbergami, 2002).

3. Economic growth

To calculate economic growth, the following formula can be used:

$$Economic\ Growth = \frac{GDRP_y - GDRP_{(y-1)}}{GDRP_{(y-1)}} \times 100\%$$

Where $GDRP_y$ is GRDP in the calculated year, and $GDRP_{(y-1)}$ is GRDP in the previous year.

4. Human Development Index

To calculate the Human Development Index, the following formula can be used:

$$HDI = 1/3(X_{(1)} + X_{(2)} + X_{(3)})$$

Where $X_{(1)}$ is the Life Expectancy Index, $X_{(2)}$ is the Education Index, and $X_{(3)}$ is the Decent Living Standard Index.

5. Open Unemployment Rate

The Open Unemployment Rate is a number that shows the number of unemployed people in 100 population included in the labor force category. Open Unemployment Rate is known as TPT in Indonesian Language and later in this study will be written by TPT. TPT rate is measured as a percentage of the unemployed number of the workforce, which is formulated:

$$TPT = \frac{Total\ Unemployment}{Total\ Labor\ Force} \times 100$$

B. DATA ANALYSIS TECHNIQUES

This research was conducted with panel data regression analysis techniques using *EViews 9* software. According to (Basuki & Prawoto, 2016) panel data is a combination of time series data and cross section data. Time series data is data that consists of one or more variables that will be observed in one unit of observation within a certain period of time. While the cross section data is observation data from several observation units in one time point. Panel data was chosen because the data in this study used a span of several years and also many districts / cities in one province.

There are three models used to perform panel data regression analysis, namely Pooled OLS / Common Effect Model, Fixed Effect Model, and Random Effect Model. To choose the best model, several tests were conducted, there is the Chow Test, the Hausman Test, and the Lagrange Multiplier Test. A Chow test is performed to choose between the Common Effect Model (CEM) and the Fixed Effect Model (FEM). The Hausman test was carried out to choose between the Fixed Effect Model (FEM) and the Random Effect Model (REM). While the Lagrange Multiplier Test is used to choose between Random Effect Model (REM) and Common Effect Model (CEM).

The classic assumption test is also carried out to determine whether or not the variables used in this study are feasible. The classic assumption test includes the normality test, the autocorrelation test, the heteroscedasticity test, and the multicollinearity test, but the tests conducted in this study are only heteroscedasticity test and multicollinearity test. Normality test was not carried out because the data used in this study were more than 30 observations (n> 30), so it was assumed to have been normally distributed or could be referred to as a large sample. While the autocorrelation test is not performed because autocorrelation only occurs in time series data, the autocorrelation test on data that is not time series will be in vain or meaningless (Basuki & Prawoto, 2016).

Significance test in this research was conducted in the form of t test or partial test and F test or simultaneous test. T test was conducted to determine the effect of each independent variable on the dependent variable, while the F test was used to determine the effect of all the independent variables on the dependent variable together. The econometrics model in this study is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$
$$RI = \beta_0 + \beta_1 IA_{it} + \beta_2 EG_{it} + \beta_3 HDI_{it} + \beta_4 TPT_{it} + \mu$$

Information:

Y	: Regional Inequality
X_1	: Industrial Agglomeration
X_2	: Economic Growth
X_3	: HDI (Human Development Index)
X_4	: Open Unemployment Rate
$\beta_0\beta_1\beta_2\beta_3$	: The coefficient of the independent variable
μ	: Error of term
i	: Subject
t	: The time period of variables

C. RESEARCH RESULTS

The panel data regression model was determined by the Chow Test and the Hausman Test, and gave the result that the Fixed Effect Model was the best model for this study.

Table 2: Results of Determination of Regression Model with Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	14.114425	(37,148)	0.0000
Cross-section Chi-square	286.978702	37	0.0000

Source: (BPS Jatim, 2020), processed.

A Chow Test is performed to choose between the Common Effect Model and the Fixed Effect Model. Based on the table above, the F probability value of 0.0000 <0.05 means that H_1 is accepted, and the Fixed Effect Model is used.

Table 3: Results of Determination of Regression Model with Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	522.233725	4	0.0000

Source: (BPS Jatim, 2020), processed.

The Hausman test was carried out to choose between the Fixed Effect Model and the Random Effect Model. Based on the table above, the Chi Square probability value of 0.0000 <0.05 means that H_1 is accepted, and the Fixed Effect Model is used. From the results of the chow test and the Hausman test, it was found that the right model used in this study was the Fixed Effect Model so that the lagrange multiplier test was not necessary because the test was conducted to choose between the Random Effect Model and the Common Effect Model.

Table 4: Results of Multicollinearity Test

	LN_IA	LN_EG	LN_HDI	LN_TPT
LN_IA	1.000000	0.105614	0.292949	-0.004749
LN_EG	0.105614	1.000000	0.368294	0.184447
LN_HDI	0.292949	0.368294	1.000000	0.483534
LN_TPT	-0.004749	0.184447	0.483534	1.000000

Source: (BPS Jatim, 2020), processed.

Multicollinearity test aims to test the correlation between independent (independent) variables. A good regression model should not occur correlation between independent variables (Ghozali, 2013). In the table above shows that the value of the relationship coefficient <0.08, it means that in the data does not occur multicollinity, there is no correlation between variables. Heteroscedasticity test is then performed. Heteroscedasticity test aims to find out whether or not there is a deviation of the classic assumption that is the variance inequality called heteroscedasticity. If the variance of the residuals for all observations in the

regression model is the same, then it is called homoscedasticity. A good regression model is a homoscedasticity model or heteroscedasticity does not occur.

Table 5: Results of Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.514599	0.508686	1.011623	0.3134
LN_IA	0.000317	0.000731	0.433242	0.6655
LN_EG	-4.71E-05	0.000363	-0.129807	0.8969
LN_HDI	-0.120639	0.120112	-1.004391	0.3169
LN_TPT	-0.000474	0.000411	-1.151908	0.2513

Source: (BPS Jatim, 2020), processed.

In the Glejser Test conducted to detect the presence of heteroscedasticity, the probability value indicates <0.05, which means heteroscedasticity problems occur. To overcome this, a white cross-section and GLS Weights test is performed so that there is no longer heteroscedasticity.

Table 6: Results of Regression using the White cross-section method and GLS Weights

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.715927	0.321433	-5.338365	0.0000
LN_IA	0.002832	0.000296	9.559536	0.0000
LN_EG	-0.001573	0.000539	-2.916833	0.0041
LN_HDI	0.395490	0.076232	5.187999	0.0000
LN_TPT	-0.000505	0.000848	-0.595350	0.5525
	Effects Specification			
Cross-section fixed (dummy variables)				
	Weighted Statistics			
R-squared	0.839987	Mean dependent var		-0.045247
Adjusted R-squared	0.795659	S.D. dependent var		0.013713
S.E. of regression	0.003097	Sum squared resid		0.001419
F-statistic	18.94937	Durbin-Watson stat		1.845758
Prob(F-statistic)	0.000000			
	Unweighted Statistics			
R-squared	0.790114	Mean dependent var		-0.041443
Sum squared resid	0.001462	Durbin-Watson stat		1.727836

Source: (BPS Jatim, 2020), processed.

Based on the regression results with Fixed Effect Model and White cross-section and GLS Weights as the method, Industrial Agglomeration variables, Economic Growth, Human Development Index (HDI), and Open Unemployment Rate (TPT) significantly influence the dependent variable namely Regional Inequality both partial (t test) and simultaneously (F test). The regression equation can be written as follows:

$$IR = -1.715927 + 0.002832_{IA} + (-0.001573)_{EG} + 0.395490_{HDI} + (-0.000505)_{TPT}$$

R-squared value indicates a figure of 0.839987 or 83.9% so that it can be concluded that the level of regional inequality (Y) can be explained by industrial agglomeration variables (X1), economic growth (X2), HDI (X3), and TPT (X4) amounted to 83.9% and 16.1% influenced by other variables. Industrial agglomeration variable probability value of 0.0000 and has a coefficient of 0.002832 which is positive, so that when industrial agglomeration has increased by 1 unit it will increase regional inequality by 0.002832 units. The probability value of economic growth variables is 0.0041 and has a coefficient of -0.001573 which is negative, so that when economic growth increases by 1 unit it will reduce regional inequality by -0.001573 units. The probability value of the HDI variable is 0.0000 and has a coefficient of 0.395490 which is positive, so that when HDI increases by 1 unit it will increase regional inequality by 0.395490 units. The probability value of the TPT variable is 0.5525 and has a coefficient of -0.000505 which is negative, so that when the TPT increases by 1 unit it will reduce regional inequality by -0,000505 units.

Based on the simultaneous test (F test) at a significance of 5% with a probability value of 0.000000 <0.05, while F_{count} 18.94937> F_{table} 2.63, it means the industrial agglomeration variables (X1), economic growth (X2), HDI (X3), and TPT (X4) simultaneously affect regional inequality (Y). In the partial test (t test) at a significance of 5%, it can be concluded that the industrial agglomeration variable (X1), economic growth (X2), and HDI (X3) partially influence the regional inequality variable (Y), while the TPT variable (X4) is not have influence. Based on the comparison of t_{count} and t_{table} with ttable values of 2.03452, industrial agglomeration variables (X1) and HDI (X3) have an influence on regional inequality variables (Y) because t_{count}> t_{table} while economic growth variables (X2) and TPT (X4) do not have influence because t_{count} <t_{table}.

DISCUSSION

A. Effect of Industrial Agglomeration on Regional Inequality in East Java

Based on the results of hypothesis testing that has been done shows that the Industrial Agglomeration variable has a positive and significant effect on Regional Inequality both simultaneously and partially. The value of industrial agglomeration calculated by the balassa index has a positive effect on widening or narrowing of inequality in an area. As industry becomes more concentrated, regional inequality will widen as many people approach the center of the industry and leave the region, causing a higher level of inequality.

This research is in line with that conducted by (Yusica et al., 2018) which states that the agglomeration variable has a positive and significant effect on regional inequality in East Kalimantan Province. Then the research (Rahmawati & Romziatin, 2019) also concluded that industrial agglomeration has a significant influence and is positively related to income inequality in districts / cities in East Java.

B. Effects of Economic Growth on Regional Inequality in East Java

Based on the results of hypothesis testing that has been done shows that the variable Economic Growth has a negative and significant effect on Regional Inequality. The level of economic growth obtained from the GRDP value has a negative effect on widening or narrowing inequality in an area. When economic growth is higher and more evenly distributed, regional inequality will narrow due to better economic activity so that regional inequality can be narrowed.

The results of this study are in line with research conducted by (Yusica et al., 2018) who concluded that based on the results of statistical analysis the variable Economic Growth had a negative and significant effect on regional inequality in East Kalimantan Province. However, in other studies showing different results, (Riandoko et al., 2013) in his research concluded that the variable of economic growth has a positive effect because economic growth in developed regions will be higher than developing regions so that it will eventually be able to create and enlarge disparities between regions .

C. Effects of the Human Development Index (HDI) on Regional Inequality

Based on the results of hypothesis testing that has been done shows that the HDI variable has a positive and significant effect on Regional Inequality. HDI value has a positive effect on widening or narrowing of inequality in an area. This is consistent with the theory that the HDI has an influence on regional inequality due to the quality of human development has a great influence on the development of an area (Dumairy, 2010).

This is in line with research conducted by (Mopangga, 2010) concluding that the human development index variable has a very large influence as a source of inequality. However, different from research by (Hidayat, 2014) which examines income inequality concluded that HDI does not have a significant effect on income inequality between regions.

D. Effect of Open Unemployment Rate (TPT) on Regional Inequality

Based on the results of hypothesis testing that has been done shows that the TPT variable has a negative and significant effect on Regional Inequality. TPT value has a negative effect on widening or narrowing of inequality in an area. This means that when the unemployment rate rises, it will narrow regional inequality.

This study is not in line with the results of research by (Aditya, 2010) which concluded that unemployment has a positive and significant effect on regional inequality. Other studies also concluded the same thing, (Yusica et al., 2018) concluded that the Unemployment Rate had a positive and significant effect on regional inequality in East Kalimantan Province. This shows that to

reduce regional disparities in East Kalimantan Province, one of the most effective ways is to create new jobs, thereby reducing the unemployment rate.

CONCLUSIONS AND SUGGESTIONS

Based on the results of research on the effects of industrial agglomeration, economic growth, HDI, and TPT on regional inequality in East Java Province, it can be concluded that: 1) Industrial agglomeration variables have a positive and significant effect on Regional Inequality both simultaneously and partially; 2) Economic Growth Variable has a negative and significant effect on Regional Inequality; 3) The HDI variable has a positive and significant effect on Regional Inequality; 4) TPT variable has a negative and significant effect on Regional Inequality.

Suggestions that can be delivered are for the government of East Java Province to increase economic growth in their regions by increasing resources and encouraging the leading sectors in the region to optimize their productivity and contribute to Gross Regional Domestic Product (GRDP) so as to reduce regional disparities in Java Province East. To overcome agglomeration and Open Unemployment Rate (TPT), it can be done by creating new jobs and leveling development, and optimizing local services and infrastructure in order to increase the value of the Human Development Index (HDI).

REFERENCES

Aditya, S. N. . (2010). Analisis Ketimpangan antar Wilayah dan Faktor-Faktor yang Mempengaruhinya dengan Model Panel Data (Studi Kasus 35 Kabupaten/Kota di Provinsi Jawa Tengah Tahun 2000-2007). *Fakultas Ekonomi Universitas Diponegoro*.

Arifin, Z. (2009). Kesenjangan Dan Konvergensi Ekonomi Atar Kabupaten Pada Empat Koridor Di Propinsi Jawa Timur. *Jurnal Humanity*, *4*(2), 11328.

Arsyad, L. (2010). *Ekonomi Pembangunan* (Edisi ke-5). UPP STIM YKPN.

Barrios, S., Bertinelli, L., & Strobl, E. (2006). Climatic change and rural-urban migration: The case of sub-Saharan Africa. *Journal of Urban Economics*, *60*(3), 357–371. https://doi.org/10.1016/j.jue.2006.04.005

Basuki, A. T., & Prawoto. (2016). *Analisis Regresi Dalam Penelitian Ekonomi & Bisnis : Dilengkapi Aplikasi SPSS & EVIEWS*. PT. Rajagrafindo Persada.

Bonet, J. (2006). *Fiscal Decentralization and Regional Income Disparities : Evidence from The Colombian Experience.* (Original P). Ann Reg Sci 40:661-676.

BPS Jatim. (2020). *Badan Pusat Statistik Jawa Timur*. jatim.bps.go.id

Dumairy. (2010). *Perekonomian Indonesia*. Erlangga.

Ghozali, I. (2013). *Aplikasi Analisis Multivariate dengan Program IBM SPSS. 21 Update PLS Regresi* (Edisi 7). Badan Penerbit Universitas Diponegoro.

Hartini, N. T. (2017). Pengaruh PDRB Perkapita, Investasi dan IPM Terhadap Ketimpangan Pendapatan Antar Daerah Di Provinsi DIY Tahun 2011-2015. *Jurnal Pendididkan Dan Ekonomi*, *6*(6), 530–539. nitatrihartini@gmail.com

Hidayat, M. H. (2014). Analisis Pengaruh Pertumbuhan Ekonomi, Investasi, dan IPM Terhadap Ketimpangan Pendapatan Antar Daerah di Provinsi Jawa Tengah Tahun 2005-2012. *Skripsi*.

Kuncoro, M. (2002). *Analisis Spasial dan Regional: Studi Aglomerasi dan Kluster Industri di Indonesia*. UPP AMP YKPN.

Kuncoro, Mudrajad. (2003). *Metode Riset untuk Bisnis & Ekonomi*. Erlangga.

Mopangga, H. (2010). Analisis ketimpangan pembangunan dan pertumbuhan ekonomi di Provinsi Gorontalo: *Jurnal Trikonomika*.

Nurcholis, M. (2014). Analisis Pengaruh Pertumbuhan Ekonomi, Upah Minimum dan Indeks Pembangunan Manusia Terhadap Tingkat Pengangguran Di Provinsi Jawa Timur Tahun 2008-2014. *Jurnal Ekonomi Pembangunan*, *12*.

Rahmawati, F., & Romziatin, F. (2019). *Pengaruh Aglomerasi Industri, Investasi, dan Pertumbuhan Ekonomi terhadap Ketimpangan Regional Provinsi Jawa Timur*.

Riandoko, B., Kurniawan, A., & Sugiyanto, F. (2013). Pengaruh Pertumbuhan Ekonomi, Share Sektor Industri Dan Pertanian Serta Tingkat Jumlah Orang Yang Bekerja Terhadap Ketimpangan Wilayah Antar Kabupaten/Kota Di Jawa Tengah Tahun 2002-2010. *Diponegoro Journal of Economics*, *2*(1), 1–14.

Sbergami, F. (2002). Agglomeration and Economic Growth: Some Puzzles. *HEI Working Paper*, *02*, 1–34.

Sjafrizal. (2008). *Ekonomi Regional, Teori dan Aplikasi*. Niaga Swadaya.

Todaro, M. P. (2000). *Pembangunan Ekonomi di Dunia Ketiga*. Erlangga.

Todaro, M., & Smith, S. (2004). *Pembangunan Ekonomi Dunia* (Edisi 3). Erlangga.

Yusica, L. V., Malik, N., & Arifin, Z. (2018). Analisis Pengaruh Pertumbuhan Ekonomi, Aglomerasi Dan Tingkat Pengangguran Terhadap Ketimpangan Antar Wilayah Kabupaten/Kota Di Provinsi Kalimantan Timur. *Jurnal Ilmu Ekonomi*, *2*, 230–240.

Farida Rahmawati
Department of Economic Development
Universitas Negeri Malang
Email: farida.rahmawati.fe@um.ac.id

Refsy Ayu Yuniarti
Department of Economic Development
Universitas Negeri Malang
Email: refsyayu@gmail.com