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Analysis of the Effect of the Gini Ratio, Percentage of Poor Population, GRDP, HDI, and Average Per Capita Expenditures on Development Inclusivity Index in Java Island

Muftiyatul Azizah[a] *
[a] Department of Management, Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA) Surabaya, East Java
* Corresponding author: muftiyatulazizah@stiesia.ac.id

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Abstract

This study aimed to analyze whether the Gini ratio, the percentage of poor people, Gross Regional Domestic Product (GDP), Human Development Index (IPM), and average per capita expenditure affect the inclusiveness index of development in Java Island. The method used is panel data regression, namely choosing the best model between the fixed effect model, random effect model, and common effect model and using the classic assumption test. This research is quantitative. The data used in this study are data obtained from BPS and Bappenas from 2014 to 2020. The results show that the factor that has a significant effect on the development inclusiveness index is the Gini ratio with a significance value of 0.0225, the percentage of poor people with a significance value of 0.0015, and Gross Regional Domestic Product (GRDP) with a significance value of 0.0174. Meanwhile, the Human Development Index (IPM) and per capita expenditure have no significant effect on the development inclusiveness index in Java.

INTRODUCTION

Initially, economic development was only seen as a strategy to increase a country's economic growth. From 1960 to 1970, developing countries achieved high growth, but the poverty, inequality, and unemployment rates did not decrease but worsened (Prabandari, 2018). Economic development is a multidimensional process that includes essential changes in social structure, people's attitudes, and traditional institutions while pursuing accelerated economic growth, reducing *inequity,* and eradicating absolute poverty (Malau, 2016; Yulianti, 2017; Fitria, 2016). Economic development aims to develop the whole human being to improve society's welfare.

Economic development does not only aim to achieve high growth; it will increase poverty and unemployment and widen inequality because some people only enjoy the benefits of economic growth. Economic development is more focused on the quality of economic growth. Quality economic growth will lead to inclusive growth, increasing output and reducing poverty, unemployment, and inequality. Inclusive growth demands the participation of all parties to create economic development so that when the economy grows, there will be a reduction in poverty, inequality, and unemployment. Inclusive growth creates new economic opportunities and ensures equal access to the opportunities created for all segments of society (Prabandari, 2018; Utama, 2018).

Inclusive development is another alternative development model that specifically emerged as a response to various negative impacts of development policies, which were considered to be too focused on economic growth and more in favor of fulfilling the interests of elite groups and, at the same time eliminating bottom-level goods such as the poor, marginalized and minority groups (Amalina *et al* ., 2013). The impacts in question include the decline in the quality of human development, increasing poverty rates, and widening social inequality (Warilah, 2017).

Economic growth in Indonesia during 2010-2020 has not shown results that continue to increase at the national level, and poverty and inequality have not decreased (Hartati, 2021). This condition is contrary to the goal of achieving inclusive economic growth. Poverty, unemployment, and income inequality have always been the economy's focus because these problems are complex and caused by various social, economic, and cultural aspects. An inclusive economic approach through strengthening inclusive growth can be the right approach to help overcome unemployment, poverty, and social and economic inequality. A development inclusivity index is used to monitor and measure the degree of inclusiveness in Indonesia's development, where several factors influence the values. The right factors in determining the value of the development inclusivity index will assist the Government in making decisions and policies to improve the Indonesian economy.

According to the Central Agency Statistics (BPS), poverty in Indonesia is still focused on the island of Java until March 2021. 14.8 million poor people live on Java island, equivalent to 53.6%. The central and regional governments have implemented various programs to overcome these problems but have not contributed optimally (Aimon *et al.*, 2020; Ferezagia, 2018; Pratama, 2014). Based on the explanation that has been explained, it is necessary to analyze the factors that influence inclusive economic growth in Java.

Several studies related to development inclusiveness, namely research conducted by Hidayat *et al* . (2020), namely analyzing the factors that influenced inclusive economic growth in the Special Region of Yogyakarta and concluded that the factors that positively affect inclusive economic growth are household consumption, exports of goods /services, foreign investment, domestic investment, per capita income, and the average length of schooling. At the same time, the factors that have a negative effect are the open unemployment rate and imports of goods/services. Another study conducted by Aimon *et al.* (2020), namely investigating the factors that affect inclusive growth in poverty, unemployment, and income inequality in West Sumatra Province. The results showed that the factors that had a positive effect were health, education, investment, and government spending. According to Sitorus and Arsani (2018), inclusive economic growth is influenced by the proportion of households that use electricity, income inequality (Gini ratio), education policies, poverty, and unemployment rates.

Meanwhile, according to Nina and Rustariyuni's research (2018), the Gini ratio has a significant effect, and per capita expenditure does not significantly affect people's welfare in the districts/cities of Bali Province. Research by Kusumawati *et al.* (2021) analyzes the effect of the poverty rate, open unemployment rate, and human development index on the economic growth of East Java province. The results of this study indicate that the poverty rate and human development index significantly affect economic growth in East Java. In contrast, the open unemployment rate has no significant effect. From these studies, the authors took one factor from each study that significantly impacts development inclusiveness, so the difference between this study and previous research lies in the variables used. This study will use five variables: the Gini ratio, the percentage of poor people, GRDP, HDI, and average per capita expenditure. These variables will be analyzed to determine whether they significantly affect the inclusiveness of development in Java. The method used is panel data regression using data from 2014 to 2020.

RESEARCH METHODS

This research is quantitative, with independent and dependent variables forming influenced variables. With the test between the independent and dependent variables, there is a hypothesis that requires an answer to this hypothesis. The data used are the Gini Ratio, Percentage of Poor Population, GRDP, HDI, and Development Inclusivity Index data on Java Island from 2014 to 2020.

The dependent variable in this study is the development inclusiveness index (Y). The development inclusivity index is a tool to measure and monitor the extent to which Indonesia's development is inclusive at the national, provincial, and district/city levels. At the same time, the independent variables in this study include the Gini ratio (X1), the percentage of poor people (X2), GRDP (X3), HDI (X4), and average per capita expenditure (X5). The sample used as the object of this study is a province on the island of Java. The timeframe used in this study was from 2014 to 2020. The data used is secondary data taken from the BPS (Central Statistics Agency) and Bappenas websites from 2014 to 2020.

The data analysis method begins with testing the selection of the panel data regression model, which aims to determine the model to be used, whether the *common effect model, fixed effect model,* or *random effect mode* (Rahmadeni and Wulandari, 2017).

The common effect model or *Pooled Least Square* (PLS) is the most straightforward panel data model approach because it only combines *time series* and *cross-section data*. This model does not pay attention to the time or individual dimensions, so it is assumed that the behavior of company data is the same in various periods. This method can use the *Ordinary Least Square* (OLS) approach or the least squares technique to estimate the data model panel (Nandita *et al.*, 2019; Lestari and Setyawan, 2017). The equation of the CEM is (Hidayat *et al* ., 2018):

$y_{it} = a + \mu_i + \lambda_t + \beta X_{it} + e_{it}$..(1)

With:

y_{it} : *unit cross-section* I for the t period
a : intercept (group/individual effect of *unit cross section* i and t period)
β : constant vector of size 1xn with n number of independent variables
X_{it} : observation vector on the independent variable of size 1xn
e_{it} : error component of the ith observation unit for the tenth time
λ_t : t-the time intercept
μ_i : intercept cross-section i
i : 1, 2,3,…,n
t :1, 2,3,… , T

A fixed Effect Model (FEM) is a model with a different *intercept* for each subject (cross-section), but the *slope* of each issue does not change over time. This model assumes that the *intercept* is different for each subject while the *pitch* remains the same between subjects. In distinguishing one subject from another, a *dummy variable is used*. This model is often called the *Least Square Dummy Variables model* (LSDV) (Nandita *et al* ., 2019; Lestari and Setyawan, 2017). The equation for FEM is (Hidayat *et al* ., 2018):

$y_{it} = \alpha_{it} + \beta_i X_{it} + \sum_{K=2}^{N} a_k D_{Ki} + e_{it}$... (2)

Where

y_{it} : unit cross-section i for t period
e_{it} : the error component for the ith individual at the time
β_i : error parameter for the ith individual at the time
X_{it} : shows the observation vector on the independent variable of size 1xn
D_{Ki} : dummy variables

The Random Effect Model (REM) is caused by variations in the value and direction of the relationship between subjects assumed to be random which is specified in the residual form. This model estimates panel data in which the residual variable is thought to have a relationship between time and between subjects. REM is used to overcome the weakness of FEM, which uses *dummy* variables. The panel data analysis method with the *random effect model* must meet the requirements; namely, the number of *cross sections* must be greater than the number of research variables (Nandita *et al* ., 2019; Lestari and Setyawan, 2017). The equation of REM is (Hidayat *et al* ., 2018):

$y_{it} = \alpha_{it} + \beta X_{it} + e_{it}$.. (3)

assuming $\alpha_{it}$is a random variable with an average $\alpha_0$so that the intercept of each unit is

$\alpha_i = a_0 + \varepsilon_i$.. (4)

for i=1,2,3,…, N

Thus, if it is substituted, the model becomes

$y_{it} = a_0 + \varepsilon_i + \beta X_{it} + e_{it}$... (5)

$y_{it} = \alpha_{it} + \beta X_{it} + w_{it}$..(6)

with

w_{it}: error *cross-section* component and error *time series component*

To select a panel data regression model using several tests, namely the Chow Test, Hausman Test, and Lagrange Multiplier Test (Sitorus and Yuliana, 2018). Chow test is a test to compare the *common effect model* with the *fixed effect model*. The Hausman test is a test to compare the *fixed effect t model* with the *random effect model. In contrast, the Lagrange Multiplier* (L.M.) test is a test to determine whether the *random effect model* is better than the model's *common effect.* Furthermore, the classical assumption test was carried out to test whether the model was declared feasible in the regression analysis. The classic assumption tests are the Normality Test, Multicollinearity Test, Heteroscedasticity Test, and Autocorrelation Test (Sutikno *et al* ., 2017). The normality test was conducted to determine whether the regression model has a normal distribution. If the probability value is more significant than 0.05, then the data is normally distributed. The multicollinearity test aims to test whether there is a correlation between the independent variables in the regression model. The independent variables do not experience symptoms of multicollinearity if the correlation coefficient between the independent variables is less than 0.8. The heteroscedasticity test determines whether the *variance-covariance structure is* homoscedastic or heteroscedastic. For the heteroscedasticity test, the residual variation value must be constant (homoscedasticity). There is a correlation in the linear regression model, which can be tested by autocorrelation test. If there is a correlation, the regression model is most likely not significant, indicated by a substantial *standard error,* and can be proven by looking at the Durbin-Watson scale.

RESULTS AND DISCUSSION

Panel Data Regression Model Selection

Estimating the panel data regression approach has three often used approaches: the *common effect model, the fixed effect model,* and the *random effect model*. The following are the results of the regression using the *common effect model, the fixed effect model,* and the *random effect model.*

Table 1 . *Common Effect Model* Panel Data Regression Results

Dependent Variable: Y
Method: Panel Least Squares
Date: 04/08/22 Time: 12:47
Sample: 2014 2020
Periods Included: 7
Cross-sections included:6
Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.140153	1.148834	-4.474234	0.0001
X1	-8.274752	1.880215	-4.400960	0.0001
X2	-0.043607	0.024077	-1.811155	0.0785
X3	4.50E-07	5.46E-08	8.238916	0.0000
X4	0.214399	0.027301	7.853149	0.0000
X5	-1.15E-06	3.80E-07	-3.026742	0.0045
Root MSE	0.187687	R-squared		0.906897

Mean dependent var	6.169048	Adjusted R-squared	0.893966
S.D. dependent var	0.622567	S.E. of regression	0.202725
Akaike info criterion	-0.222365	Sum squared resid	1.479514
Schwarz criterion	0.025874	Log-likelihood	10.66966
Hannan-Quinn criteria.	-0.131376	F-statistic	70.13377
Durbin-Watson stat	1.043967	Prob (F-statistic)	0.000000

Based on the regression results with the *Common Effect Model* (CEM) in Table 1, it shows that there is a constant value of -5.140153 with a probability of 0.0001. The regression equation on *adjusted* R^2 of 0.893966 explains that the variance of the Gini ratio (X1), the percentage of poor people (X2), GRDP (X3), HDI (X4), and the average expenditure per capita (X5) is 89.39 %. The remaining 10 .6 1 % is influenced by other factors not examined in this study.

Table 2. Hasil Regresi Data Panel *Fixed Effect Model*

Dependent Variable: Y
Method: Panel Least Squares
Date: 04/08/22 Time: 12:49
Sample: 2014 2020
Periods Included: 7
Cross-sections included:6
Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23.94492	10.13688	2.362159	0.0246
X1	-7.273049	3.027824	-2.402071	0.0225
X2	-0.210103	0.060515	-3.471935	0.0015
X3	5.49E-07	2.19E-07	2.511954	0.0174
X4	-0.195132	0.136730	-1.427126	0.1635
X5	5.37E-07	5.78E-07	0.928764	0.3602

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.140849	R-squared	0.947567
Mean dependent var	6.169048	Adjusted R-squared	0.930654
S.D. dependent var	0.622567	S.E. of regression	0.163945
Akaike info criterion	-0.558448	Sum squared resid	0.833214
Schwarz criterion	-0.103344	Log-likelihood	22.72741
Hannan-Quinn criteria.	-0.391634	F-statistic	56.02360
Durbin-Watson stat	1.766216	Prob (F-statistic)	0.000000

Based on the results of the *fixed effect model regression* in Table 2, it shows that there is a constant value of 23.94492 with a probability of 0.0246. The regression equation on *adjusted* R^2 of 0.930654 explains that the variance of the Gini ratio (X1), the percentage of poor people (X2), GRDP (X3), HDI (X4) and the average per capita expenditure (X5) is 93.06 % and the remaining 6.94 % influenced by other factors not examined in this study.

Table 3. Hasil Regresi Data Panel *Random Effect Model*

Dependent Variable: Y
Method: Panel EGLS (Cross-section random effects)
Date: 04/08/22 Time: 12:51
Sample: 2014 2020
Periods Included: 7
Cross-sections included:6
Total panel (balanced) observations: 42
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.140153	0.929066	-5.532604	0.0000
X1	-8.274752	1.520536	-5.441997	0.0000
X2	-0.043607	0.019471	-2.239580	0.0314
X3	4.5E-07	4.41E-08	10.18781	0.0000
X4	0.214399	0.022078	9.710792	0.0000
X5	-1.15E-06	3.07E-07	-3.742711	0.0006

Effects Specification

	S.D	Rho
Cross-section random	1.77E-07	0.0000
Idiosyncratic random	0.163945	1.0000

Weighted Statistics

Root MSE	0.187687	R-squared	0.906897
Mean dependent var	6.169048	Adjusted R-squared	0.893966
S.D. dependent var	0.622567	S.E. of regression	0.202725
Sum squared resid	1.479514	F-statistic	70.13377
Durbin-Watson stat	1.043967	Prob (F-statistic)	0.000000

Unweighted Statistics

R-squared	0.906897	Mean dependent var	6.169048
Sum squared resid	1.479514	Durbin-Watson stat	1.043967

Based on the results of the regression with the *random effect model* in Table 3, it shows that there is a constant value of -5.140153 with a probability of 0.0000. The regression equation on the *adjusted* $R^{2 \text{ value}}$ of 0.893966 explains that the variance of the Gini ratio (X1), the percentage of poor people (X2), GRDP (X3), HDI (X4), and the average per capita expenditure (X5) is 89.39 %. The remainder is 10.61 %, influenced by other factors not examined in this study.

To determine the best model among the three equation models, it is necessary to test each. The first step is the Chow test which is used to choose a better approach between the *common effect model* and the *fixed effect model*. The criteria for the Chow Test are as follows:

1. *P-value* $F \geq 0.05$probability value is cross-section then H_0accepted so that the suitable model to use is the *common effect model.*

2. If the P-value probability value is *cross sectionF* ≤ 0.05, then it is H_0rejected so that the suitable model to use is the *fixed effect model*.

The hypothesis used in the *chow test* is as follows:

H_0: *Common Effect Model* (CEM)

H_1: *Fixed Effect Model* (FEM)

The results of the Chow test can be seen in Table 4 as follows:

Table 4 . ChowTest _

Effect Test	Statistics	df	Prob.
Cross-section F	4.809160	(5.31)	0.0023
Chi-square cross-sections	24.115493	5	0.0002

Cross-section fixed effects test equation:
Dependent Variable: Y
Method: Panel Least Squares
Date: 04/08/22 Time: 12:49
Sample: 2014 2020
Periods Included: 7
Cross-sections included: 6
Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.140153	1.148834	-4.474234	0.0001
X1	-8.274752	1.880215	-4.400960	0.0001
X2	-0.043607	0.024077	-1.811155	0.0785
X3	4.50E-07	5.46E-08	8.238916	0.0000
X4	0.214399	0.027301	7.853149	0.0000
X5	-1.15E-06	3.80E-07	-3.026742	0.0045
Root MSE	0.187687	R-squared		0.906897
Mean dependent var	6.169048	Adjusted R-squared		0.893966
S.D. dependent var	0.622567	S.E. of regression		0.202725
Akaike info criterion	-0.222365	Sum squared resid		1.479514
Schwarz criterion	0.025874	Log-likelihood		10.66966
Hannan-Quinn criteria.	-0.131376	F-statistic		70.13377
Durbin-Watson stat	1.043967	Prob(F-statistic)		0.000000

Based on Table 4 on the results of the Chow test, the probability value (*P-value*) of *cross section* F is 0.00 2 3 ≤0.05, so the hypothesis H_0 is rejected and H_1 is accepted, which means that the *Fixed Effect Model* (FEM) model is a more appropriate model to use.

Next, the Haussman test was conducted to compare the *random effect model* with the *fixed effect model*. Test results to find out which method is selected with the following criteria:

1. If the probability value is *chi-square*≥ 0.05, then H0 is accepted, so the suitable model to use is the random *effect model* (REM).
2. If the probability value of *chi-square* ≤is 0.05, then H0 is rejected, so the correct model is the *fixed effect model* (FEM).

The hypothesis used in the *Hausman test* is as follows:
H_0: *Random Effect Model* (REM)
H_1: *Fixed Effect Model* (FEM)

The results of the Hausman test can be seen in Table 5 as follows:

Table 5. Hausman Test

Correlated Random Effects – Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq.d.f.	Prob.
Cross-section random	24.045802	5	0.0002

**WARNING: estimated cross-section random effects variance is zero.
Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
X1	-7.273049	-8.274752	6.855691	0.7020
X2	-0210103	-0.043607	0.003283	0.0037
X3	0.000001	0.000000	0.000000	0.6417
X4	-0.195132	0.214399	0.018208	0.0024
X5	0.000001	-0.000001	0.000000	0.0006

Cross-section random effects test equation:
Dependent Variable: Y
Method: Panel Least Squares
Date: 04/08/22 Time: 12:51
Sample: 2014 2020
Periods Included: 7
Cross-sections included: 6
Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23.94492	10.13688	2.362159	0.0246
X1	-7.273049	3.027824	-2.402071	0.0225
X2	-0.210103	0.060515	-3.471935	0.0015
X3	5.49E-07	2.19E-07	2.511954	0.0174
X4	-0.195132	0.136730	-1.427126	0.1635
X5	5.37E-07	5.78E-07	0.928764	0.3602

Effects Specification
Cross-section fixed (dummy variables)

Root MSE	0.140849	R-squared	0.947567
Mean dependent var	6.169048	Adjusted R-squared	0.930654
S.D. dependent var	0.622567	S.E. of regression	0.163945
Akaike info criterion	-0.558448	Sum squared resid	0.833214
Schwarz criterion	-0.103344	Log-likelihood	22.72741
Hannan-Quinn criter.	-0.391634	F-statistic	56.02360
Durbin-Watson stat	1.766216	Prob (F-statistic)	0.000000

Based on Table 5 on the results of the Hausman test, the *chi-square probability value is* 0.000 2 ≤0.05, and the hypothesis is H_0rejected and

H_1 accepted, which means that the *Fixed Effect Model* (FEM) is a more appropriate model to use. Based on the results of the panel data regression model selection test for the three models, the panel data regression model used is the *Fixed Effect Model* (FEM).

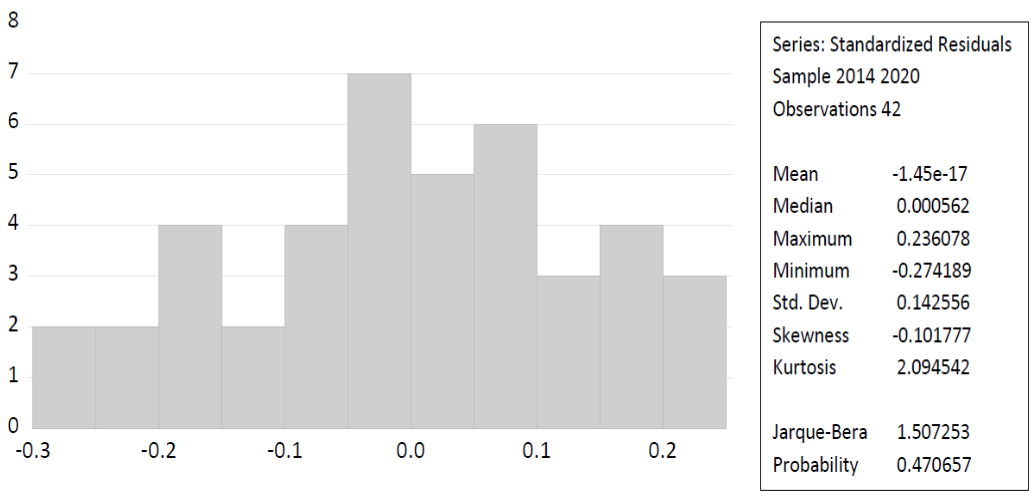
Classic assumption test

Normality test

The normality test determines whether or not a model variable is normally distributed. In this study, the normality test used the histogram chart method with the following conditions:

a. If the probability value is > 0.05 (greater than 5%), then the data can be said to be normally distributed.
b. If the probability value is <0.05 (smaller than 5%), then the data can be said to be not normally distributed.

Figure 1 . Normality test



Based on Figure 1, it can be seen that the normality test has a probability value of 0.470657, where the probability is more significant than 0.05, so it can be said that the data is normally distributed.

Multicollinearity Test

The multicollinearity test was carried out to test the regression model whether there is a correlation between the independent variables or the independent variables. If the correlation value is more significant than 0.80, it is said that a multicollinearity problem is identified. Multicollinearity is a situation to describe a strong relationship between two or more independent variables in a regression model. A good regression model should not show a correlation between each variable. The multicollinearity test can be seen in Table 6 below:

Table 6. Multicollinearity Test

	Gini Coefficient	The Proportion of The Poor	The Region's Gross Domestic Product	The Human Development Index	Average Per Capita Spending
Gini Coefficient	1.000000	0.018671	-0.232344	0.527954	0.182247
The Proportion of The Poor	0.018671	1.000000	-0.404737	-0.277401	-0.765895
The Region's Gross Domestic Product	-0.232344	-0.404737	1.000000	0.000605	0.412294
The Human Development Index	0.527954	-0.277401	0.000605	1.000000	0.762102
Average Per Capita Spending	0.182247	-0.765895	0.412294	0.762102	1.000000

Table 6 shows the value of the multicollinearity test for the independent variables of the Gini ratio. The percentage of poor people, GRDP, HDI, and average expenditure per capita have a correlation value below 0.80, so none of the variables experience multicollinearity.

Heteroscedasticity Test

The heteroscedasticity test aims to detect whether or not heteroscedasticity is present by looking at its probability value. The results of the heteroscedasticity test can be seen in Table 7 below.

Table 7. Heteroscedasticity Test

Dependent Variable: RESABS
Method: Panel Least Squares
Date : 04/08/22 Time : 13:00 _ _
Sample: 2014 20 20
Period included: 7
Cross-sections included: 6
Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.575636	0.471711	1.220315	0.2303
X1	0.776220	0.772015	1.005446	0.3214
X2	0.009760	0.009886	0.987292	0.3301

X3	1.78E-09	2.24E-08	0.079430	0.9371
X4	-0.014745	0.011210	-1.315377	0.1967
X5	1.88E-07	1.56E-07	1.207258	0.2352

Root MSE	0.077064	R-squared	0.081759
Mean dependent var	0.115632	Adjusted R-squared	-0.045775
S.D. dependent var	0.081397	S.E. of regression	0.083239
Akaike info criterion	-2.002639	Sum squared resid	0.249434
Schwarz criterion	-1.754400	Log-likelihood	48.05542
Hannan-Quinn criteria.	-1.911650	F-statistics	0.641076
Durbin-Watson stat	1.989238	Prob (F-statistic)	0.669850

Table 7 shows that the probability value of each variable has a result greater than 0.05, so it can be concluded that there are no symptoms of heteroscedasticity.

Autocorrelation Test

The autocorrelation test aims to see whether there is a relationship between the residuals of one study and other studies. A good regression model does not have autocorrelation. The results of the autocorrelation test can be seen in Table 2 with the values D.W. = 1.766216, dL = 1.2546, and dU = 1.7 814 because the dW>dL value fulfills non-autocorrelation.

The Effect of the Gini Ratio on Development Inclusivity in Java Island

Based on the estimation results using the *fixed effect model* shown in Table 2, the Gini ratio coefficient value is -7.273049; This shows that the Gini ratio negatively affects the development inclusiveness index. So if the Gini ratio increases, it can cause a decrease in the value of the development inclusiveness index. The t-statistic value for the Gini ratio variable is -2.402071, and the significance value is 0.0225. From these results, it can be seen that the probability value of the Gini ratio variable is less than 0.05 (5%), which means that the Gini ratio variable has a significant effect on the development inclusiveness index on the island of Java according to the research of Sitorus and Arsani (2018) and Nina and Rustariyuni (2018).

The Influence of the Presentation of the Poor on the Inclusivity of Development on Java Island

Based on the estimation results using the *fixed effect model* shown in Table 2. The percentage coefficient value of the poor population is -0.210103; This indicates that the poor's presentation negatively influences the development inclusiveness index. So if the presentation value of the poor decreases, it will encourage a reduction in the value of the development inclusiveness index. The t-statistic value for the presentation variable of the poor is -3.471935, and the significance value is 0.0015. From these results, it can be seen that the probability value of the presentation variable is poor less than 0.05 (5%), which means that the presentation variable is poor has a significant effect on the inclusiveness index of development on the island of Java according to the research of Sitorus and Arsani (2018) and Kusumawati *et al.,* (2021).

The Effect of GRDP on Development Inclusiveness in Java Island

Based on the estimation results using the *fixed effect model,* which can be seen in Table 2. The GRDP coefficient value is 5.49 E-07; This shows that GRDP positively influences the development inclusiveness index. So if the GRDP value increases, it will encourage an increase in the development inclusiveness index value. The t-statistic value for the GRDP variable is 2.511954, and the significance value is 0.0 174. From these results, it can be seen that the probability value of the GRDP variable is less than 0.05 (5%), which means that the GRDP variable has a significant effect on the development inclusiveness index on Java Island according to research by Hidayat *et al* ., (2020).

The Effect of the Human Development Index on Development Inclusivity on Java Island

Based on the estimation results using the *fixed effect model,* which can be seen in Table 2, the coefficient value of the Human Development Index is -0.195132; This shows that the Human Development Index negatively influences the development inclusiveness index. So if the Human Development Index value decreases, the development inclusiveness index value will increase. The t-statistic value for the Human Development Index variable is -1.427126, and its significance value is 0.1 635. From these results, it can be seen that the probability value of the Human Development Index variable is more than 0.05 (5%), which means that it has no significant effect on the development inclusiveness index in Java. The results of this study contradict the results of research by Kusumawati *et al.* (2021). Differences in area coverage and economic conditions of each region can cause differences in research results.

Influence of Average Per Capita Expenditures on Development Inclusivity in Java Island

Based on the estimation results using the *fixed effect model,* shown in Table 2, the average coefficient value of per capita expenditure is 5. 37 E-07; This indicates that the average per capita expenditure positively influences the development inclusiveness index. So that if there is an increase in the average per capita expenditure value. The development inclusiveness index value will increase. The t-statistic value for the average per capita expenditure variable is 0.928764, and the significance value is 0.3602. The probability value of the average per capita expenditure variable is more than 0.05 (5%); This means that the average per capita expenditure variable does not significantly affect the inclusiveness index of development in Java Island, according to the research of Nina and Rustariyuni (2018).

CONCLUSION

Based on the results and discussion previously described, the conclusions of this study are as follows: (1) The Gini ratio variable has a significant effect on the inclusiveness index of development in Java with a probability value of 0.0225, (2) The percentage variable of the poor has a significant effect on the index development inclusiveness on the island of Java with a probability value of 0.0015, (3) the GRDP variable has a significant effect on the development inclusiveness index on the island of Java with a probability value of 0.0174, (4) the Human Development Index variable does not have a significant effect on the development inclusiveness index on the island of Java with a value probability of 0.1653, (5) The average per capita expenditure variable has no significant effect on the development inclusiveness index on Java Island with a probability value of 0.928764.

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