INFLUENCE OF INCOME INEQUALITY, ECONOMIC GROWTH, UNEMPLOYMENT ON INDONESIAN POVERTY IN 1992-2019

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Abstract
Indonesia cannot avoid the issue of poverty because it is a developing nation with a growing population. During the period from 1992 to 2019, the number of poor people in Indonesia fluctuated, fluctuating between increases and decreases each year. Therefore, it is necessary to conduct an analysis in order to determine the factors that contribute to poverty. This study's aim is to examine the impact of income inequality, economic growth, and unemployment on poverty in Indonesia between 1992 and 2019. Time series data are utilized. The data utilized for analysis are secondary data from the World Bank and the Central Statistics Agency (hereinafter referred to as BPS). Through the E-views 10 software, the analysis tool employs the Engle Granger-Error Correction Model. The findings indicate that (1) short- and long-term income inequality has a negligible impact on poverty in Indonesia and (2) short- and long-term economic growth has a positive impact on poverty in Indonesia. On the long term, poverty in Indonesia has a significant impact in Indonesia, between 1992 and 2019, unemployment has no significant short-term impact on poverty, but a significant long-term impact.

Keywords: Economic Growth, Gini Ratio, Poverty, Unemployment

1. INTRODUCTION
Indonesia is one of the countries that are part of the big five with the largest population in the world. As a country that is still categorized as a developing country, the Indonesian government still needs to carry out sustainable development and give more attention to its population. One of the problems in Indonesia that has always been the government's homework is poverty. Research researched by Leasiwal (2013) explained that If the greater the number of poor people in a region, the lower the level of welfare in that region, and conversely, the smaller the number and percentage of poor people, this indicates that the welfare of the community is increasing. People are categorized as disadvantaged (poor) if their average monthly per capita expenditure falls below the poverty line (BPS, 2022).
Table 1. Number of Indonesia’s Poor 2014-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Poor Population (million people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>28.30</td>
</tr>
<tr>
<td>2015</td>
<td>28.60</td>
</tr>
<tr>
<td>2016</td>
<td>28.00</td>
</tr>
<tr>
<td>2017</td>
<td>27.80</td>
</tr>
<tr>
<td>2018</td>
<td>25.90</td>
</tr>
<tr>
<td>2019</td>
<td>25.10</td>
</tr>
</tbody>
</table>

Source: BPS Indonesia (data processed)

According to Table 1, the number of poor people in Indonesia during the period from 2014 to 2019 is still fluctuating. Beginning in 2014, the number of poor people decreased by 28.30 million individuals, before rising to 28.60 million in 2015. Following that year, the number of poor people decreased to 28.00 billion in 2015. In the meantime, the number of poor people in Indonesia decreased to 27.80 million in 2017. In 2018, the number of poor people in Indonesia decreased to 25.90 million, and by 2019, it had dropped to 25.10 million.

Poverty has many factors as its causes, so it can be said that poverty rarely occurs because of a single factor. Poverty is caused by economic disparities between high-income and low-income groups, inequality in income distribution, the number of people below the poverty line, lack of education, and rising unemployment. These factors clearly influence and are related to each other (Pratiwi & Malik, 2022). As a head country with a large population, each region in Indonesia has differences in its characteristics so that it cannot lead to uniformity in the pattern of development. This non-uniformity causes there are areas that grow quickly and there are also areas that grow slowly. Therefore, this difference in growth causes inequality in development and income in Indonesia.

Table 2. Indonesia Gini Index 2014-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Gini Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>38.40</td>
</tr>
<tr>
<td>2015</td>
<td>39.70</td>
</tr>
<tr>
<td>2016</td>
<td>38.60</td>
</tr>
<tr>
<td>2017</td>
<td>38.10</td>
</tr>
<tr>
<td>2018</td>
<td>37.80</td>
</tr>
<tr>
<td>2019</td>
<td>37.00</td>
</tr>
</tbody>
</table>

Source: World Bank (data processed)

From the table above, we can see the value of Income Inequality which is reflected in the Gini index value. Starting in 2014 Indonesia's Gini index showed a figure of 38.40. In the following year 2015 Indonesia's Gini index increased to 39.70. In 2016, the Gini index fell to 38.60. In 2017 Indonesia's Gini index decreased to 38.10. Meanwhile, in 2018 Indonesia's Gini index also decreased to 37.80 until 2019 the Gini index continued to decline until 2019 the Gini index became 37.70.
Economic growth is seen as an illustration of welfare in the form of economy and the welfare of the population in a country. Economic growth is also one of the many indicators as a measure of economic performance in a country. In order to increase the standard of living and the general welfare of its population, each country must prioritize a rapid improvement in its economic situation (Nopiana et al., 2022). With economic growth, it can be seen how economic activity is running, especially in seeking an increase in the production of goods and services. In a study conducted by Tubaka (2019), the increase in production is then expected to cause a trickle down effect so that it can have an effect on increasing the welfare of the community itself and will also reduce poverty. Todaro (2013) explains that although it does not provide automatic answers to many problems in the country, one of the important elements of poverty alleviation is economic growth.

Table 3. Indonesia's Gross Domestic Product in 2014-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>3,492 US$</td>
</tr>
<tr>
<td>2015</td>
<td>3,332 US$</td>
</tr>
<tr>
<td>2016</td>
<td>3,563 US$</td>
</tr>
<tr>
<td>2017</td>
<td>3,838 US$</td>
</tr>
<tr>
<td>2018</td>
<td>3,894 US$</td>
</tr>
<tr>
<td>2019</td>
<td>4,135 US$</td>
</tr>
</tbody>
</table>

Source: World Bank (data processed)

The preceding table demonstrates that the magnitude of economic growth fluctuates. The annual Gross Domestic Product (GDP) per capita produced is a measure of economic growth. Starting in 2014 GDP per capita showed a figure of US$ 3492. In the following year 2015 economic growth decreased to US$ 3332. In 2016 GDP per capita increased to US$ 3563. In 2017 GDP per capita increased again to US$ 3838 and continued to increase in 2018 with a figure of US$ 3894. However, in 2019 GDP per capita also increased to US$ 4135.

Theoretically, if the income distribution is even, the economy can grow with good quality and accompanied by high absorption of labor, it can reduce the level of poverty. Full employment (full employment) will create maximum community income. Unemployment will have the impact of reducing the community and the low prosperity of the community. Unemployment can cause economic growth to decline and their lives depend on people who are still productive, causing dependency rates to increase and per capita income to decline (Prasetyoningrum and Sukmawati, 2018).
Table 4. Indonesia's Open Unemployment Rate (TPT) 2014-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Open Unemployment Rate (TPT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>5.90 %</td>
</tr>
<tr>
<td>2015</td>
<td>6.20 %</td>
</tr>
<tr>
<td>2016</td>
<td>5.60%</td>
</tr>
<tr>
<td>2017</td>
<td>5.50%</td>
</tr>
<tr>
<td>2018</td>
<td>5.30 %</td>
</tr>
<tr>
<td>2019</td>
<td>5.30 %</td>
</tr>
</tbody>
</table>

Source: BPS Indonesia (data processed)

As shown in the table above, Indonesia's Open Unemployment Rate has fluctuated. The Open Unemployment Rate for Indonesia in 2014 was 5.90%. There was an increase in 2015 to 6.20%. In 2016 TPT decreased to 5.60% and decreased again in 2017 to 5.50%. Meanwhile, in 2018-2019 the value of Indonesian TPT is the same, which is 5.30%.

Several previous studies have been conducted to identify variables such as income inequality, economic growth and unemployment that affect fluctuations in poverty in Indonesia. Tubaka (2019) examining poverty in eastern Indonesia, three of the variables used one of which is unemployment, income distribution and economic growth on poverty by using panel data regression analysis method. Slightly different from the research conducted by Murjani (2019) about poverty two of the three variables are economic growth and unemployment using the Autoregressive Distributive Lag (ARDL) method.

The purpose of this study is to examine the impact of income distribution, economic growth, and unemployment on poverty in Indonesia from 1992 to 2019 in light of the information provided above and the varying findings of previous research regarding the variables that influence poverty. Consequently, employing alternative methods, such as ECM (Error Correction Model). This study examines the short- and long-term effects of each variable, namely income distribution, economic growth, and unemployment rate, on poverty in Indonesia from 1992 to 2019.

2. LITERATURE REVIEW

Currently, poverty is one of the problems in development that is multidimensional in nature. Poverty is easily detected by the state of the economy experiencing backwardness, powerlessness, and incompetence, and the high number of people who become unemployed, and income inequality as a trigger for the gap between community groups (Rahman et al, 2019). The Poverty Line (GK) is used and determined by BPS (2022) to calculate the number of poor people and households. Some of the factors below are determinants (with an individual approach): low levels of education, poor quality in health, and having children are widely considered as investments for the poor, low productivity leads to low savings (because income is used up for consumption).

2.1. Income Inequality

The greater the distance between income, the greater the variation in the income distribution. If the gap continues between the rich and the poor, it can be assumed that
growth is uneven (Tubaka, 2019). In addition, there is another view to measuring poverty in Indonesia, namely by looking at whether or not the level of income is even and the level of income earned by the community.

In the figure above, in research Ratih and Indrayani (2010) Simon Kuznets explained that in the initial phase of economic growth, income distribution tends to worsen, but in the subsequent phase, income distribution will improve. The relationship of income distribution inequality and poverty in Banten Province in 2000-2012 as studied by Saraswati (2020) results that the inequality of income distribution per capita (Gini Index) has a positive effect on the percentage of the poor. In the research conducted Hassan (2015) shows that increasing income inequality greatly affects poverty.

2.2. Economic Growth

Harold Domar's theory of economic growth explains that aggregate spending will determine the level of economic activity, the more savings invested, the faster the rate of economic growth. But in reality, there are still poor people in Indonesia. People who are said to be poor if their income is much lower than the average income causes them to have limitations to prosper themselves (Rahman et al, 2019). On the other hand Ginting and Rasbin (2010) explained that population growth and also an increase in the labor force as one of the factors that can trigger economic growth. The theory of trickle-down economics can be summarized briefly from the traditional relationship between growth and poverty, in which trickle-down economics can work. Public intervention can increase growth rates, where policies also provide a means to reduce poverty and low incomes (Candradewi et al, 2018).
In Pakistan Afzal (2012) examined analysis of the relationship between education, poverty, and economic growth in Pakistan using econometrics. Pov (poverty) and RGDP (economic growth) exhibit a significant and inverse relationship. On the other hand, to increase economic growth we must reduce poverty and on the other hand, to reduce poverty we need to increase economic growth. As well as Fadillah (2021) conducted research on the macromacroeconomic and poverty alleviation in Indonesia (analysis of the ability of economic growth and macroeconomic indicators in poverty alleviation in Indonesia) using the ARDL method, in the long term the GDPG variable (economic growth) has a negative and significant influence on the dependent variable poverty at alpha 5 percent. Research conducted by Febriaty (2020) shows that GRDP/capita has a negative and significant influence on poverty in North Sumatra Province. It's different with Pratiwi and Malik (2022) by using panel data regression analysis, the economic growth of the Regency/City of the Province of Bali from the period 2011-2020 has a significant positive impact on the level of poverty in the Regency/City of the Province of Bali.

2.3. Unemployment

According to International Labor Organization, Unemployment is explained that During a given time period, a portion of the population of working age is unemployed, willing to accept work, and actively seeking employment. Todaro (2013) explained that if there is an unemployment problem it is related to the prosperity of the community. If population growth is not controlled, it can cause the goal of economic development not to be achieved, namely the welfare of the community and reducing poverty. Population growth can be one of the driving factors and obstacles to development (Sukirno, 2011).

Other research was conducted in Central Java Province Bintang and Woyanti (2018) with the Fixed Effect Model (FEM) or also called Least Square Dummy Variable (LSDV), Gross Regional Domestic Product (GRDP) and Unemployment have a positive effect on poverty levels in 35 regencies/cities in Central Java Province. Similar research was conducted by Andhykha et al (2018) Regarding In a panel data regression analysis of the effects of Regional Domestic Product (GRDP), unemployment rate, and human development index on the poverty rate in Central Java Province, unemployment had a positive influence. These results provide an overview of the unequal economic growth and the contribution of the high-income group that dominates. By using the ARDL model, Murjani (2019) observing the impact of the macroeconomic variable of unemployment on the poverty level has a significant effect on the level of poverty in the long term. Significantly only economic growth affects poverty in the short term.

The differences in the analytical tools used, the time period employed, and the areas studied determine the outcomes of the conducted research. According to conceptual and prior research, the effects of income inequality, economic growth, and unemployment on poverty are mixed. Therefore, it is necessary to review and expand upon this topic using a model of analysis that does not currently exist, namely the Engle-Granger ECM model. This allows for a greater understanding of the analysis of long-term and short-term effects.
3. RESEARCH METHODS

This study employs a quantitative approach with a descriptive methodology. Secondary data are derived from literature, books, and documents through reading, studying, and comprehending other media (Sugiyono, 2012). The secondary data used in this study are systematically time series data spanning the years 1992 to 2019. This study uses data from 1992 to 2015 regarding the poor population, the Gini index, per capita GDP, and total unemployment.

In this study, there are two types of variables: the dependent variable and the independent variable. In this study, Poverty is the dependent variable, while Income Inequality, Economic Growth, and Unemployment are the independent variables. This study employs the Error Correction Model (ECM) technique to examine the long- and short-term effects of variables on economic growth. The following procedures must be followed when estimating using the Engle-Granger ECM:

3.1 Unit Root Test

The unit root test evaluates the hypothesis that a time series is not stationary. The Augmented Dickey Fuller test is regularly administered (ADF-test). This investigation made use of the Dickey-Fuller (DF) unit root test. According to Widarjono (2018), the fundamental concept of a stationary test with a unit root test is as follows:

\[ Y_t = \rho Y_{t-1} + e_t; \ -1 \leq \rho \geq 1 \]

3.2 Integration Degree Test

The degree of integration test is a connection from the stationarity test, if the data that has been tested using the unit root test produces data that is not stationary, then the next step is to use the degree of integration.

3.4 Cointegration Test

Regression using time series data whose results are not stationary will most likely result in spurious regression. The Engle-Granger cointegration approach has two stages. The first stage is regressing the dependent variable with the independent variable, so that our model is as follows (Widarjono 2018):

\[ Y_t = \beta_0 + \beta_1 X_t + \varepsilon_t \]

The Engle-Granger cointegration test is carried out by testing the stationary of the residuals with the Dickey Fuller and Augmented Dickey Fuller methods which have the following test equation:

\[ \Delta e_t = \beta_1 e_{t-1} + \sum_{i=2}^{p} \alpha_i \Delta e_{t-i+1} \]
From the results of the estimated statistical value of Dickey Fuller and Augmented Dickey Fuller testing this method, it can be seen the probability value of the test results. The EG-ECM model can be used if the long-run equation residuals are stationary at the level level.

3.5 ECM (Error Correction Model)

To overcome this imbalance, a model is made to include adjustments to correct the imbalance which is known as the error correction model (ECM). Error Correction Model in the Engle Granger method, namely on two variables that are stationary at the level of differentiation and there is a cointegration of the two variables. The existence of cointegration of both means that in the long run the two variables have a relationship or balance. While the imbalance can occur in the short term (Khamidah & Sugiharti, 2022). Systematically the basic model used in this research is this research as follows:

\[
LOGPOV = f(LOGINI, LOGGDP, TPT)
\]

To discuss this model, we have a model of the long-run relationship between the variables X and Y as follows:

\[
Y_t = \beta_0 + \beta_1 X_t
\]

The ECM-Engle Grenger econometric model in this study in the long term is formulated as follows:

\[
LOGPOV_t = \beta_0 + \beta_1 LOGINI_t + \beta_3 LOGGDP_t + \beta_4 TPT_t + e_t
\]

Information:
- LOGPOV = number of poor people (million/million)
- LOGGIN = Gini Index (ratio)
- LOGGDP = Economic Growth (US$)
- TPT = Unemployment (%)
- \(e_t\) = residual value (previous period)

A short-term equation is derived from the preceding equation. ECM is defined by the inclusion of an Error Correction Term (ECT) element in the model. ECT, which is stationary in the long-term equation, is used not only to determine the presence or absence of cointegration, but also as a variable in the short-term equation. If the ECT coefficient is statistically significant, meaning that the probability value is less than 5%, the model specification is deemed valid. In light of this, the short-term equation for this study can be expressed as follows.

\[
\Delta LOGPOV_t = \alpha_0 + \alpha_1 \Delta LOGINI_t + \alpha_2 \Delta LOGGDP_t + \alpha_3 \Delta TPT_t + \alpha_4 \Delta ECT_t + e_t
\]
Information:
LOGPOV = number of poor people (million/million)
LOGGIN = Gini Index (ratio)
LOGGDP = Economic Growth (US$)
TPT = Unemployment (%)
ECT = Error Correction Term
\( \alpha_0 \) = Constant
\( \alpha_1, \alpha_2, \alpha_3 \) = Coefficient of independent variable
\( \alpha_4 \) = ECT coefficient
\( e_t \) = Error term

After the short-term estimation is done, the ECT coefficient value can be known, if the ECT coefficient is negative between 0-1 and significant, the Engle-Granger Error Correction Model is valid to use.

4. RESULTS AND DISCUSSION
4.1. Research Result
4.1.1. Stationarity Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>t-statistics</th>
<th>Mackinnon Critical Value 5%</th>
<th>Prob</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG_POV</td>
<td>0.479596</td>
<td>-3.012363</td>
<td>0.9816</td>
<td>Not Stationary</td>
</tr>
<tr>
<td>LOG_GINI</td>
<td>-0.999933</td>
<td>-2.976263</td>
<td>0.7386</td>
<td>Not Stationary</td>
</tr>
<tr>
<td>LOG_GDP</td>
<td>-0.7000869</td>
<td>-2.976263</td>
<td>0.8301</td>
<td>Not Stationary</td>
</tr>
<tr>
<td>TPT</td>
<td>-2.325661</td>
<td>-2.998064</td>
<td>0.1728</td>
<td>Not stationary</td>
</tr>
</tbody>
</table>

Source: E-views, data processed

Based on table 5 above, it is known that the ADF test results show that the coefficient values of all variables are greater than the Mackinno critical value of 5 percent and also the probability is greater than 0.05. This means that all variables are not stationary at the level, therefore it is necessary to test the degree of integration to see if the data is stationary at the first difference or second difference degrees.
4.1.2. Integration Degree Test

Table 6. Integration Test at First Different Level

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF Test</th>
<th>Level</th>
<th>1st Difference</th>
<th>ADF</th>
<th>Prob</th>
<th>ADF</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG_POV</td>
<td>0.479596</td>
<td>0.9816</td>
<td>-4.779673</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOG_GINI</td>
<td>-0.999933</td>
<td>0.7386</td>
<td>-4.247536</td>
<td>0.0028</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOG_GDP</td>
<td>-0.7000869</td>
<td>0.8301</td>
<td>-5.255831</td>
<td>0.0002</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TPT</td>
<td>-2.325661</td>
<td>0.1728</td>
<td>-5.255831</td>
<td>0.0002</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Eviews, data processed

According to the table above, the results of the integration degree test with ADF on the variables of poverty, income inequality, economic growth, and stationary unemployment at the first degree of difference. This is due to the fact that the probability value for each variable is less than $\alpha = 5\%$, or 0.05. Thus, the subsequent phase of testing can be conducted.

4.1.3. Cointegration Degree Test

To find out the residual stationarity, first form a regression equation using ordinary least squares (OLS). The model used in this regression is as follows:

$$LOG_{POV_t} = \beta_0 + \beta_1 LOG_{GINI_t} + \beta_2 LOG_{GDP_t} + \beta_3 TPT_t + e_t$$

After obtaining the residual value, the ADF test was carried out to determine whether the residual value was stationary or not. The ADF value is obtained as follows:

Table 7. Residual Stationarity Test Result

<table>
<thead>
<tr>
<th>Variable</th>
<th>t-statistics</th>
<th>Mackinnon Critical Value 5%</th>
<th>Prob</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECT</td>
<td>-4.198859</td>
<td>-2.976263</td>
<td>0.0030</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

Source: Eviews, data processed

The test results indicate that the residuals in the linear equation involving the dependent variable and the independent variable are stationary at the level level. Due to the fact that the probability value is 0.00030 0.05 or less than $\alpha = 5\%$, it is possible to conclude that there is a long-term balance between the variables in this study.
4.1.4. Error Creation Model (ECM) Test

Table 8. Short-term Error Correction Model (ECM) Test Result

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-statistics</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.009337</td>
<td>0.026448</td>
<td>0.353018</td>
<td>0.7274</td>
</tr>
<tr>
<td>D(LOG_GINI)</td>
<td>0.621127</td>
<td>0.778249</td>
<td>0.798109</td>
<td>0.4333</td>
</tr>
<tr>
<td>D(LOG_GDP)</td>
<td>-0.291395</td>
<td>0.147951</td>
<td>-1.969535</td>
<td>0.0616</td>
</tr>
<tr>
<td>D(TPT)</td>
<td>0.024314</td>
<td>0.032951</td>
<td>0.737901</td>
<td>0.4684</td>
</tr>
<tr>
<td>ECT(-1)</td>
<td>-0.720391</td>
<td>0.211360</td>
<td>-3.408354</td>
<td>0.0025</td>
</tr>
</tbody>
</table>

R-squared: 0.4178
F-statistics: 3.9474
Prob(F-statistic): 0.014

Source: Eviews, data processed

Based on the table, the regression equation can be arranged in the short-term equation below:

\[
DPOV_t = 0.009337 + 0.621127 DLOGGINI_t - 0.291395 DLOGGDP_t \\
+ 0.024314 TPT_t - 0.720391 ECT(-1)
\]

Based on the preceding equation and the estimation results of the short-term model, the ECT probability value (-1) is 0.0025 ≤ 0.05, indicating that the ECT variable is statistically significant \( \alpha = 5\% \). The ECT coefficient value (-1) is -0.720391, which means that the error correction model can be used to analyze the impact of income inequality, economic growth, and unemployment on poverty in Indonesia. Based on the results of the conducted tests, the short-term effect of each independent variable on the dependent variable can be explained.

Based on the results of short-term estimates, the value of income inequality (LOG GINI) has a positive coefficient of 0.621127, and the probability is 0.4333 > 0.05 (\( \alpha = 5\% \)), indicating that a 1 percent increase in income inequality in Indonesia will not result in a change in the number of poor. The economic growth variable (LOG GDP) has a negative coefficient of 0.291395 and a probability of 0.0616 > 0.10 (\( \alpha = 10\% \)), indicating that for every 1 percent increase in economic growth in Indonesia between 1992 and 2019, the proportion of the poor will increase by 0.291395 percent. Inasmuch as the unemployment variable (TPT) is a short-term estimation result indicating that the coefficient value of 0.024314 is positive and the probability is 0.4684 > 0.05 (\( \alpha = 5\% \)), a 1 percent increase in economic growth will not result in a change in the poor population of Indonesia. In the table, the value of the coefficient of determination (R2) is 0.4178, indicating that the short-term effect of the independent variable on the dependent variable is 41.78 percent,
Influence of Income Inequality, Economic Growth, Unemployment on Indonesian Poverty in 1992-2019
Shalsabila Rizky Aureli, Whinarko Juliprijanto

While the remaining 58.22 percent is explained by the residual variable, i.e., variables not included in the model.

Table 9. Long-term Error Correction Model (ECM) Test Result

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-statistics</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>2.791803</td>
<td>2.095754</td>
<td>1.332129</td>
<td>0.1953</td>
</tr>
<tr>
<td>D(LOG_GINI)</td>
<td>0.845432</td>
<td>0.809737</td>
<td>1.044082</td>
<td>0.3069</td>
</tr>
<tr>
<td>D(LOG_GDP)</td>
<td>-0.328951</td>
<td>0.116737</td>
<td>-2.817887</td>
<td>0.0095</td>
</tr>
<tr>
<td>D(TPT)</td>
<td>0.026667</td>
<td>0.012823</td>
<td>2.079566</td>
<td>0.0484</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.5886</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-statistics</td>
<td>11.447</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: E-views, data processed

Based on the table, the regression equation can be arranged in the long-term equation below:

\[ POV_t = 2.791803 + 0.845432 \cdot LOG\_GINI_t - 0.328951 \cdot LOG\_GDP_t + 0.026667 \cdot TPT_t \]

According to the long-term estimation results, the coefficient value of income inequality is 0.845432, which is positive, and the probability is 0.3069 > 0.05 (\( \alpha = 5\% \)), indicating that a 1 percent increase in income inequality in Indonesia will not affect the poor population. The economic growth variable has a negative coefficient of 0.328951 and a probability of 0.0095 < 0.05 (\( \alpha = 5\% \)), indicating that economic growth has a significant negative effect on Indonesian poverty over the long term from 1992 to 2019. While the unemployment variable exhibits a positive coefficient value of 0.026667 and a probability of 0.0484 > 0.05 (\( \alpha = 5\% \)), the poor population in Indonesia will increase by 0.026667 percent for every 1 percent increase in economic growth. The value of the table’s coefficient of determination (\( R^2 \)) is 0.5886, indicating that the short-term effect of the independent variable on the dependent variable is 58.86%, while the remaining 41.14% is explained by the residual variable, i.e., variables not included in the model.
4.1.5. Classic assumption test

1) Normality Test

On the basis of the results of the normality test, it is known that the Jarque-Bera statistical value reveals the number 2.969345, with a probability value of 0.226577 > α = 5%. Therefore, the data can be interpreted as normally distributed or as meeting the requirements for normality.

2) Multicollinearity Test

Since the VIF value of each variable is less than 10, it can be concluded that these variables do not exhibit multicollinearity. Consequently, it can be stated that the model has no multicollinearity issues.

3) Heteroscedasticity Test
Based on the results of data processing for the heteroscedasticity test, a chi-square probability greater than $\alpha = 5\%$ is calculated to be 0.1092. This indicates that it is statistically significant and that the used regression model is free of heteroscedasticity issues.

4) Autocorrelation Test

<table>
<thead>
<tr>
<th>Table 12. Autocorrelation Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breusch-Godfrey Serial Correlation LM Test:</td>
</tr>
<tr>
<td>F-statistics</td>
</tr>
<tr>
<td>Obs*R-squared</td>
</tr>
</tbody>
</table>

Source: Eviews, data processed

Basis of the results of the calculation of the short-term equation, the probability value of Obs* R-Squared is 0.3215, which is greater than the significance level of $\alpha = 5\%$, indicating that there is no autocorrelation issue.

4.2. Discussion

4.2.1. The Effect of Income Inequality on Indonesia's Poverty

On the short term, the coefficient value of the income inequality variable is 0.621127, which is positive, and the probability is 0.4333, whereas on the long term, Indonesia's income inequality has a coefficient of 0.845432, a positive sign, and a probability of 0.3069, indicating that it has a positive and insignificant effect on poverty in Indonesia on both the short and long term. This is similar with research conducted by Vania Grace Sianturi et al (2021) The results show that the inequality of income distribution is 0.082073 with a probability value of 0.6124, meaning that the inequality of distribution of income has a positive and insignificant influence on poverty in Indonesia. The increasing Gini index number indicates that the results of achieving economic growth are still not evenly distributed (Nadhfah, 2018). This is in accordance with Kuznets theory which argues that an uneven distribution of income is a necessary condition for increasing economic growth, a high rate of economic growth can lead to high inequality in income distribution because rich people prefer to save compared to poor people so that the aggregate saving rate will increase and followed by an increase in investment as development capital and a trigger for economic growth. Increased investment will spur high economic activity and high job opportunities, so that national income will increase and the level of community prosperity will increase. The same result was also obtained by Tubaka (2019) that in 12 provinces of eastern Indonesia, the Gini ratio had a positive but insignificant impact on poverty levels. One of the reasons is the disparity in patterns of resource ownership, which leads to unequal or unequal income distribution.

4.2.2. The Effect of Economic Growth on Indonesia's Poverty

The coefficient value of the short-term economic growth variable is 0.291395 with the short-term prob value of 0.0616 significant at alpha 10%, and the long-term coefficient value is 0.328951 with the long-term prob value of 0.0095 significant at alpha
5%, indicating that economic growth from the above equation had a negative and statistically significant effect on poverty in Indonesia during the short-term and long-term periods of 1992 to 2019. Marisa (2019) found using multiple linear regression models that the variable economic growth has a negative and statistically significant effect on the level of poverty in Indonesia. These findings are supported by the findings of this study. According to a study conducted by Afzal et al. (2012) in Pakistan, poverty and economic growth are significantly and inversely related. Poverty must be alleviated in order to accelerate the rate of economic growth, and economic growth must increase in order to decrease poverty. The success of poverty alleviation depends on the economic growth and income distribution of the country. This long-term and short-term relationship is consistent with the theory of the trickle-down effect, which states that economic growth can reduce the number of poor people in an area, as a portion of economic growth trickles down from the rich to the poor. In order for rapid economic expansion to further narrow the gap between the rich and the poor (Candradewi et al. 2018).

4.2.3. The Effect of Economic Growth on Indonesia's Poverty

The coefficient value of the unemployment variable in the short term is 0.024314, which is positive with a prob of 0.4684, which means that the positive effect is not significant. This study results are similar with research conducted by Marisa (2019), the unemployment variable on the poverty rate is positive but not statistically significant, with an unemployment coefficient of 0.042003. Insignificance occurs because the number of the workforce continues to increase every year, and this workforce is still a student or college student where the cost of living is still borne by parents that in the long-term unemployment coefficient value of 0.026667 is positive with a probability of 0.0484 significant meaning that in the long-term unemployment has a positive and significant effect on poverty. The findings of this study are supported by research conducted by Fadillah (2021), which indicates that the UNM variable or unemployment has a positive and significant influence over the long term, assuming that Indonesia, as a developing nation, continues to prioritize high economic growth. This is also in accordance with Sukirno's (2011) theory that unemployment causes people to have no income so that it will cause economic and social problems. High unemployment has an adverse effect on the equity of income distribution. The greater the unemployment, the more workers have no income.

5. CONCLUSION

The income inequality variable (Gini index) has a positive and insignificant effect on poverty (number of poor people) in Indonesia from 1992 to 2019 on the short and short term. In the interim, from 1992 to 2019, the variable short- and short-term economic growth has a negative and substantial impact on poverty in Indonesia. In Indonesia, between 1992 and 2019, the unemployment variable (TPT) has a positive but insignificant effect on poverty (number of poor people) over the short term. On the other hand, it has
a positive and significant effect on poverty in Indonesia from 1992 to 2019 on the long term.

REFERENCES


