Analysis Factors Influencing Economic Growth, Unemployment and Poverty in Indonesia

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Abstract

This research was conducted on the basis of several problems that occurred in Indonesia, namely, the lack of economic resilience and the impact of the global crisis, which can affect uneven levels of economic growth, unemployment caused by a mismatch between labor skills and labor market demand, and can lead to poverty due to income inequality. The purpose of this research is to determine the characteristics of the variables that influence economic growth, unemployment and poverty in Indonesia. This research will later discuss the simultaneous model relationship between variables that affect economic growth, unemployment, and poverty using the Three Stage Least Square (3SLS) method. The research object consists of 34 provinces in Indonesia in the period 2012-2021. The research results showthe unemployment, inflation, and investment variables have a significant positive effect on economic growth which has a probability value of less than 0.05 and a positive coefficient value, while the human development index variable has a prob value. less than 0.05 and the coefficient is negative so it has a significant negative effect. The results of the second equation, the Human Development Index and economic growth have a significant effect on the prob value. 0.00 < 0.05, while labor has a significant negative impact with a prob value. 0.05 and the coefficient is negative, while the poverty variable has a prob value. 0.06 > 0.05 so it has no significant effect on unemployment. Analysis of the results of the third equation reveals that poverty is significantly affected by the gini ratio with the prob value. 0.00, but not affected by unemployment or the minimum wage because the probability value is more than 0.05.

Key words : Economic Growth, Unemployment, Poverty, 3SLS

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INTRODUCTION

Indonesia is one of the developing countries and there are still various problems that must be faced in the process of national development (Lubis, 2013) (Morita et al., 2020). National development, especially what is happening in Indonesia, focuses more on development in the economic sector, this is because, if the economic sector experiences significant growth, it will have an impact on increasing development changes in various other fields (Pridayanti, 2013). Every country, including Indonesia,

certainly has the desire to build a prosperous, prosperous, peaceful and affluent society. Therefore, economic development is one of the efforts to increase economic growth. Economic growth is the fiscal development of a nation's production of goods and services that results in an increase in national income (Khoiruroh & Setiawan, 2014; Magdalena & Suhatman, 2020).

Economic growth in a certain area is basically measured based on Gross Domestic Product (GDP) and the growth rate is based on constant prices (Soemartini, 2016; Coccia, 2021). GDP based on constant prices explains that added value to goods and services whose calculation process uses prices prevailing in a particular year. For determining a nation's annual economic growth, GDP at constant prices is useful (BPS, 2022).

The rise and fall of the level of economic growth can be seen by various factors, namely first, by looking at the level of the Human Development Index. The Human Development Index is a tool for measuring human development in relation to a number of fundamental aspects of quality of life. There are three dimensions to the Human Development Index: knowledge, healthy living, longevity, and a decent standard of living (Ningrum et al., 2020). According to the findings of previous studies, there is a two-way relationship (dual causation) between the level of economic growth and human development. This means that changes in the level of economic growth can have an impact on human development, but that an increase in human development can also have an impact on economic growth. Therefore, the conclusion is that economic growth will rise in tandem with a rise in human development (Muqorrobin & Soejoto, 2017; Clark, 2013).

In human development efforts, there is an increase in the demand for and supply of goods or services, for example, government spending has increased, investment levels ha-

ve increased, and the amount of money circulating in society. With the occurrence of high demand and supply can encourage inflation. In Indonesia, inflation is an important concern. In the history of the Indonesian economy, several times experienced very high inflation and even hyper-inflation around the 60's, especially in 1962 to 1968, the highest occurred in 1966, namely 136%. Very high inflation has had a sizable impact on the Indonesian economy, such as unemployment due to layoffs and lack of employment as well as increasing poverty rates (Maggi & Saraswati, 2013).

Conditions where prices increase in general and continuously within a certain period of time is called inflation (Kibritçioğlu, 2018), this inflation can be used as a controller for economic stability. A low and stable inflation rate can provide benefits in the form of increased social welfare. And conversely, high inflation will have an impact on socio-economic conditions in society, such as declining income levels, and the lack of certainty in making decisions for economic actors. According to the findings of previous studies, inflation has a small but significant impact on economic expansion. From this it can be said that inflation is not a determining factor for increasing economic growth, but only a complementary variable for other variables to be studied (Nujum & Rahman, 2019).

As a result of the high inflation rate, the investment level will decrease. Because with an increase in the prices of produced goods, business people will reduce the amount of production so that investors will also reduce the amount of their investment, because in this situation it is not possible for investors to get a return on the investment capital that has been provided.

A type of expenditure or investment is an acquisition of capital goods and production equipment for the purpose of increasing the economy's production of goods and services (Sukirno, 2016). Investment is one of the ways used to increase economic growth. Testing indicated that investment contributes positively and significa-

ntly to economic expansion based on previous research findings. This can be interpreted that economic growth will depend on the development of capital which emphasizes investment, if the higher the level of investment, it is able to encourage an increase in economic growth (Sari et al., 2016). Investment can drive a country's economy, because the provision of capital can encourage production activities so that it can create new jobs (Nujum & Rahman, 2019; Blomström et al., 2003).

Table 1. Indonesia's Economic Growth (%)

Years	of Economic Growth
2012	6.03
2013	5.56
2014	5.01
2015	4.88
2016	5.03
2017	5.07
2018	5.17
2019	5.02
2020	-2.07
2021	3.69

Source: katadata.co.id (2022)

Table 1 shows economic growth data which empirically explains that the level of economic growth in Indonesia as measured by Gross Domestic Product (GDP) has increased and decreased every year, as was the case when there was a drastic decrease in the economic growth rate of -2.07% in 2020, this could happen because at that time Indonesia was experiencing a Covid-19 pandemic (Mutia, 2022). It is clear that a higher unemployment rate will slow economic growth because the Covid-19 pandemic appears to be able to halt economic expansion in Indonesia. Unemployment is a condition of a person or workforce who wants to get a job but has not got one. One type of unemployment is open unemployment. Open unemployment or often called unemployed is someone who doesn't have a job at all, someone who is looking for work, and someone who is preparing a business (Rambe et al., 2019; Cyril, n.d.).

Table 2. Open Unemployment Rate in Indonesia (%)

Year	Open Unemployment Rate
2012	6.13
2013	6.17
2014	5.94
2015	6.18
2016	5.61
2017	5.5
2018	5.3
2019	5.23
2020	7.07
2021	6.49

Source: bps.go.id

Open unemployment is a serious problem in the economic sector, because with open unemployment the income level and productivity of the people will decrease. In comparison to the previous year, the open unemployment rate increased by 1.84 percent in 2020 to 7.07 %. In 2020 there were 29.12 million people of working age who felt the impact of Covid-19, consisting of 2.56 million unemployed people, 0.76 million people not working, while 1.77 million people were unemployed, as well as the working population who experienced reduced working hours of 24.03 million people (bps, 2022). However, the simple theory of production explains that when the level of the economy increases, there will be technological shocks that can reduce employment and increase the number of unemployed as a whole. On the other hand, economic growth typically results in an increase in the number of unemployed. This technology shock is capital intensive which is in line with economic growth in Indonesia which is identified as a capital intensive production structure (Jamil & Santosa, 2017).

As a result of capital-intensive technological shocks, it can have an impact on increasing the number of unemployed. In addition, unemployment can be identified with the Human Development Index. The Human Development Index is defined as a process to expand the choices of the population, in which the population is used as the ultimate goal (the ulti-

mate end) and development as a means (principal means) (Rustariyuni, 2014; Anand & Ravallion, 1993). Based on research from (Nurcholis, 2014) explains that the Human Development Index has a positive and significant effect on the rise and fall of the unemployment rate in Indonesia. This can happen because the benchmarks used in the Human Development Index such as the level of knowledge, education and healthy living increase, so the number of unemployed will decrease positively. Not only that, unemployment is also closely related to the inflation rate and the number of workers, if inflation rises, it is undeniable that a company will reduce costs for producing goods and services. As a result, it is clear that both inflation and the number of workers affect the unemployment rate positively (Utomo, 2013). Unemployment is a problem that needs to be considered by the government, because the higher the unemployment rate, it will be able to bring up new problems, namely poverty. Poverty is a state in which a person or group of people cannot maintain their standard of living and economic prosperity (Annur, 2013; Rita et al., 2018)

Poverty can be influenced by several factors such as the gini ratio level is said to be able to influence the level of poverty. Giniratio can be interpreted as a measure of inequality or inequality in a society's income. There are three levels in the giniratio assessment. (1) If the Gini ratio value is less than (<) 0.3 then it can be said to be in the low inequality category, (2) if the value lies between 0.3 to 0.5 then it can be said to be in the moderate or moderate inequality category,(3) if the value is greater than (>) 0.5 then it is stated to be in high inequality. The higher the gini ratio, it can be interpreted that the level of distribution of people's income is very unequal (Saputri & Suryowati, 2018; Shibuya et al., 2002). Febriaty's research (2020) states that the giniratio has a positive and significant effect on the poverty rate, which

identified that an increase in the giniratio not only reduces the effectiveness of the influence of economic growth, but actually increases poverty.

Discussing the level of income of the community is certainly related to the level of wages received by the community. Wages can be interpreted as production costs that must be paid by producers as remuneration for production activities that have been carried out by workers. The theory of labor demand places wages as the price of labor. The term "minimum wage" refers to the lowest wage paid to employees for each type of position or job, which does not include overtime pay and includes regular allowances. The minimum wage is a source of people's income, if income is reduced or remains the same, it can be said that welfare will decrease or remain stagnant. This can lead to poverty. According to the findings of previous studies, the poverty variable is positively impacted by the minimum wage variable (Putri, 2021).

The purpose of this study is to determine the characteristics of the variables that influence economic growth, unemployment and poverty that occur in Indonesia. In addition, this study aims to add to the literature and offer scientific evidence to help make decisions related to the variables studied in this study. The approach used in this study is useful for evaluating the simultaneous effect of the variables that have been determined. Because these three issues cannot be separated from the conditions of a country, it is necessary to study and update the conditions of these issues. The novelty of the research is to empirically determine the similarity of the relationship between economic growth, unemployment, and poverty in Indonesia. This research uses calculations with a mathematical model, namely econometric analysis. Econometrics itself can be interpreted as a science that applies economic theory, economic mathematics, and economic statistics to provide empirical support to models built by economic theory and provide results in numbers (Khoiruroh & Setiawan, 2014; MW & Poirier, 1995). The approach in this

research is a quantitative approach through the method Three Stage Least Square (3SLS) which is used for handles endogeneity problems in regression analysis and is suitable when there is more than one endogenous variable in a separate regression equation. This research is different from previous studies which used the majority method Two Stage Least Square (2 SLS) which is used for regression analysis when there is a problem of endogeneity, this method overcomes endogeneity by using instrument variables that are not correlated with dependent variables but are correlated with endogenous variables. The comparison of these two research methods lies in their effectiveness, accuracy, and reliability in dealing with endogeneity problems. So that it can provide an understanding regarding which method is better used to deal with endogeneity problems in the regression equation.

METHOD

The Three Stage Least Square (3SLS) approach was used for the descriptive quantitative analysis of the data in this study. One of the methods, Three Stage Least Square (3-SLS), is able to estimate all parameters simultaneously and can be applied to all kinds of equations in the model at the same time. Because this study employs panel data, the data used do not indicate the population but rather the number of observations that will be used. The focus of this study discusses the dependent variable consisting of economic growth (Y_1), unemployment (Y_2), poverty (Y_3), and the independent variables consist of, human development index (X_1), inflation (X_2), investment (X_3), number of workers (X_4), giniratio (X_5), minimum wage (X_6).

The research location is in Indonesia with the number of samples in this study being 10 years starting from 2012-2021 by taking data from 34 provinces in Indonesia so that the total sample is 340. This study's data collection method is derived from secondary

data obtained from BPS, books, journals, the internet, notes, findings from prior research, and other sources connected to the current study.

The first data analysis technique is to analyze the simultaneous equations. An equation model with multiple equations that will eventually influence one another is the simultaneous equation model. Simultaneous equations have the characteristics that if the dependent variable or known as the independent variable in an equation can be a variable that explains in other equations in the model.

The analysis model of the simultaneous economic growth equation is as follows:

$$Economic\ Growth = \alpha_0 + \alpha_1\ Unemployment + \alpha_2\ Human\ Development\ Index + \alpha_3\ Inflation + \alpha_4\ Investment + \varepsilon_1 \qquad (1)$$

The analysis model of the simultaneous equation of unemployment is as follows:

$$Unemployment = \alpha_0 + \alpha_1\ Economic\ Growth + \alpha_2\ Poverty + \alpha_3\ Index\ Human\ Development + \alpha_4\ Labor + \varepsilon_1 \qquad (2)$$

Poverty simultaneous equation analysis model as follows:

$$Poverty = \alpha_0 + \alpha_1\ Unemployment + \alpha_2\ Giniratio + \alpha_3\ Provincial\ Minimum\ Wage + \varepsilon_1 \qquad (3)$$

Simultaneous equations have at least two equations that influence each other, so when using the estimation using the single equation method which this method does not display all the information contained in the system, so the results of the estimation are less efficient when compared to the system estimation method which uses all the information in a system of simultaneous equations. Three-Stage Least Squares (or 3SLS) is one of the estimation techniques that can be utilized. The Three Stage Least Square (3SLS) method is a technique that can be applied simultaneously to all kinds of equations in the model and provides estimates for all parameters.

The three stage least square method is an advanced method from the Two Stage Square (2SLS). Two stage least square (2SLS) is a method for interpreting a single equation, so it can be said that in this method the information obtained is still limited (limited information method). Method 3SLS is a combination of the 2SLS with SUR (Seemingly Unrelated Regression). This method includes one-stage regression to obtain predictions of the value of endogenous variables, two-stage least squares (2SLS) to obtain residuals to estimate the equation correlation matrix (Khoiruroh & Setiawan, 2014), Three-stage least squares (3SLS), namely the OLS method which uses three Step. Stage 1, assessing the parameters of the simultaneous equation from the reduced parameters using OLS. Phase II, the results of the first estimate are then estimated again using the OLS method. Stage III, then the structural equation is estimated simultaneously using the Generalized Least Square (GLS) method.

Stage I for the entire model equation can be written as follows:

$$\gamma = Z\,\delta + \varepsilon$$

Which one :

$$\gamma = \begin{bmatrix} y_1 \\ y_2 \\ \vdots \\ y_m \end{bmatrix}; z = \begin{bmatrix} z_1 & 0 & \cdots & 0 \\ 0 & z_2 & \cdots & 0 \\ \vdots & \cdots & \ddots & \vdots \\ 0 & 0 & \cdots & z_m \end{bmatrix}; \delta = \begin{bmatrix} \delta_1 \\ \delta_2 \\ \vdots \\ \delta_m \end{bmatrix}; \varepsilon = \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \vdots \\ \varepsilon_m \end{bmatrix} \tag{4}$$

Stage II substitutes the first equation as follows:

$$\gamma_i = z_i\,\gamma_i + \varepsilon_i \tag{5}$$

So that the parameter estimate of the simultaneous equation is obtained as follows:

$$\hat{\gamma}_{(2sls)} = \begin{bmatrix} \hat{\alpha} \\ \hat{\beta} \end{bmatrix} = (Z^* \quad Z^*)^{-1} (Z^* \quad Y)$$

$$= ([X^* \quad \hat{Y}] \quad [X^* \quad \hat{Y}])^{-1} ([X^* \quad \hat{Y}] \quad Y) \tag{6}$$

The results of *2SLS* are then estimated again using *GLS*, so the equation is as follows:

$$\hat{\gamma}_{(3sls)} = (Z^* \quad \widehat{\Sigma^{-1}} \quad Z^*)^{-1} Z^* \quad \widehat{\Sigma^{-1}} \quad Y \tag{7}$$

The 3sls equation model in the economic growth equation (Y_1), unemployment (Y_2) and poverty (Y_3) can be written as follows:

$Y_1 = \beta_{10} + \beta_{11}\,Y_2$ *(unemployment)* $+ \beta_{12}\,X_1$ *(human development index)* $+ \beta_{13}\,X_2$ *(inflation)* $+ \beta_{14}\,X_3$ *(investment)* $+ \varepsilon_1$ (8)

$Y_2 = \beta_{20} + \beta_{21}\,Y_1$ *(economic growth)* $+ \beta_{22}\,Y_3$ *(poverty)* $+ \beta_{23}\,X_1$ *(human development index)* $+ \beta_{24}\,X_4$ *(labor)* $+ \varepsilon_2$ (9)

$Y_3 = \beta_{30} + \beta_{31}\,Y_2$ *(unemployment)* $+ \beta_{32}\,X_5$ *(giniratio)* $+ \beta_{33}\,X_6$ *(provincial minimum wage)* $+ \varepsilon_3$ (10)

The operational definition of variables in research will explain specifically and measurably how a variable will be measured in research. The first variable is related to economic growth which can be measured as the percentage change in a country's gross domestic product from year to year. Economic growth is measured using real GDP sourced from the Central Bureau of Statistics. Next is related to the unemployment variable which reflects the percentage of the labor force that does not have a job but is actively looking for work. The unemployment rate will be measured using data on the number of open unemployed divided by the total labor force and multiplied by one hundred percent. It then discusses the variable poverty which refers to conditions when individuals do not have adequate access to the economic and social resources needed to meet their basic needs. Poverty is measured using a poerty index that has been developed by the central statistics agency or other institutions. This index includes household inco-me,

food consumption, education, and access to   health services.

<div align="center">**Table 3.** Simultaneous Equation Model Identification Test</div>

Equation Name	K-k	m-1	Results	Identification
Economic Growth	6-3	2-1	3 > 1	over identification
Unemployment	6-2	3-1	4 > 2	over identification
Poverty	6-2	2-1	4 > 1	over identification

Source: data processing results from Eviews

Based on the variables of economic growth, unemployment, and poverty, the results of the simultaneous equation model identification test are presented in Table 3. The system of simultaneous equations is identified by *order conditions*. The following is an explanation of *order conditions*; M = the number of endogenous variables in the model, m = the number of endogenous variables in a particular equation, K = the number of predetermined variables in the model, k = the number of predetermined variables in a particular equation. $K - k = m - 1$ is called *exactly identified*, $K - k \geq m - 1$ is called *overidentified*, $K - k < m - 1$ is called *under identified*.

The results of the identification of the three equations are classified as *over identified*, that is, it can be said that the model with the number of parameters estimated is smaller than the number of known data (df > 0), so the estimation can be done with *3SLS*.

Cross-sectional and time series data are combined to create the Panel Data Regression Model. Power regression can be performed with one of three models:

The *pooled least square* approach is used to combine data *cross-section* and *time series* using the *Common Effect Model (CEM)*, a panel data regression model. The formula for the equation model is as follows:

$$Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it} \qquad (11)$$

The description is (Y) Variabel dependen, (α)konstanta, (β) koefisien regresi, (X) Variabel independen, (i) cross section, (t) time series, (ε) error.

Fixed effect model is a panel data regression model whose effect differs between individuals and also includes unknown parameters, the estimation is done by technique *least square dummy*. The equation model can be formulated as follows:

$$Y_{it} = \alpha + \beta_1 X_{it} + \beta_2 X_{it}$$
$$+ \beta_3 X_{it} + \beta_4 X_{it} + \varepsilon_{it} \qquad (12)$$

The *random effect model* is a panel data regression model that is used to make estimation more efficient by using fewer degrees of freedom. Utilizing the method of generalized least square, parameter estimation The formula for the equation model is as follows:

$$Y_{it} = \alpha + \beta_1 X_{it} + \beta_2 X_{it}$$
$$+ \beta_3 X_{it} + \beta_4 X_{it} + \ldots + \beta_n X_{it} \varepsilon_{it} \qquad (13)$$

The selection test of the panel regression model uses several test tools, namely:

When choosing between *the Common Effect Model (CEM)* and the *Fixed Effect Model (FEM)*, the Chow test is helpful. The hypothesis states that the *fixed effect model* should be chosen if the chi-square cross section value is less than a significant value (0.05). On the other hand, the Hausman test is no longer necessary if the chi-square cross section value is greater than (>) 0.05, which indicates that the *common effect model* will be chosen.

The Hausman test is a tool for deciding between the Fixed Effect Model (FEM) and the Random Effect Model (REM) types of models. The hypothesis states that the fixed effect model should be chosen if the random cross section

value falls below a significant value (0.05). Conversely, the random effect model will be chosen if the random cross section value is greater than (>) a significant value (0.05).

The choice between the random effect model and the common effect model can be made using the Lagrance Multiplier test. The Chi-Squares distribution with the same degree of freedom for the number of independent variables reveals the LM test's findings. The selected model is a random effect model if the LM value is greater than the critical Chi-Squares value, and the opposite is true if the LM value is lower than the Chi-Squares value.

The next step is to test the classical assumptions used to determine whether the regression model exhibits a significant and representative relationship. If the model is to be used, it must meet the classical assumptions. The following is the standard assumption test that should be used:

To determine whether the residuals in the regression model have a normal distribution, the normality test is applied. If the regression model has a normal distribution, it is either perfect or good. In this study, *the Jarque Bera (JB)* and the histogram-normality test are used for the statistical test. (1) If the probability is greater than 0.05, the data are normally distributed, which is one of the indicators used in the normality test. 2) The data are not normally distributed if the probability is less than 0.05.

The multicollinearity test aims to determine whether the regression model has a high or perfect correlation between the independent variables by measuring the linear relationship between them. (1) The multicollinearity test uses the following indicators: (1) Multicollinearity can be concluded if the correlation between the two independent variables is greater than (>) 0.8. 2) There is no multicollinearity if the correlation between the two independent variables is less than (<) 0.8.

Uji R2 (Coefficient of Determination) is a useful test for determining the closeness of the relationship between the variables that need to be tested. If the R value2 is low, it indicates that the independent variable has a very limited capacity to explain the dependent variable. And vice versa, if R2 approaches 1 (one), the independent variable is capable of providing the dependent variable with all necessary information. On the test of the coefficient of determination, the adjusted R value2 is suggested by numerous researchers.

The T test, also known as the partial test, is used to see if the independent variable has an effect on the dependent variable. (1) If the significant value is less than (<) 0.05, the t test indicates that the independent variable partially influences the dependent variable. 2) It is concluded that the independent variable partially has no effect on the dependent variable if the significant value is greater than (>) 0.05.

The simultaneous test, or f test, is used to explain how the independent variables affect the dependent variable. (1) If the F-statistic prob value is less than (<) 0.05, it is possible to conclude that the independent variables have an effect on the dependent variable simultaneously. 2) It is possible to draw the conclusion that both the independent variables and the dependent variable are unaffected by one another if the prob value of the F-statistic is greater than (>) 0.05.

RESULTS AND DISCUSSION

The chow test is a statistical method used to determine if there is a relationship between two categorical variables and is useful in data analysis involving categorical variables and helps understand if there is a relationship between variables. Chow test on panel data regression is used to determine the best intermediate model fixed effect model (FEM) and common effect model (CEM), with the following hypothesis:

H_0: CEM model is better than FEM (> 0.05)
H_1: FEM model is better than CEM (< 0.05)

Table 4. Chow test results

Structure equation	Prob.	Model identification
Economic Growth	0.0000	FEM
Unemployment	0.0000	FEM
Poverty	0.0000	FEM

Source: data processing results from Eviews

Based on table 4 it can be concluded that the results of the chow test on the three equation models show that FEM is the best model for further testing.

The Hausman test is a test used to determine the best model between models fixed effect model (FEM) andrandom effect model (REM) with the following hypothesis:

H_0 : REM model is better than FEM (> 0.05)
H_1 : FEM model is better than REM (< 0.05)

Table 5. Hausman Test Results

Structure equation	Prob.	Model identification
Economic Growth	0.0000	FEM
Unemployment	0.0005	FEM
Poverty	0.1877	REM

Source: data processing results from Eviews

Based on table 5, it can be concluded that the results of the Hausman test of the three equation models show that the equation of economic growth and unemployment is the FEM model that is selected, while the poverty equation is the REM model that is selected, so it is necessarydo a test The Lagrance Multiplier on the poverty equation.

Lagrance Multiplier Test .

The lagrance multiplier test is used to determine the best model between the common effect model (CEM) and the random eff-

ect model (REM), with the following hypotheses:

H_0 : CEM model Better than REM (> 0.05)
H_1 : REM model is better than CEM (< 0.05)

Table 6. Lagrance Multiplier (LM) Test Results

Structural equation	Prob.	Model Identification
Poverty	0.0000	REM

Source: results of data processing from Eviews

Based on table 6 shows that the poverty equation is identified as the best model using REM.

The regression model can be tested to see if it is normally distributed using the normality test.

Table 7. Normality Test Results

Structure equation	Prob.
Economic Growth	0.225712
Unemployment	0.178683
Poverty	0.439608

Source: data processing results from Eviews

The data are normally distributed if the probability value is greater than (>) 0.05, as indicated by the indicators used in the normality test. Therefore, the data's normal distribution is demonstrated by the normality test results presented in table 6.

The fact that the probability value of 0.43 9608 is greater than alpha (0.05) on the basis of the data above indicates that the data are normally distribute.

Useful to find out whether the regression model found a correlation between variables. A good model should not detect multicollinearity. The following presents the results of the multicollinearity test on the equation of economic growth, unemployment and poverty in the table below:

Table 8. Multicollinearity Test Results for Economic Growth Equations

	Unemployment	Human Development Index	Inflation	Investation
Unemployment	1	0.293719	0.068700	0.248839
Human Development Index	0.293719	1	-0.1010980	0.48660
Inflation	0.068700	-0.101098	1	-0.190559
Investation	0.248839	0.48660	-0.190559	1

Source: data processing results from Eviews

Table 9. Unemployment Multicollinearity Test Results

	Economic Growth	Poverty	Human Development Index	Labor
Economic Growth	1	-0.192737	0.376171	0.580838
Poverty	-0.192737	1	-0.582541	-0.248279
Human Development Index	0.376171	-0.582541	1	0.252132
Labor	0.580838	-0.248279	0.252132	1

Source: data processing results from Eviews

Table 10. Poverty Equation Multicollinearity Test Results

	Economic Growth	Giniratio	Minimum Wage
Economic Growth	1	-0.079033	0.143456
Giniratio	-0.079033	1	-0.315535
Minimum Wage	0.143456	-0.315535	1

Source: data processing results from Eviews

Based on the results of each table 8, 9, and 10, it shows that the correlation coefficient value of the exogenous variable shows a number less than 0.8 so it can be concluded that the exogenous variables from the equations of economic growth, unemployment, and poverty do not identify multicollinearity problems.

Table 11. R^2

Structural Equation	Adjusted R-squared
Economic Growth	0.999753
Unemployment	0.859565
Poverty	0.015352

Source: data processing results from Eviews

It is known that R^2 0.999753 indicating that exogenous variables can explain 99% of endogenous variables and the other 1% is influenced by other variables not analyzed in this study.

It is known that R^2 0.859565 indicating that exogenous variables are able to explain 85% of endogenous variables and the other 15% can be influenced by other variables not explained in this study.

It is known that R^2 0.015352 which is classified as very small so, it can be concluded that the power of the independent variable in explaining the dependent variable is very limited.

Table 12. Results of the Three Stage Least Square (3SLS)Economic Growth Equation

	Coefficient	Std. Error	t-Statistic	Prob.
C	-18.67091	3.890768	-4.798772	0.0000
Unemployment	0.955604	0.145056	6.587835	0.0000***
Human Development Index	-7.970886	3.207866	-2.484794	0.0136***
Inflation	11.29165	3.247266	3.477280	0.0006***
Investation	1.628993	0.185759	8.769400	0.0000***
Determinant residual covariance			0.749190	

Notes : *** if the probability value is less than 0.05 then the independent variable has a significance effect on the dependent variable
Source: data processing results from Eviews

The test results stated that the unemployment variable had an effect positive significantly to economic growth, seen from the results of use Three Stage Least Square (3SLS) to process economic growth equation data. because unemployment has a probability of 0.0000 <0.05. This can be interpreted that, if there is an increase in unemployment, it will also be able to increase economic growth. The results of this study are consistent with research conducted by (Nani, n.d.)which stated that the unemployment rate has a positive effect on economic growth in Indonesia, indicated by a coefficient of 0.725.

Another factor that influences economic growth is the human development index. The human development index variable has a significant negative effect on economic growth. This happens because the probability value at HDI is 0.0136 <0.05 and the coefficient value is -7.970886. Based on the theory, the HDI has a positive effect on economic growth, but in this study the HDI rate has a negative effect on the level of economic growth, which is in accordance with previous research conducted by (Utami, 2020). This can occur due to other factors that influence this variable, namely economic growth increases only in the consumption sector, not in sectors that support an increase in the HDI. In accordance with conditions in Indonesia in 2021, expenses for food consumption are IDR 622,845, and non-food expenses, such as education costs, are IDR 39,578 (BPS, 2022). So that it can be said that the community is only concerned with food consumption compared to consumption for the non-food sector, the community is not aware of the importance of developing human development through the education sector.

In The economic growth variable is significantly influenced by the inflation variable. because 0.0006 < 0.05 is the inflation probability value.This can happen because, with inflation, it will cause an increase in the ratio of real wages and real interest rates, so that it can increase usage *human capital* in various sectors, and will later increase the economic growth of the community. Even though an increase in inflation can increase economic growth, the government will not continue to strive for inflation, because on the other hand inflation will also have a negative impact on society.

Economic expansion is also significantly influenced by investment variables. because the probability of making an investment is 0.0000 < 0.05. The results of this study state that investment has a significant positive effect on economic growth, so it can be said that when there is an increase in investment it will increase production capacity which in turn will add new jobs, which can ultimately help increase the rate of economic growth in Indonesia.

The R-square value of the economic growth equation is 0.438061, so it can be interpreted that the contribution of the unemployment, HDI, inflation, and investment variables to economic growth is 43.80% and the remaining 56.20% is determined by other factors that are outside the equation on economic growth.

Tabel 13. Results of the Three Stage Least Square (3SLS) Unemployment Equation

	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.794520	1.520094	-1.180532	0.2386
Economic Growth	0.174885	0.018976	9.216172	0.0000***
Poverty	0.051807	0.027689	1.871035	0.0622
Human Development Index	1.073694	0.359520	2.986468	0.0030***
Labor	-0.522777	0.097913	-5.339196	0.0000***
Determinant residual covariance		0.102381		

Notes : *** if the probability value is less than 0.05 then the independent variable has a significance effect on the dependent variable
Source: data processing results from Eviews

From the results of processing the unemployment equation data using the method *Three Stage Least Square (3SLS)* it can be identified that, the variable Economic Growth has an effect positive significant impact on unemployment. because the possibility of economic expansion is 0.0000 < 0.05. This is in accordance with research conducted by (Jamil & Santosa, 2017) which states that economic growth tends to be responded to by increasing unemployment. In addition, it is in accordance with research that has been conducted by (Purba et al., 2022) which states that economic growth has a positive and significant effect on unemployment in North Sumatra Province. The results of this study indicate that economic growth has a significant positive effect on unemployment, namely that it can be explained that an increase in economic growth tends to be responded to by an increase in the unemployment rate and vice versa. This is because it is in accordance with the theory of production which states that an increase in economic growth will result in capital-intensive technological shocks *(capital intensive)* which resulted in reduced demand for labor, so as to increase unemployment in Indonesia.

The results of the next test stated that the poverty variable had no significant positive effect on unemployment, this was because the probability value was 0.0622 > 0.05. So it can be said that an increase in the number of poverty will also increase the number of unemployed, but changes in the poverty rate are not able to affect the overall unemployment rate. These results state that the research hypothesis is accepted which is in accordance with previous research from (Garnella et al., 2020) This phenomenon can be illustrated that not all citizens who belong to the poor are identified as not having a job or are called unemployed. Most likely they have a job, but their income level is still very low so that they are unable to make ends meet.

The unemployment rate is also positively and significantly affected by the Human Development Index Variable. because the Human Development Index has a probability of 0.0030 < 0.05. The results of this study indicate that HDI has a significant positive effect on unemployment and is in accordance with research conducted by (Sisnita, 2017). That is, if the hum-

an development index increases, the open unemployment rate in Indonesia will also increase. This can happen because it is caused by factors such as, in Indonesia there are many educated unemployed, meaning that a high level of education does not guarantee that someone will have a job, so that the increasing educated unemployment factor will affect the open unemployment rate. So with this phenomenon there is a need for other policies to increase the human development index other than through the education sector, because it is felt that the education sector alone is not enough to affect the unemployment rate in Indonesia.

Tests on the labor variable state that it has a significant negative effect on the unemployment rate. because labor has a probability value of $0.0000 < 0.05$. These results are in accordance with research conducted by

(Filiasari, 2013). The results of this study explain that, if there is an increase in the number of workers, the unemployment rate will decrease and vice versa with a decrease in the demand for the number of workers, the unemployment rate will increase. Labor can be used as one of the driving factors to increase economic growth in a country. So that by increasing the need for labor it will reduce unemployment, by reducing unemployment it can be said that people's income will be guaranteed and be able to encourage increased economic growth.

In addition, the economic growth equation has an R-square value of 0.267636. shows that the variables of economic growth, poverty, Human Development Index, and labor respectively contributed 26.76 % to unemployment, while other factors excluding unemployment amounted to 73.24 %.

Table 14. Results of the Three Stage Least Square (3SLS) Poverty Equation

	Coefficient	Std. Error	t-Statistic	Prob.
C	4.581873	4.115444	1.113336	0.2664
Unemployment	-0.078568	0.108998	-0.720821	0.4715
Giniratio	1.385458	0.378562	3.659788	0.0003***
Minimum Wage	-1.486623	1.588207	-0.936039	0.3499
Determinant residual covariance		0.549339		

Notes : *** if the probability value is less than 0.05 then the independent variable has a significance effect on the dependent variable
Source: data processing results from Eviews

From the results of processing the poverty equation data using the method *Three Stage Least Square (3SLS)* it can be identified that, the variable Unemployment has no significant effect on poverty. Because the probability value of unemployment is $0.4715 > 0.05$.It can be said that the unemployment rate in Indonesia has not been able to influence the level of poverty in Indonesia. The results of this study state that the hypothesis is accepted which is based on previous research that was conducted by (Giovanni, 2018).

The results of this study show a new phenomenon that the relationship between

unemployment and poverty has no significant effect. The phenomenon can be described as follows, with unemployment in a certain household, but there are still other high-income household members, it cannot be said that the household is a poor family, because other family members are still able to support one family member's living expenses the unemployed.

Another factor that has an influence on poverty is giniratio. The giniratio variable has a significant positive effect on poverty. Because the probability value giniratio $0.0003 < 0.05$. That is, an increase in the level of income inequality will increase the amount of poverty and vi-

ce versa. The existence of high income inequality in society can cause social problems such as social jealousy, disturbances to economic and political stability which can lead to a decline in the community's economy, causing poverty to increase. This finding is in line with (Sihombing et al., 2023; Islami & Fitrianto, 2023) which also stated that giniratio had a significant positive effect on poverty.

The results of further tests state that the variable Provincial Minimum Wage has a negative and insignificant effect on poverty. Because the probability value of the Provincial Minimum Wage is 0.3499 > 0.05 and the coefficient value is -1.486623. These results state that the research hypothesis is accepted which is in accordance with research conducted by (Chairunnisa & Qintharah, 2022) which explains that city/ district minimum wages have no effect on poverty. Based on these results it can be interpreted that, no matter how big the Provincial Minimum Wage level in Indonesia has been regulated by the government, there are still human resources who do not have the education or experience needed by the industrial world, it will not affect changes in the poverty rate.

Table 15. Test Results f

Structural Equation	Prob (F-statistik)
Structural Equation	0.000000
Unemployment	0.000000
Poverty	0.043000

Source: data processing results from Eviews

The open unemployment variable, the Human Development Index, inflation, and investment all have a significant impact on the economic growth variable simultaneously, as the F-test's results on the equation for economic growth showed a value of less than (<) 0.05.

The F-test results on the unemployment equation are known to have a value of 0.000000, which is less than (<) 0.05. This means that the variables of economic growth, poverty, the Human Development Index, and labor all have a significant impact on the unemployment variable at the same time.

It is known that the results of the F-test for the poverty equation produce a value of 0.043000 which is smaller than the value of 0.05. This shows that the variables unemployment, inequality, and minimum wages have a significant effect on poverty simultaneously.

CONCLUSION

According to the findings of this study, the human development index and other variables that have an impact on economic growth have a significant positive impact (Nurmainah, 2013), so that if the Human Development Index increases, a country's economic growth will also increase. Through the development or improvement of the quality of human resources in the fields of education, health, and so on, the Human Development Index can contribute to economic growth. Inflation has a significant impact on economic expansion as well as the Human Development Index, the findings are different from the results of research conducted by (Nujum & Rahman, 2019) which argues that inflation has an influence on economic growth but not significantly. In addition, investment has a significant positive impact on economic expansion. Accordingly, economic expansion depends on the amount of capital or investment; if investment is higher, economic expansion will also rise, and vice versa. And finally, the unemployment variable has a significant negative effect on the economic growth variable, because as a result of the high unemployment rate it will reduce people's per capita income which will also affect the level of economic growth which will decrease, and vice versa.

The second equation on unemployment leads to the conclusion that empirically, the variables that affect unemployment, specifically the human development index, have a signi-

ficant impact on unemployment because the rate of unemployment will decrease as human development increases. This is due to benchmarks of human development such as levels of education, knowledge, and health so as to encourage workers to find jobs. Furthermore, the workforce also has a significant influence on unemployment, because if the level of the number of workers increases, the unemployment rate will decrease, and vice versa if the number of workers decreases, the unemployment rate will increase. The next variable, namely economic growth, has a significant negative effect on the unemployment variable, this is because, if economic growth increases as a result of certain factors such as the implementation of capital-intensive activities, the unemployment rate will also increase due to a reduction in the workforce. The next variable, namely poverty, based on the results of poverty testing does not have a significant effect on the open unemployment rate, because empirically the poor are not necessarily classified as unemployed, and can be said to have jobs but not permanent or free lance, and does not mean they do not have jobs (Ihsan et al., 2018).

Finally, the variable that influences poverty is the gini ratio which has a significant positive effect on poverty. It can be said that the level of inequality or gini ratio increases, the poverty rate will also increase, and if the gini ratio decreases, the poverty rate will also decrease. Furthermore, there are provincial minimum wage variables and unemployment which based on the test results do not have a significant effect on the poverty level.

The results of this research are expected to be able to become a benchmark for the government in efforts to increase community economic growth and form policies to reduce unemployment and poverty rates. In addition, it is able to provide an overview of monetary policy makers, such as in the process of monitoring inflation in Indonesia.

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