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THE EFFECT OF INFLATION, UNEMPLOYMENT, AND POVERTY ON INCOME INEQUALITY IN INDONESIA

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Abstract

This research is intended to know the influence of inflation, unemployment and poverty on income inequality in Indonesia. Population in this research is Indonesia and 24 of them were selected to be the samples for this research through purposive sampling technique. Estimates conducted by the multiple regression analysis. The data that were used in this study were secondary data, consisted of Inflation, Unemployment and Poverty on Income Inequality for the year 2000-2023. The results of this research, that Based on the partial test (t test), the Unemployment and Poverty have significant effect on the Income Inequality in Indonesia. Meanwhile the Inflation has not significant effect on the Income Inequality. Based on the simultan test (F test), Inflation, Unemployment and Poverty have a significant effect on the Income Inequality.

Keywords: ***Inflation , Unemployment, Poverty, and Income Inequality***

A. INTRODUCTION

According to Todaro and Smith (2006), economic development is a constant process in which there is an increase in the volume of production of an economy in a sustainable manner so that national income also increases. The main objective of economic development in a region is to realize optimum economic growth and reduce unemployment and poverty rates so that income inequality can be reduced. Economic development efforts are identical to increasing per capita income and economic growth. However, in most Developing Countries (NSB), when experiencing increased growth, it only provides little benefit in solving poverty problems and income distribution (Arifianto & Setiyono, 2011). Thus, the main issues faced in Developing Countries are not only oriented towards growth but also towards equal distribution of income.

People carry out economic activities to meet their needs and seek income. It can be seen in the income distribution indicator, where the income of individual or agency varies, which causes an imbalance in income distribution. National income distribution is the even or unequal distribution of a country's results among its population (Dumairy, 1999). Income inequality is a condition where the income received by the people of a nation is uneven (Hakim, 2018).

As an indicator of income inequality (equality), Gini ratio data in Indonesia shows that Indonesian society is not yet prosperous. In 2011-2014, the development of the Gini ratio tended to fluctuate. In 2014, the Gini ratio was 0.414; this data shows the highest Gini ratio from 2011 to 2018. This condition results in increasing income inequality. However, this decline cannot be separated from the role of the government in equalizing development throughout Indonesia. However, the Gini ratio value in 2018 was still above 0.35. Arsyad (2017) stated that the Gini index of countries with low inequality is between 0.20-0.35. Countries with low-income disparities, if the Gini coefficient value is close to 0. Conversely, if the Gini coefficient value is close to 1, the income distribution is very unequal. In other words, the Gini coefficient value is at 0-1. From this explanation, it can be said that income distribution in Indonesia still has quite high inequality, so improvements are needed (Hindun et al., 2019). Factors affecting income inequality include Inflation, Unemployment, Poverty, the Human Development Index, and the Corruption Perception Index (CPI). This study used inflation, unemployment and poverty variables as independent variables.

One of the causes of inequality or uneven income distribution is inflation, where money income increases but is not followed proportionally by increased production of goods in general (Irma Adelman and Chynthia Taft Morris in Arsyad, 2004). A spike in inflation that is too high and not balanced by economic equality will widen poverty, increase unemployment rates, decrease welfare, and increase income inequality (Wahyuni & Andriyani, 2022). Income inequality can also occur if the unemployment rate in a region is high. Unemployment is one of the problems that occurs in developing countries. High unemployment rates cause a person to be unable to receive income or wages, resulting in a widening gap between the rich and the poor (Yoertiara & Feriyanto, 2022). The unemployment rate is used as an indicator in measuring community welfare. A higher unemployment rate indicates that the community's welfare is still low, and a lower unemployment rate indicates that the community's welfare is already high (Sjafrizal, 2014:176).

Another factor that causes inequality of income in a region is poverty. Poverty is often understood as lacking money and goods to ensure survival (Frisnoiry, 2024). Income inequality is closely related to relative poverty (Badrudin, 2017). Poverty causes the inequality of income distribution between rich and poor to become increasingly unequal. As expressed by Arsyad (2017), the failure to achieve a significant reduction in poverty rates has increased income distribution inequality in developing countries. Therefore, reducing poverty is necessary to decrease income inequality in society. Here are some studies on the relationship between the influence of poverty and income inequality as follows. In his research, Hassan et al. (2015) stated that there is a positive relationship between poverty and income inequality in the long term. Syawie (2011) noted that poverty is indeed related to inequality in a certain proportion. However, reducing poverty does not mean reducing inequality. Syawie's findings are also supported by Afandy, Rantung, & Marashdeh (2017), who stated that lower poverty rates increase inequality, so solutions or steps to reduce poverty can be biased towards inequality, but inequality can improve further.

B. LITERATURE REVIEW

Inflation

Inflation is an increase in the general level of costs, implying that inflation is a general expansion in the price of goods or products and administration over some time (Camobell & Brue, 1990). Meanwhile, Friedman's opinion states that all inflation comes from an excessive desire for goods when much money is produced. It is because, according to him, inflation is only a monetary phenomenon, so the main solution to the problem of inflation is to control the money supply. Friedman demonstrated how monetary authorities can cause depression, inflation, and other economic instability through carelessness in managing the money supply. According to Friedman, because the Central Bank cannot be relied on to implement and implement the right policy, it must be forced to maintain and follow monetary guidelines rather than being allowed to regulate the wrong management of the money supply.

Unemployment

Unemployment is when a person in the workforce wants a job but cannot get one. A person not working but not actively looking for work is not classified as unemployed. The main factor that causes unemployment is a lack of aggregate spending. The greater the demand, the more goods and services they will realize. The increase in production will increase the use of labor. Thus, there is a close relationship between the level of national income achieved and the use of labor carried out. The higher the national income, the more labor is used in the economy (Sukirno, 2012).

Poverty

According to Sukanto in Susanto (2019), poverty is a condition where a person cannot choose himself according to the standard of living of his group and cannot use his mental or physical energy in that group. Poverty is a low standard of living, namely the level of material deprivation experienced by a number or group of people compared to the standard of living that generally applies to the community concerned. This low standard of living impacts the moral health of life and self-esteem of those classified as poor.

Income Inequality

According to Smith and Todaro (2006), income inequality is the existence of differences in income received or generated by society, resulting in an uneven distribution of national income among the people. Economic inequality is one of the government's concerns. Economic inequality is a complex problem because various aspects cause it. The conditions of income inequality cause differences in income that arise due to differences in ownership of resources and production factors, especially ownership of capital goods. The characteristics of a region have a strong influence on the creation of economic development patterns. This unevenness influences regions' ability to grow, resulting in some areas being able to grow rapidly, but others are the opposite.

The Relationship Between Inflation and Income Inequality

According to Nopirin (1987:32), inflation can affect income distribution, allocation of production factors, and national products. The effects on income distribution (Equity Effect) are uneven; some are disadvantaged, but some are advantaged by inflation. The effects of production factor allocation (Efficiency Effects) occur through an increase in demand for various goods, which can then encourage changes in the production of certain goods. Regarding the effects of national products (Output Effects), there is no direct relationship between inflation and output. An increase in production can accompany inflation but can also be accompanied by a decrease in output level if the inflation rate is high enough (hyperinflation).

H1: Inflation has a positive and significant influence on income inequality.

The Relationship Between Unemployment and Income Inequality

Quah et al. (2014) state that unemployment is when someone has stopped working temporarily or is looking for work. Someone unemployed does not earn income. The greater the unemployment rate, the more groups of workers will not have income. Unemployment that is too high can lower the wages of low-income groups so that income inequality increases (Sukirno, 2012). A situation like this requires job vacancies to be provided and created in accordance with changes in the number of workers so that income distribution becomes even (Sriwahyuni, 2010).

H2: There is a negative and significant influence of unemployment on income inequality.

The Relationship Between Poverty and Income Inequality

Poverty is a condition where someone is unable to meet their living needs. The problem of poverty can cause income inequality. The higher the poverty rate, the higher the level of inequality. The failure to significantly reduce poverty rates has resulted in increasing inequality in income distribution in developing countries (Hariyati, Hindun, & Soeyoto, 2019). Therefore, reducing poverty rates is necessary to reduce inequality in society.

H3: Poverty has a positive and significant influence on income inequality.

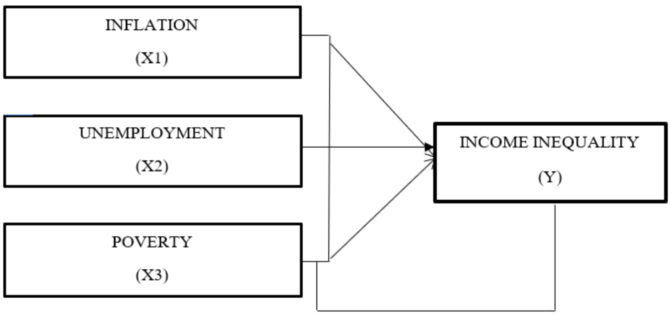

Figure 1 Research Framework

C. IMPLEMENTATION METHOD

The research used in this study is quantitative research with associative. Associative research expects to decide the impact or relationship between at least two or more variables. The population in this study is Inflation, Unemployment, and Poverty. The sample is part or representative of the population that is the object of research. The study sample includes Inflation, Unemployment, Poverty, and Income Inequality in Indonesia from 2000 to 2023. The data analysis method in this study is multiple regression analysis. The research data is processed using the SPSS (Statistical Package for Social Science) program. Multiple regression analysis aims to predict how the dependent variable will be when related to two or more independent variables.

D. RESULTS AND DISCUSSION

Classical Assumption Test Results

The requirement in using a multiple regression model with the Ordinary Least Square (OLS) method is that all classical assumptions are fulfilled so that the test results are not biased and efficient (Best Linear Unbiased Estimator/BLUE). The classical assumption tests conducted in this study include normality test and multicollinearity test.

a) Normality Test

The normality test used is the Kolmogorov-Smirnov test. Data is declared normally distributed if the significance is greater than 0.05. The following is a table of normality test results:

Table 1.
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		24
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.01748705
Most Extreme Differences	Absolute	.072
	Positive	.062
	Negative	-.072
Test Statistic		.072
Asymp. Sig. (2-tailed)		.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Source: Data Processing Results, 2024

From Table 1, we can see that the significance value is 0.200. This value is greater than 0.05, so it can be concluded that the data is normally distributed.

b) Multicollinearity Test

The multicollinearity test aims to test whether there is a correlation between independent variables in the regression model. In a good regression model, there should be no correlation between independent variables. Multicollinearity testing is done by looking at the VIF between independent variables.

Table 2.
Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Inflation	.451	2.219
	Unemployment	.305	3.284
	Poverty	.353	2.831

Source: Data Processing Results, 2024

The results of the multicollinearity test show that the three independent variables of Inflation, Unemployment, and Poverty do not experience multicollinearity because the tolerance value of the two independent variables is above 0.10 and the VIF value of the three independent variables is below 10.

Hypothesis Testing

a) Linear Regression of Inflation, Unemployment, and Poverty on Income Inequality in Indonesia

To obtain the regression results between the independent variables (Inflation, Unemployment, and Poverty) and the dependent variable (Income Inequality), secondary data from BPS was used, recorded from 2000-2023 and processed using a computer program. The following are the results of data processing using the OLS (Ordinary Least Square) method.

Table 3.
Regression Results
Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.353	.674		4.977	.000
	Inflation	.002	.002	.207	1.025	.318
	Unemployment	-.410	.098	-.953	-4.177	.000
	Poverty	44.456	12.683	.929	3.505	.002

Source: Data Processing Results, 2024

From the regression results above, the following estimation result model can be formed:

$$\mathbf{Y = 3{,}353 + 0{,}002\ X1 – 0{,}410\ X2 + 44{,}456\ X3}$$

b) Model Interpretation

Based on the estimation model above, the influence of the independent variables, namely Inflation (X1), Unemployment (X2), and Poverty (X3) on Income Inequality in Indonesia can be explained as follows:

1. **Inflation**
   Inflation has a positive effect on Income Inequality in Indonesia. It is indicated by the regression coefficient X1, which is 0.002. It means that for every 1% increase in inflation, income inequality will increase by 0.002% (ceteris paribus).
2. **Unemployment**
   Unemployment has a negative effect on Income Inequality in Indonesia. It is indicated by the value of the regression coefficient X2, which is 0.410. This means that for every 1% increase in Unemployment, Income Inequality will decrease by 0.410% (ceteris paribus).
3. **Poverty**
   Poverty has a positive effect on Income Inequality in Indonesia. It is indicated by the value of the regression coefficient X3, which is 44.456. This means that for every 1% increase in Poverty, Income Inequality will increase by 44.456% (ceteris paribus).

c) Individual Regression Coefficient Testing (Statistical t-test)

1. **Inflation**
   The Inflation variable's t-count value is 1.025, with a probability value (significance) of 0.318. Thus, H0 is accepted because the probability value is greater than 0.05 (0.318 > 0.05) and t-count < t-table (1.025 < 2.086). It means that it can be concluded that the inflation variable does not have a real (significant) effect on the income inequality variable in Indonesia, with testing at a 95% confidence level (= 5%).
2. **Unemployment**
   For the Unemployment variable, the t-count value is -4.177 with a probability value (significance) of 0.000. Thus, Ha is accepted because the probability value is smaller than the value of 0.05 (0.000 < 0.05) and - t-count < t-table (-4.177 < -2.086). It means that it can be concluded that the unemployment variable has a real (significant) effect on the income inequality variable in Indonesia, with testing at a 95% confidence level (= 5%).
3. **Poverty**
   For the Poverty variable, the t-count value is 3.505 with a probability value (significance) of 0.002. Thus, Ha is accepted because the probability value is smaller than the value of 0.05 (0.002 < 0.05) and- t-count> t-table (3.505> 2.086). It means that it can be concluded that the poverty variable has a real (significant) effect on the income inequality variable in Indonesia, with testing at a 95% confidence level (= 5%).

d) Simultaneous Testing of Regression Coefficients (F Statistic Test)

Testing was carried out using the F test to prove the R-squared value above. The hypothesis is as follows:

H_0: $\beta 1 = \beta 2 = 0$

Ha: $\beta 1 \neq \beta 2 \neq 0$

It means that, based on the available data, testing will be carried out on 1 and 2 together, whether it is equal to zero, which means it has no significant effect on the dependent variable, or is not equal to zero, which means it has a substantial impact on the dependent variable.

Table 4.
Anova Test
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.012	3	.004	11.482	.000[b]
	Residual	.007	20	.000		
	Total	.019	23			

a. Dependent Variable: Income Inequality

b. Predictors: (Constant), Poverty, Unemployment, Inflation

Source: Data Processing Results, 2024

Based on the output of the SPSS program, the F-count value is 11.482 with a probability value (significance) of 0.000. Thus, Ha is accepted because the probability value (significance) is smaller than 0.05 (0.000 <0.05). It means that it can be concluded that Variable X1 (Inflation), Variable X2 (Unemployment), and Variable X3 (Poverty) have a real (significant) effect on Income Inequality (Y) at a 95% confidence level (= 5%).

e) Coefficient of Determination (R2)

Table 5.
Coefficient Of Determination
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.814[a]	.662	.611	.017993

Source: Data Processing Results, 2024

Based on the output results of the SPSS program, it shows that the R-square value is 0.662, which means that variables X1 (Inflation), X2 (Unemployment), and X3 (Poverty) together can explain Income Inequality in Indonesia of 66.2%. In comparison, the remaining 33.8% is explained by new variables not included in the model estimation.

Discussion of Research Results

The Effect of Inflation on Income Inequality

The study results showed that the Inflation variable does not affect Income Inequality. The results of this study are not in line with the research hypothesis, which states that the Inflation variable does not affect Income Inequality. There are several reasons inflation may not significantly affect income inequality when inflation is balanced. If inflation occurs at a low and stable rate, for example, in the range of 2-3% per year, then its effect on income inequality can be very limited. In this condition, employers and workers can adjust income and living costs more easily, so inflation does not significantly impact income inequality. In addition, in a situation where wages increase along with inflation, especially for low-income workers, income inequality will not worsen. Suppose the wages or benefits received by this group can offset the increase in the price of goods and services. In that case, their purchasing power is maintained and will not worsen income inequality.

The Impact of Unemployment on Income Inequality

The study results showed that the Unemployment variable partially negatively and significantly affects Income Inequality. This study's results align with the research hypothesis, which states that unemployment affects Income Inequality. When the unemployment rate is high, more people lose their jobs or cannot get jobs, which causes their income to decrease. It further widens the gap between people who are employed and unemployed. High unemployment can also increase dependence on social assistance, often lower than the income obtained from work. It causes those unemployed or low incomes to remain trapped in poverty, thus increasing inequality.

The Impact of Poverty on Income Inequality

The study results showed that the Poverty variable partially has a positive and significant effect on Income Inequality. This study's results align with the research hypothesis, which states that poverty affects Income Inequality. Many impoverished people work in the informal sector or low-paid jobs, which lack adequate social security or protection. This causes their income not to increase significantly. On the other hand, wealthier groups or those working in the more stable formal sector tend to have much higher and more secure incomes.

E. CONCLUSION

From the research results that researchers have obtained through classical assumption tests, multiple linear regression, and hypothesis tests, the conclusion is that partially Unemployment and Poverty have a significant effect on Income Inequality in Indonesia**.** In contrast**,** the Inflation Variable does not affect Income Inequality in Indonesia. Simultaneously, Inflation, Unemployment**,** and Poverty significantly affected Income Inequality in Indonesia from 2000-2023. The coefficient of determination (R) value is 0.662, which means that the variables Inflation, Unemployment**,** and Poverty can explain the variation in Income Inequality in Indonesia by 66.2%**.** In comparison**,** the remaining 33.8% is explained by new variables not included in the model estimation.

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