

MACROECONOMIC COORDINATION: AS AN APPROACH FOR POVERTY REDUCTION

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Abstract: This study aims to analyze macroeconomic policies simultaneously to minimize the tradeoff impact of economic growth and inflation to reduce poverty. The analysis used is theoretical and simultaneously tests the model in Indonesia using annual data for the period 1990-2020 to show that poverty reduction is correlated with the coordination of monetary and fiscal policies. This study finds that poverty is simultaneously affected by economic growth, money supply and inflation, while Foreign Direct Investment has no statistically significant effect on poverty. Therefore, policymakers should implement a macro-fundamental policy mix that focuses on price stability, followed by policy adjustments for all sectors to support the targets set by the Central Bank.

Keywords: Poverty, Macroeconomic Policies, Economic Growth

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Introduction

Poverty arises because several people cannot access various economic activities due to their lack of perfect information on the sources of economic activities. It will worsen if the government does not have a synergistic policy across sectors as overlapping policies will affect the high-cost economy. The weak cross-sector coordination is often said to be the cause of the Negligence of poverty alleviation. The previous empirical studies proved that efficient policy communication and coordination would facilitate and accelerate sustainable development goals (Bianchi & Ilut, 2017). Likewise, monetary policy will work more efficiently if it is supported by fiscal policy. There is still limited research on macroeconomic policy elaboration to reduce poverty. The research has been more oriented towards economic growth to reduce poverty, whereas economic growth often impacts income inequality and increasing poverty. Comprehensive and integrated research on macroeconomic policy to reduce poverty is still minimal. The authors are motivated to conduct this research because the phenomenon shows a sectoral ego for each policy to lower the poverty level that negatively impacts the macro-

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economic achievement target. Macroeconomic policies are often reviewed separately, which does not lead to an effective synergy to reduce poverty, where fiscal policy is oriented towards the stability of the goods market. Monetary policy is oriented towards the stability of the money market. The research problem is how do policyholders synergize macroeconomic to minimize tradeoff positions to lower poverty? The evidence of the short-run estimation indicates that a better primary fiscal performance and a higher economic growth rate reduce public debt in the short run. The immediate reforms that increase the primary fiscal surplus and attract investors are crucial to prevent a debt crisis in the country (Ibrahim, 2021). The monetary policy regulation has a prominent effect on systemic banking risks. The systemic banking risks tend to increase under a loose monetary policy environment regardless of whether the monetary policy instrument is quantitative or price-based (Dou et al., 2021). This study is interesting because it aims to analyze macroeconomic policies simultaneously to minimize the tradeoff impact of economic growth and inflation to reduce poverty. Policy coordination emerges for effective macroeconomic policy, indicated by high economic growth and low-interest rates.

Theoretical Framework

Poverty is not only about the number of people below the minimum threshold in meeting food, income, or consumption needs. It is also a matter of how the poor perceive themselves, their environment, and the culture that surrounds them. The problem of poverty is closely related to economic growth (Kalwij & Verschoor, 2007). In other studies, poverty and economic growth can have a reciprocal relationship (Nyasha & Odhiambo, 2017). Hypothesis-1: Economic Growth has a significant negative effect on poverty.

Economic growth and inflation are the targets of macroeconomic policy, where the government wants to pursue high economic growth followed by a low inflation rate. Expansive monetary policy from the government can encourage an increase in output accompanied by inflation. Hypothesis-2: Money Supply has a significant negative effect on poverty.

Poverty is very close to inflation. Maintaining the real interest rate to a low level is indicated for countries to achieve sustainable economic growth (Simionescu et al., 2019). Increased interest rate discourages the private sector, which leads to a slow-down in economic activities and creates pressure on prices to increase (Munir, 2020). Hypothesis-3: Inflation has a significant positive effect on poverty. FDI affects the movement of GDP with a certain lag (Djuraskovic et al., 2019). The FDI inflow significantly impacts economic growth (GhafoorAwan & Rasheed, 2021). According to Wardhani & Haryanto (2020), FDI in the agriculture sector, rural population, GDP per capita, consumer price index, food import and food export simultaneously and significantly affect food security in developing countries. It means that FDI can directly influence poverty reduction in developing countries (Thareeq & Handoyo, 2020). The government of developing countries

must be concerned about political stability, trade openness, and market size and change in exchange rates to increase FDI inflows of the country (Thareeq & Handoyo, 2020; Lee & Brahmastreene 2020). Hypothesis-4: Foreign Direct Investment has a significant negative effect on poverty.

Poverty can also be a source of low economic growth achieved by a country. High poverty causes low public savings, followed by low investment in the real sector, resulting in low economic growth. Economic growth itself does not automatically cause a trickle-down effect for the growth of other sectors. Poverty will cause low economic growth if the government does not deal with poverty consistently (Fosu, 2010). Hypothesis-5: Poverty has a significant negative effect on economic growth. Economic growth cannot be separated from money supply changes. According to classical economists, the source of economic growth is the money supply. The economy does not grow if the money supply is not available. Behera & Mishra (2016) found a linear combination in the long run between the money supply and GDP growth. Ahmad et al. (2016) find a positive relationship between the money supply and economic growth. Hypothesis-6: Money Supply has a significant positive effect on economic growth.

Behera & Mishra (2016) find a long-run positive relationship between inflation and economic growth only for China and South Africa at the 5 percent significance level. On the other side, Ahmad et al. (2016) find inflation positively while insignificant affects economic growth. Hypothesis-7: Inflation has a significant negative effect on economic growth.

Poverty is closely related to a person's ability to meet the minimum needs for a decent life. Developing countries have low savings and investments due to the low ability of people to save and carry out consumption activities. More studies discuss the effect of the money supply on economic growth, with a positive relationship. Hypothesis-8: Poverty has a significant negative effect on money supply. Economic growth will increase other economic activities to create many jobs and income per capita and impact increasing purchasing power and the money supply (Yan-liang, 2012; Sola and Peter, 2013). Hypothesis-9: Economic growth has a significant positive effect on money supply.

The relationship between FDI and money supply is causal. The increase in the money supply impacts increasing inflation and depreciating the local currency exchange rate so that FDI increases (Khan, NU, & Ullah, MA, 2015). Ghafoor Awan and Rasheed (2021) find a significant positive relationship between FDI and money supply. Hypothesis-10: FDI has a significant positive effect on money supply.

An increase in interest rates will raise savings and reduce the money supply due to decreased consumption. Therefore, interest rates have a negative relationship with the money supply (Kaplan & Gungor, 2017). Hypothesis-11: Interest Rate has a significant negative effect on money supply.

FDI is a contributor to inflation. According to Keynes, capital inflows will increase the money supply and encourage growth and inflation. Thus, the money supply

becomes the channel between FDI and economic growth and inflation. Foreign direct investments would significantly impact current accounts in highly developed countries and developed countries but negatively impact emerging countries (Vilutiene & Dumciuviene, 2020). Inward foreign direct investments are usually cited as an essential tool for economic growth and are often listed as one of the priorities by national governments, especially in transition countries strive (Maček et al., 2020). Hypothesis-12: FDI has a significant positive effect on inflation.

Increases in budget deficits lead to increases in current account deficits, and a government should reduce the deficit budget to generate adequate revenue to match the expenditure (Abu & Gamal, 2020). Hypothesis-13: Budget Deficit has a significant positive effect on inflation.

Poverty is closely related to the coordination of macroeconomic policies issued by each sector (Hussain et al., 2020). Policy coordination is crucial to create efficient policies that will facilitate the policymakers to achieve predetermined goals. Nevertheless, monetary and fiscal policies are designed and implemented in different study areas regarding objectives, resources, constraints and incentives. Bianchi & Ilut (2017) show a policy mix between monetary and fiscal policies in Brazil to be of high significance. Hypothesis-14: Coordination policy has a significant effect on poverty.

Research Methods

Descriptive quantitative and verification methods were used in this study, with the type of literature survey research. The annual secondary data used for the period 1990 to 2020 were obtained from the Central Bureau of Statistics, Bank Indonesia, and the Ministry of Finance of Indonesia. A simultaneous equation model is used in this study to show the relationship between monetary and fiscal policy with poverty reduction. The use of OLS regression in the simultaneous equation is very irrelevant because OLS regression is unable to describe the reciprocal relationship in the simultaneous equations system (Paek et al., 2013). Therefore, the simultaneous equation model is solved using two-stage least squares (2SLS) or three-stage least squares (3SLS) simultaneous regression or Indirect Least Square (Paek et al., 2013). OLS regression in solving simultaneous equation models produces biased and inconsistent estimates since the explanatory variables derived from endogenous variables in the simultaneous equation system are correlated with the error term (Paek et al., 2013).

A simultaneous equation model is a model that has more than one interrelated equation, which is used to determine the interdependence relationship among endogenous variables. Lin & Shao (2000) reveals that the simultaneous equation model is a model that explains the dependent variables together. A simultaneous equation contains more than one equation, and cannot estimate the parameters without considering other equations in the model. A simultaneous equation has two variables, namely endogenous variables and predetermined variables. The simultaneous equation model is solved using two-stage least squares (2SLS) or

three-stage least squares (3SLS) simultaneous regression or Indirect Least Square (Lin & Shao, 2000).

Derivation of Simultaneous Equations

$$\begin{aligned} y_{t1}y_{11} + \dots + y_{tm} y_{1M} + x_{t1}\beta_{11} + x_{t2} 11 + \dots + x_{tk} 1M + t_1 &= 0 \\ y_{t1}y_{21} + \dots + y_{tm} y_{2M} + x_{t2}\beta_{22} + x_{t2} 22 + \dots + x_{tk} 2M + t_2 &= 0 \\ y_{t1}y_{11} + \dots + y_{tm} y_{1M} + x_{t1}\beta_{11} + x_{t2} 11 + \dots + x_{tk} 1M + t_1 &= 0 \\ y_{t1}y_{M1} + \dots + y_{tm} y_{MM} + x_{t1}\beta_{K1} + x_{t2} K1 + \dots + x_{tk} KM + t_M &= 0 \quad (1) \end{aligned}$$

Where, y and β are structural parameters of the unknown system of equations and estimated from the data. In matrix notation, it can be written as follows:

$$\begin{bmatrix} y_{t1} \\ y_{t2} \\ y_{tm} \end{bmatrix} \begin{bmatrix} Y_{11} & Y_{12} & Y_{1M} \\ Y_{21} & Y_{22} & Y_{2M} \\ Y_{M1} & Y_{M2} & Y_{MM} \end{bmatrix} + \begin{bmatrix} x_{t1} \\ x_{t2} \\ x_{tm} \end{bmatrix} \begin{bmatrix} \beta_{11} & \beta_{12} & \beta_{1M} \\ \beta_{21} & \beta_{22} & \beta_{2M} \\ \beta_{K1} & \beta_{K2} & \beta_{KM} \end{bmatrix} + \begin{bmatrix} u_{t1} \\ u_{t2} \\ u_{tm} \end{bmatrix}$$

$$y \Gamma + xB + u = 0$$

$$y\Gamma + xB = u(2)$$

Description:

y : $M \times 1$ endogenous variable vector

x : $M \times 1$ predetermined variable vector

Γ : $M \times M$ coefficient matrix of unknown endogenous variables

B : $M \times M$ coefficient matrix of unknown predetermined variables

u : $M \times 1$ vector of random error variable

y and u have the same size

$$\begin{aligned} Y_{1t} &= 10 + 11Y_{2t} + 12Y_{3t} + 13Y_{4t} + u_{1t} \\ Y_{2t} &= 20 + 21Y_{1t} + 22Y_{5t} + 21X_{1t} + 22X_{2t} + u_{2t} \\ Y_{3t} &= 30 + 31Y_{2t} + 31X_{3t} + u_{3t} \\ Y_{4t} &= 40 + 41Y_{2t} + 42X_{4t} + u_{4t} \end{aligned}$$

Where:

Endogenous variables: Y_{1t} , Y_{2t} , Y_{3t} , and Y_{4t}

Predetermined variables: Exogenous variables: X_{1t} , X_{2t} , X_{3t} , and X_{4t}

Lin & Shao (2000) revealed two formal rules to determine the identification of equations, namely order condition and rank condition. The order condition is an important but not sufficient condition for identification. The notation used is M , namely the number of endogenous variables in the simultaneous equation model; m is the number of endogenous variables in a particular equation; K is the number of predetermined variables in the simultaneous equation model, and k is the number of predetermined variables in a particular equation.

The rules are:

- If $(Kk) = (m-1)$ then the equation is exactly identified.
- If $(Kk) > (m-1)$, then the equation is overidentified.

If the rank condition is to be applied, then the rules are as follows:

- a. If $(Kk) > (M-1)$ and rank of R matrix are to be $M-1$, then the equation is overidentified;
- b. If $(Kk) = (M-1)$ and rank of R matrix are to be $M-1$, the equation is exactly identified;
- c. If $(Kk) < (M-1)$ and rank of R matrix are to be less than $M-1$, then the equation is under-identified;
- d. If $(Kk) < (M-1)$ and rank of R matrix are to be less than $M-1$, then the equation is unidentified.

The simultaneous equations are as follows:

$$Pov1t = 10 + 11EG2t + 12MS3t + 13Inf4t + 14FDI5t + ut$$

$$EG2t = 20 + 21Pov1t + 22MS3t + 23Inf4t + u2t$$

$$MS3t = 30 + 31Pov1t + 32EG2t + 31FDI5t + 32R6t + u3t$$

$$Inf4t = 40 + 41EG2t + 42 FDI5t + 43 BD7t + u4t$$

Description: Pov is the number of poor people; EG is a rate of economic growth; Inf is inflation rate; FDI is a foreign direct investment; MS is Money Supply; BD is a budget deficit; R is Bank Indonesia benchmark interest rate.

The decision rule in the Hausman test is to compare the t-statistical value of the residuals inserted in the equation with the t-table value. If the value of t-statistic > t-table, H_0 is rejected, meaning there is a system of simultaneous equations in the model.

Table 1. Data Characteristics

| Variable | Description | Data | Source |
|---------------------------|---|--------------------------------------|-------------------------------|
| Poverty | The poor people who have an average per capita expenditure per month below the poverty line. | Number of poor people (in a million) | The Central Statistics Agency |
| Economic growth | Economic growth represents a major change in the real income or economy over some time. Economic Growth Rate is the difference between constant price GDP in year t and the previous year divided by the previous year's GDP multiplied by 100. | Rate of economic growth (%) | The Central Statistics Agency |
| inflation rate | A general increase in the prices of goods occurs continuously over a certain period. | Inflation rate (%) | The Central Statistics Agency |
| Foreign direct investment | Total realization of foreign direct investment enters | The total value of foreign direct | The Central Statistics Agency |

| Variable | Description | Data | Source |
|----------------------------|--|--------------------------------|------------------------------------|
| | Indonesia. | investment (in billion Rupiah) | |
| money supply | The total money supply consists of M1, M2 and M3. | Money supply (in billions) | Bank Indonesia |
| Bank Indonesia Certificate | Bank Indonesia Certificate (SBI) is Bank Indonesia benchmark interest rate. | SBI annual (report) in (%) | Bank Indonesia |
| Budget deficit | The difference between state revenue and expenditure is in a certain period. | Total of state budget deficit | The Indonesian Ministry of Finance |

Results and Discussion

Results of recapitulation of the model that built-in the simultaneous equation can be seen in the following table:

Table 2. Identification Test of Simultaneous Equation

| Structural Equation | kk | m – 1 | Order Condition |
|---------------------------------|----|-------|--------------------|
| Function of Poverty | 2 | 2 | Exactly Identified |
| The function of Economic Growth | 3 | 2 | Overidentified |
| The function of Money Supply | 1 | 1 | Exactly Identified |
| Function of Inflation | 4 | 1 | Overidentified |

Source: Results of secondary data processing.

Description: m is the number of endogenous variables in a given equation; K is the number of predetermined variables in a simultaneous equation model; k is the number of predetermined variables in a given equation. Based on the rank conditions above, the processing method to be used is the 2SLS method since the results of equation identification are overidentified. The next step is to conduct a simultaneous test to find the relationship between one equation and another. The results of Hausman test can be seen in the table below:

Table 3. Simultaneous Test

| Equation | Statistical Value (Residual) | Probability | Description |
|----------|------------------------------|-------------|--------------|
| POV | 29.76288 | 0.0000 | Simultaneous |
| EG | 3.156409 | 0.0040 | Simultaneous |
| MS | -6.939049 | 0.0000 | Simultaneous |
| INF | -3.405092 | 0.0025 | Simultaneous |

Source: Results of secondary data processing.

By looking at the probability value of each equation, it can be concluded that there is a relationship between endogenous variables in one equation and endogenous variables in another.

The econometric tests, such as autocorrelation test, multicollinearity test and heteroscedastic test, are conducted.

Table 4. Classical Assumption Test of Simultaneous Equation Model

| Eq. | Autocorrelation | | | Multicollinearity | Heteroscedasticity | | |
|-----|-----------------|--------|--------|----------------------|--------------------|--------|--------|
| | n.R2 | Prob. | Desc. | Description | n.R2 | Prob. | Desc. |
| POV | 12.91474 | 0.1148 | Passed | No multicollinearity | 1.852870 | 0.7975 | Passed |
| EG | 30.11735 | 0.1156 | Passed | No multicollinearity | 1.633470 | 0.6850 | Passed |
| MS | 9.739700 | 0.1361 | Passed | No multicollinearity | 4.322048 | 0.3994 | Passed |
| INF | 0.553328 | 0.7583 | Passed | No multicollinearity | 1.852870 | 0.7975 | Passed |

Source: R of secondary data processing.

According to the estimation results, as shown in Table 4, it can be concluded that there is no multicollinearity problem between variables in each simultaneous equation. The next step is to test the stability model. The following table is the Chow test result for structural equations.

Table 5. Chow Breakpoint Test

| Equation | F – Count | F-Table ($\alpha = 5\%$) | Description |
|----------|-----------|----------------------------|-------------|
| POV | 57.04213 | 2.76 | Stable |
| EG | 3.431640 | 2.98 | Stable |
| MS | 4.826743 | 2.76 | Stable |
| INF | 3.113567 | 3.35 | Stable |

Source: Results of secondary data processing.

According to Table 5, it can be understood that all structural equations are stable equations. Table 6 shows the result of the simultaneous equation model of poverty using the EViews Program.

Table 6. Analysis of Simultaneous Equation Model Estimation

| Poverty Model | | | | | |
|-----------------------|-------------|--------------|--------|----------|--------------|
| Variable | Coefficient | t-statistics | Prob. | R2 Adj. | F-statistics |
| Constanta | 58.74390 | 10.60705 | 0.0000 | 0.600876 | 12.58192 |
| EG | -3.239317 | -4.955955 | 0.0000 | | |
| MS | -1.22E-05 | -1.840799 | 0.0771 | | |
| INF | -0.678090 | -3.425109 | 0.0021 | | |
| FDI | 0.000142 | 0.389991 | 0.6997 | | |
| Economic Growth Model | | | | | |
| Variable | Coefficient | t-statistics | Prob. | R2 Adj. | F-statistics |
| Constanta | 20.43775 | 3.565955 | 0.0014 | 0.836112 | 42.83652 |
| POV | -0.378572 | -2.115472 | 0.0438 | | |
| MS | -3.33E-06 | -3.871278 | 0.0006 | | |
| INF | -0.195655 | -4.687619 | 0.0001 | | |
| Money Supply Model | | | | | |
| Variable | Coefficient | t-statistics | Prob. | R2 Adj. | F-statistics |

| | | | | | |
|-----------|-----------|-----------|--------|----------|----------|
| Constanta | 6038566. | 2.247986 | 0.0333 | 0.622542 | 0.622542 |
| POV | -101518.1 | -2.16132 | 0.0450 | | |
| EG | -266004.8 | -2.382107 | 0.0248 | | |
| FDI | -12.35392 | -0.397810 | 0.6940 | | |
| R | -72600.93 | -2.465404 | 0.0206 | | |

| Inflation Model | | | | | |
|------------------------|-------------|--------------|--------|----------|--------------|
| Variable | Coefficient | t-statistics | Prob. | R2 Adj. | F-statistics |
| Constanta | 31.40326 | 7.896105 | 0.0000 | 0.571933 | 16.60675 |
| EG | -3.395243 | -5.816129 | 0.0000 | | |
| FDI(-4) | -0.003232 | -1.414129 | 0.1707 | | |
| BD | 0.149739 | 1.177096 | 0.2512 | | |

Economic growth estimates accept the null hypothesis because the probability value (0.0000) is less than 0.05. Economic growth has a significant negative effect on poverty. Innovation is a transformation instrument of an economy resulting in economic growth (Lydeka & Karaliute, 2021). In developing countries, economic growth is still a tool to reduce poverty. Innovation acts as a transformation instrument of an economy, resulting in economic growth (Lydeka & Karaliute, 2021). The estimation results of the money supply accept the null hypothesis because the probability value (0.0771) is less than 0.1. It means that statistically, the money supply does not affect poverty reduction. The coefficient of the money supply is negative, which means that it will reduce the level of poverty when the money supply rises. The money supply has two opposite sides. On the one hand, the money supply can increase growth, but on the other hand, it can increase inflation if it is not appropriately managed. The results of the inflation estimation accept the null hypothesis because the probability value (0.0021) is less than 0.05. The inflation coefficient value is negative to poverty, which means that the higher the inflation rate, the poverty will decrease. The coefficient relationship is not following the hypothesis that when inflation rises, poverty will increase. Inflation has received intensive attention from the government. An increase does not necessarily follow inflation in poverty because the central bank plays an active role in issuing policies to compensate for the negative impact of rising inflation, such as direct cash assistance to the poor so that purchasing power does not decrease so that poverty does not increase. Inflation has a negative influence on economic growth (Boujelbene, 2021). Inflation can increase poverty through distortion of relative prices and its effect on allocation efficiency. On the contrary, Huang et al. (2016) found a positive relationship between money supply (M2) and inflation. Inflation is closely related to poverty. High inflation can create instability, raise expectations of macroeconomic instability, disrupt financial markets and distort economic policies. Previous inflation can increase the income gap in the next period. Coibion et al. (2017) found that contractionary monetary policy tends to increase gaps in revenue and total income in America. The FDI estimation results reject the null hypothesis because the probability value (0.6997) is more significant than 0.05. This means that statistically, FDI has no impact on poverty reduction.

FDI does not affect poverty because capital creation is not pro-poor. The developed industry is a capital-intensive industry that only absorbs a small number of workers.

The poverty estimation results accept the null hypothesis because the probability value (0.0438) is less than 0.05. There is a negative relationship between poverty and economic growth. There is an indicator that high poverty will lead to lower economic growth. High poverty causes low purchasing power, decrease demand and supply of goods, aggregate demand and economic growth (Loayza & Raddatz, 2010). Poverty will cause low economic growth if the government does not deal with poverty consistently (Fosu, 2010). Results from the estimated money supply accept the null hypothesis because the probability value (0.0006) is less than 0.05. The correlation is negative, which means an increase in the money supply will cause a decline in economic growth. The economy does not grow if the money supply is not available. Ahmad et al. (2016) find a positive relationship between the money supply and economic growth. The result in the inflation estimate rejects the null hypothesis because the probability value (0.0001) is less than 0.05. The relationship is negative; namely, when inflation is high, economic growth will decline. Economic growth and inflation are the targets of macroeconomic policy, but these two goals work in opposites. The government can create more stable prices but is often accompanied by lower economic growth.

The result in the poverty estimate accepts the null hypothesis because the probability value (0.0450) is less than 0.05. The relationship is negative, which means that high poverty will reduce the money supply. Poverty will cause people's purchasing power to be low so that the need for money is low, and the money supply will decrease. This finding results in the estimated economic growth and accepts the null hypothesis because the probability value (0.0248) is less than 0.05. The relationship between economic growth and money supply is negative, which means that the higher the economic growth, the lower the money supply. Several literature reviews have found that the effect of the money supply on growth is neutral. It means that the money supply will increase economic growth. Economic growth will be crowded out by rising prices so that the money supply is not affected by economic growth (Koti and Bixho, 2016). An increase in the money supply will stimulate economic growth by increasing demand for goods and services and aggregate demand. In other studies, high economic growth will be followed by an increase in the money supply. The FDI estimation results reject the null hypothesis because the probability value (0.6940) is greater than 0.05. In several cases in developing countries, capital inflow through FDI is not always in investment activities that can absorb labor to increase purchasing power and the money supply. FDI invests in capital-intensive sectors that will have a long-term impact and will not affect short-term economic growth and money supply. The interest rate estimation results accept the hypothesis because the probability value (0.0206) is less than 0.05 and is negatively directed. It means that when interest rates are high, it will cause a decrease in the amount of money in circulation. High-interest rates

will encourage people to save their funds in financial institutions, resulting in a low need for money for consumption and a decreased money supply.

The economic growth estimation results accept the hypothesis because the probability value (0.000) is less than 0.05. The direction of the relationship is negative, which means that a decrease will follow economic growth in inflation. This finding is not following the hypothesis that high economic growth will be followed by high inflation. If high economic growth is used to buy imported goods, the demand for domestic goods tends to decline, which will affect lowering Inflation (Mankiw, 2014). The FDI lag four estimation results reject the null hypothesis because the probability value (0.1707) is more significant than 0.1. FDI fourth year before affecting inflation this year because the capital inflow brought to the destination country is capital goods needed to open a new factory in the destination country. The effect is that FDI will not directly affect the level of liquidity in the destination country. People's purchasing power is not affected, and inflation does not change quickly. Wardhani & Haryanto (2020) find that FDI has a positive effect on inflation through food security. The estimation results of the budget deficit reject the hypothesis because the probability value (0.2512) is greater than 0.1. It means that the budget deficit does not affect inflation. According to Ross, there is no effect of the budget deficit on inflation because the budget deficit financed from foreign loans is used to buy imported goods in the short term.

Macroeconomic policies have been implemented as a tool to solve development problems, including poverty. Poverty is multidimensional, so the policies used to reduce poverty cannot be used partially. Economic Growth policies must be supported by monetary, fiscal and investment policies that significantly affect Economic Growth (Khosravi & Karimi, 2010). Estimating the effect of economic growth policy, monetary policy and fiscal policy accepts the null hypothesis because the probability value is less than 0.05. Meanwhile, the estimation results of investment policy reject the null hypothesis because the probability value is greater than 0.05. It means that macroeconomic policies, except for investment policies, significantly influence poverty reduction. This finding is in line with the findings of previous studies, which state that high economic growth is needed to reduce poverty levels. Monetary policy that only focuses on high economic growth will be followed by high inflation rates. This statement is supported by the estimation results of the simultaneous model revealing the equation that there is a negative relationship between inflation and economic growth. Therefore, an expansionary monetary policy only at stimulating economic growth will be followed by an increase in inflation and poverty in the long run. Trade openness, FDI and institutional quality significantly increase economic growth in the long term, while institutional quality reduces economic growth in the short-run (Yameogo, & Omojolaibi, 2020).

Furthermore, FDI does not statistically affect poverty in Indonesia. It means that capital formation, transfer of knowledge and technological advances resulting from

direct FDI have not created new job opportunities that can absorb many workers and grow the economy. FDI is more interested in investing its funds in the tertiary sector than in the primary and secondary sectors. To accelerate high economic growth, investment policy should direct its investment activities towards pro-poor economic growth. The government has to restructure regulations related to direct foreign capital flows. FDI activities must be focused on pro-poor investment activities. Simultaneously, poverty is strongly affected by economic growth. Economic growth is directly affected by money supply and inflation and indirectly by FDI. The unemployment rate and poverty rate negatively influence sustainable Development (Skvarciany et al., 2021).

Conclusion

The decline in the poverty rate in Indonesia is simultaneously affected by economic growth, money supply and inflation, while FDI does not affect at the 5% significance level. It indicates that economic growth can be a tool to reduce poverty, which should be supported by price stability from changes in money supply as an instrument of monetary policy, foreign investment flows and budget deficit as an instrument of fiscal policy. Policyholders synergize macroeconomic to minimize trade positions to lower poverty through mixed policy coordination. Policyholders should implement a macro-fundamental policy mix focused on price stability as the sole target of macro policy. Price stability will encourage high economic growth and job creation, increase people's purchasing power and reduce poverty. As a monetary policy regulator, the Central Bank has a very strategic position to communicate inflation targets and achievements to other policy regulators so that there is no asymmetry of information regarding the focus on achieving price stability. Thus, all sectors adjust their policies so that they are not counterproductive to the targets set by the Central Bank.

The limitation of the research is the scope. It becomes interesting for the next study to compare the coordination of macroeconomic policies in various developing countries whether there are similarities or differences in the behavior of the poverty variable due to macroeconomic policies.

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KOORDYNACJA MAKROEKONOMICZNA: JAKO PODEJŚCIE DO REDUKCJI UBÓSTWA

Streszczenie: Niniejsze badanie ma na celu jednoczesną analizę polityk makroekonomicznych w celu zminimalizowania kompromisowego wpływu wzrostu gospodarczego i inflacji na zmniejszenie ubóstwa. Wykorzystana analiza ma charakter teoretyczny i jednocześnie testuje model w Indonezji z wykorzystaniem danych rocznych za okres 1990-2020, aby pokazać, że redukcja ubóstwa jest skorelowana z koordynacją polityki monetarnej i fiskalnej. Badanie to stwierdza, że na ubóstwo wpływa jednocześnie wzrost gospodarczy, podaż pieniądza i inflacja, podczas gdy bezpośrednie inwestycje zagraniczne nie mają statystycznie istotnego wpływu na ubóstwo. Dlatego decydenci powinni wdrożyć makrofundamentalną kombinację polityki, która koncentruje się na stabilności cen, a następnie dostosowaniu polityki dla wszystkich sektorów, aby wspierać cele wyznaczone przez Bank Centralny.

Słowa kluczowe: ubóstwo, polityka makroekonomiczna, wzrost gospodarczy

宏观经济协调:作为减贫的一种方法

摘要:本研究旨在同时分析宏观经济政策,以尽量减少经济增长和通货膨胀的权衡影响,以减少贫困。所使用的分析是理论性的,同时使用1990-2020年期间的年度数据测试印度尼西亚的模型,以表明减贫与货币和财政政策的协调相关。本研究发现,贫困同时受到经济增长、货币供应量和通货膨胀的影响,而外商直接投资对贫困的影响没有统计学意义。因此,政策制定者应实施以价格稳定为重点的宏观基本面政策组合,然后对各部门进行政策调整,以支持央行设定的目标。

关键词:贫困,宏观经济政策,经济增长