

THE INFLUENCE OF INFLATION, GOVERNMENT SPENDING AND UNEMPLOYMENT RATE ON ECONOMIC GROWTH IN INDONESIA, 2001-2021(PUBLIC SECTOR CASE STUDY)

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ABSTRACT

This study aims to examine the effect of inflation, government spending, and the unemployment rate on economic growth in Indonesia. The data used in this research is secondary data. The population in this study was 34 provinces using a saturated sample technique. The data analysis method in this study uses multiple linear regression analysis with panel data. The results showed that partial inflation and government spending had a positive and significant effect on economic growth in Indonesia, while the unemployment rate had a negative and significant effect on economic growth in Indonesia. Simultaneously inflation, government spending, and the unemployment rate had a positive and significant effect on economic growth in Indonesia.

Keywords: *Inflation, Government Expenditure, Unemployment Rate, and Economic Growth.*

1. INTRODUCTION

The aim of economic growth is to increase national income and increase productivity. A country is considered successful or not in solving its own country's economic problems can be seen from the country's macro and micro economy. The economic growth of a country or a region that continues to show improvement illustrates that the economy of the country or region is developing well (Hasibuan et al., 2022).

According to Sukurno, (2019) Economic growth is a picture of economic development in a certain period when compared to the previous period and this development is expressed in the form of the percentage change in national income in a period compared to the previous period. High and sustainable economic growth is the main condition of necessity for the continuity of economic development and increased welfare. Because the population increases every year and by itself the need for daily consumption also increases every year, an additional income is needed every year (Hartati, 2020). High economic growth will increase investment so that development occurs in various regions.

The high number of unemployed can have a negative impact on the economy. Unemployment will become a burden not only for the government, but also affect families, the environment, and so on. If the number of unemployed is low, indirectly the number of workers who work increases. This can reflect good economic growth, and can reflect an increase in the quality of life of the population, therefore the welfare of the population increases (Widayati et al., 2019).

Reza Juanda

Table 1.1
Inflation, Unemployment Rate and Economic Growth in Indonesia in 2012-2021

Year	Inflation (%)	Government Spending (in million rupiah)	Unemployment Rate (%)	Economic growth (%)
2012	4.30	212,452,971	6,13	6,23
2013	8,38	237,336,479	6,17	5.78
2014	6,23	261,712,905	5.94	5.02
2015	3.35	277,595,814	6,18	4.79
2016	3.02	297,851,059	5,61	5.02
2017	3.61	349,611,545	5.50	5.07
2018	3,13	358,180,434	5.30	5,17
2019	2.72	396,055,586	5,23	5.02
2020	1.68	407,167,366	7.07	-2.07
2021	1.87	406,537,379	6,49	3.69

Source: Central Bureau of Statistics, data processed (2022)

Based on the table above, it can be seen that there was an increase in the inflation rate in 2012 and 2013 by 4.08 percent, government spending also increased by 24,884 billion and the unemployment rate also increased by 0.04 percent, but economic growth decreased by 0.76 percent. In 2014 and 2015 the inflation rate decreased drastically from 6.23 percent to 3.35 percent, but government spending increased by 15,883 billion, the unemployment rate also increased by 1.76 percent resulting in a decline in economic growth from the previous 5.02 percent to 4.79 percent.

1.1. Inflation

Inflation is one of the most important factors affecting a country's economic growth. According to Boediono (2014) Inflation is a symptom in which the general price level increases continuously. An increase in the price of just one or two goods cannot be called inflation, unless the increase extends to (or results in an increase in) most of the prices of other goods.

1.2. Government Expenditures

Government spending is also one of the indicators that affect economic growth, according to Sukurno (2019) Government spending is a government action to regulate the course of the economy by determining the amount of government revenue and expenditure each year, which is reflected in the APBN document for the national and APBD for the region or region. Besides being determined by the amount of government spending, the success of the development of a region is also influenced by the amount of investment.

1.3. Unemployment Rate

Unemployment is a problem for all countries in the world. The high unemployment rate will disrupt the country's national stability. So that each country tries to maintain the unemployment rate at a reasonable level. The problem of unemployment has always been a difficult problem to solve in every country. This is because the population is increasing every year, which will lead to an increase in the number of job seekers, and along with that the workforce will also increase. If the workforce cannot be absorbed into the workforce, they will be classified as unemployed.

1.4. Economic growth

According to Sukurno, (2019) Economic growth is a picture of economic development in a certain period when compared to the previous period and this development is expressed in the form

of the percentage change in national income in a period compared to the previous period. High and sustainable economic growth is the main condition of necessity for the continuity of economic development and increased welfare.

2. LITERATURE REVIEW

The locations in this research were conducted in all provinces in Indonesia during the 2001-2021 period. According to (Sugiyono, 2015) explains that the object of research is the target to obtain the data and information needed for the problem under study. In this study, the objects of research were inflation (X1), government spending (X2), unemployment rate (X3), and economic growth (Y).

The population in this study were all provinces in Indonesia during the 2001-2021 period, totaling 34 provinces.

The type of research used is a quantitative approach. The data used is panel data for 34 provinces in Indonesia from 2001-2021. The type of data used is secondary data in the form of Provincial Gross Regional Domestic Product (GRDP) data, Inflation, Revenue and Expenditure Budget Reports of Provincial Governments throughout Indonesia.

Source of data obtained in this study through the website of the Central Statistics Agency (BPS), SIMREG (Regional Basic Data Information and Management System), as well as other sources such as journals, books, necessary scientific articles and other sources that can be used in this research.

The variable operational definition is this research variable, namely economic growth expressed in percent units, data obtained from the official website of the Central Bureau of Statistics (BPS). Inflation expressed in percent units, data obtained from the official website of the Central Bureau of Statistics (BPS). Government spending is expressed in units of billions of rupiah, data obtained from the official website of the Central Statistics Agency (BPS). Unemployment rate expressed in percent units, data obtained from the official website of the Central Bureau of Statistics (BPS).

The data analysis method used in this study is panel data regression analysis. Panel data regression analysis is a statistical technique that is measured through parameter coefficients, to be able to find out how much influence the independent variables have on the dependent variable. The panel data regression equation is formulated as follows:

$$Y = \alpha + \beta_1 \text{ Inf} + \beta_2 \text{ PP} + \beta_3$$

Information:

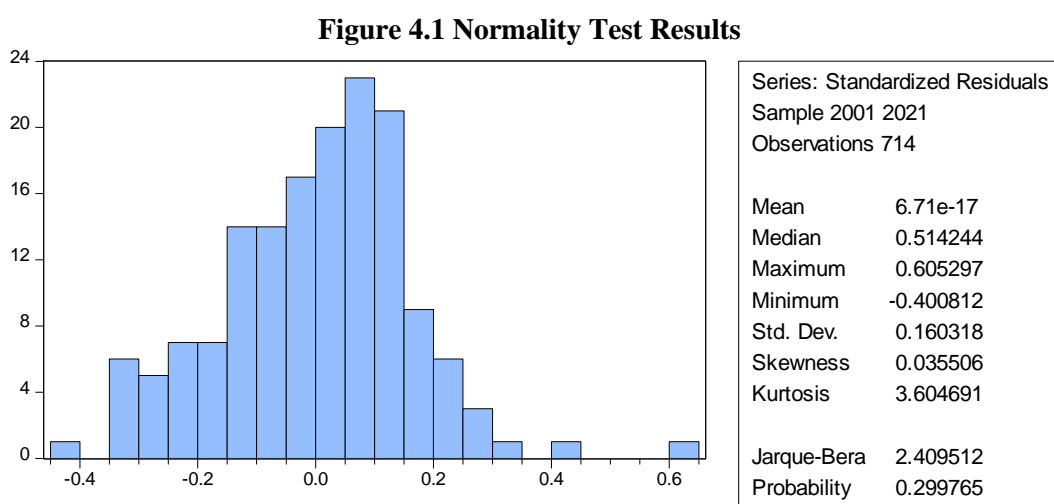
- Y : Economic growth
- α : Constant
- $\beta_1, \beta_2, \beta_3$: Regression Coefficient
- inf : Inflation
- pp : Government Spending
- TP : Unemployment Rate
- e : Residual error (Coefficient of Error)

Reza Juanda

3. RESULTS AND DISCUSSION

The normality test is a test conducted to see whether the data is normally distributed or not. A good data is data that is normally distributed or data that is close to normal so that it is feasible to be tested statistically(Ghozali, 2016).In this study, to see whether or not a data is normal, you can use the Jarque-Bera test model with a significance level of $\alpha= 5\%$. Following are the results of the Jarque-Bera test in this study:

3.1.Test Normality



Source: Research Results (2022)

Based on the picture above, it can be seen that the probability value in the Jarque-Bera test is 0.299765 and the standard error tolerance is 5%. From the results of the statement above, it can be concluded that the data in this study are normally distributed provided that the probability value is > 0.05 .

3.2.Heteroscedasticity Test

**Table 4.2
Heteroscedasticity Test Results**

Variables	coefficient	std. Error	t-Statistics	Prob.
C	1.728968	0.430883	4.012615	0.0001
Inflation	-0.039984	0.024651	-1.622013	0.1052
Government Spending	0.032877	0.036820	0.892906	0.3722
Unemployment Rate	0.009406	0.023544	0.399528	0.6896

Source: Research Results (2022)

Based on the table above, it can be seen that the significance value for each research variable is as follows:

- a. The significance value for the inflation variable (X1) is $0.1052 > 0.05$ so that inflation is declared not to have symptoms of heteroscedasticity.
- b. The significance value for the government expenditure variable (X2) is $0.3722 > 0.05$ so that

government spending is declared not to have symptoms of heteroscedasticity.

- c. The significance value for the unemployment rate variable (X3) is $0.6896 > 0.05$ so that the unemployment rate does not show symptoms of heteroscedasticity.

3.3. Multicollinearity Test

Table 4.3
Multicollinearity Test Results

	Inflation	Government Spending	Unemployment Rate
Inflation	1.000000	0.187923	0.213254
Government Spending	0.187923	1.000000	0.291829
Unemployment Rate	0.213254	0.291829	1.000000

Source: Research Results (2022)

Based on the table above, it can be concluded that this study is free from multicollinearity problems, because the results of research between independent variables do not exceed 0.8.

3.4. Autocorrelation test

Table 4.4
Autocorrelation Test Results

R-squared	0.065 923	Mean dependent var	3.04 4680
Adjusted R-squared	0.061 976	SD dependent var	3.15 9364
SE of regression	3.059 896	Sum squared resid	6647 702
F-statistics	16.70 292	Durbin-Watson stat	1.36 0145
Prob(F-statistic)	0.000 000		

Source: Research Results (2022)

One way to detect the presence or absence of autocorrelation can be seen by performing the Durbin-Watson test (DW test). Based on the table above, it is known Durbin-Watson value in this study is equal to 1.360145. This value is between the tolerance values in the autocorrelation test, namely -2 and 2. It can be concluded that this study is free from autocorrelation symptoms, because the Durbin-Watson value is between -2 and 2.

Model selection in panel data regression analysis was carried out to obtain the best model between the Common Effect Model (CEM), Fixed Effect Model (FEM) and also Random Effect Model (REM). The selection of the panel data regression model can be done by means of the Chow test (Chow test) and the Hausman test (Hausman test).

The Chow test (Chow Test) is a test conducted to select the best model between the Fixed Effect Model (FEM) and the Common Effect Model (CEM). According to Gujarati and Porter (2012) said that the basis for making decisions on the Chow test is by looking at the probability value. If the Chow test results are significant (probability < 0.05) then the selected model is FEM and vice versa. The results of the Chow test in this study can be seen in the table below:

Reza Juanda

Table 4.5
Chow Test Results

Effect Test	Statistics	df	Prob
Cross-section F	2.613891	(33,677)	0.0000
Chi-square cross-sections	85.626700	33	0.0000

Source: Research Results (2022)

Based on the table above, it can be seen that the value the probability on the chow test is equal to 0.0000. This value is below the standard error tolerance value in this study, which is 0.05. Therefore, based on the results of the Chow test the best model in this study is the Fixed Effect Model (FEM), so it is necessary to do the Hausman test to choose the best model between the Fixed Effect Model (FEM) and the Random Effect Model (REM).

To determine the best model between FEM or REM with the Hausman test. The basis for making decisions on the Hausman test is by looking at the value probability, if the Hausman test results are significant (probability <0.05) then the selected model is FEM and vice versa. The results of the Hausman test in this study are as follows:

Table 4.6
Hausman Test Results

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob
Random cross-sections	5.830632	3	0.1201

Source: Research Results (2022)

Based on the table above, it can be seen that the value the probability on the hausman test is 0.1201. This value is below the standard error tolerance value in this study, which is 0.05. Therefore, based on the results of the Hausman test, the best model in this study is the Random Effect Model (REM), so it is necessary to do the LM test to choose the best model between *Common Effects Model* (CEM) and Random Effect Models (REM).

The LM test or also known as the Lagrangian Multiplier Test is a test to select the best model between the Common Effect Model (CEM) and Random Effect Model (REM). According to Gujarati and Porter (2012) said that the basis for making decisions on the LM test is by looking at the probability value. If the Breusch-Pagan cross section value is > 0.05, so the model used is the common effect model and vice versa. The results of the LM test in this study can be seen in the table below:

Table 4.7
LM Test Results

	Cross-section	Test Hypothesis Time	Both
Breusch-Pagan	29.91178	665.2474	695.1592
	(0.0000)	(0.0000)	(0.0000)
Honda	5.469166	25.79239	22.10526
	(0.0000)	(0.0000)	(0.0000)
King-Wu	5.469166	25.79239	23.71185
	(0.0000)	(0.0000)	(0.0000)
Standardized Honda	5.864837	27.36581	18.13447
	(0.0000)	(0.0000)	(0.0000)
Standardized King-Wu	5.864837	27.36581	20.00055

	(0.0000)	(0.0000)	(0.0000)
Gourieroux, et al.	-	-	695.1592
			(0.0000)

Source: Research Results (2022)

Based on the table above, it can be seen that the value of Both *Breusch-Pagan* the LM test of 0.0000. This value is less than 0.05, so it can be concluded that the best model used in this study is *Random Effects Model* (BRAKE).

Based on the selection of the above models, the best model used in this study is *Random Effects Model* (BRAKE). Following are the results of panel data regression with *Random Effects Model* (BRAKE) that is:

Table 4.8
Panel Data Regression Estimation Results with *Random Effects Model* (BRAKE)

Variables	coefficient	std. Error	T-Statistics	Prob.
C	0.713370	0.694838	1.026671	0.3049
Inflation	0.137448	0.034792	3.950602	0.0001
Government_expenditure	0.318216	0.056807	5.601669	0.0000
Unemployment_rate	-0.074551	0.037103	-2.009316	0.0449
R-Squared	0.065923	Mean Dependent Var		3.044680
Adjusted R-Square	0.061976	SD Dependent Var		3.159364
SE Of Regression	3.059896	Sum Squared Residence		6647702
F-Statistics	16.70292	Durbin-Watson Stat		1.360145
Prob(F-Statistic)	0.000000			

Source: Research Results (2022)

Based on the table above, the regression equation in this study is as follows:

$$Y = 0.713370 + 0.137448 \text{ Inf} + 0.318216 \text{ PP} - 0.074551 \text{ TP}$$

Information:

- Y = Economic Growth
- inf = Inflation
- pp = Government Spending
- TP = Unemployment Rate

3.5. Hypothesis Testing

Partial Test Results (T-Test)

1. Effect of Inflation on Economic Growth

Based on the test results using the Eviews 12 application, it is known that the tcount value of inflation is 3.950602 with a significant 0.0001. The ttable value in this study is calculated by $df = 714 - 4$ which is 1.963311 with a significance of 0.05. Judging from the value of $tcount > ttable$ 3.950602 > 1.963311 and a significant value of 0.0001 < 0.05. Then the H1 decision is accepted, so it can

Reza Juanda

be concluded that inflation positive and significant effect on economic growth in Indonesia.

2. Effect of Government Spending on Economic Growth

Based on the test results using the Eviews 12 application, it is known that the tcount value of government spending as big 5.601669 with a significant 0.0000. The ttable value in this study is calculated by $df = 714 - 4$ which is 1.963311 with a significance of 0.05. Judging from the value of $t_{count} 5.601669 > t_{table} 1.963311$ and a significant value of $0.0000 < 0.05$. Then the decision H2 is accepted, so it can be concluded that government spending positive and significant effect on economic growth in Indonesia.

3. Effect of Unemployment Rate on Economic Growth

Based on the test results using the Eviews 12 application, it is known that the tcount value of unemployment rate as big -2.009316 significantly 0.0449. The ttable value in this study is calculated by $df = 714 - 4$ which is 1.963311 with a significance of 0.05. Judging from the value of $t_{count} -2.009316 < t_{table} 1.963311$ and significant value $0.0449 < 0.05$. Then the decision H3 is accepted, so it can be concluded that unemployment rate negative and significant effect on economic growth in Indonesia.

Simultaneous Test (F-Test)

Table 4.10
Simultaneous Test Results (Test F)

R-squared	0.065 923	Mean dependent var	3.04 4680
Adjusted R-squared	0.061 976	SD dependent var	3.15 9364
SE of regression	3.059 896	Sum squared residue	6647 702
F-statistics	16.70 292	Durbin-Watson stat	1.36 0145
Prob(F-statistic)	0.000 000		

Source: Research Results (2022)

Based on the test results, it is known that the Fcount value is 16.70292 significantly 0.000000. The Ftable value in this study is calculated by $df = 714 - 4$ which is 2.384476 with a significance of 0.05. Judging from the value of $F_{count} 16.70292 > F_{table} 2.384476$ and significant value $0.000000 < 0.05$. Then the H4 decision is accepted, so it can be concluded that the variables of inflation, government spending, and the unemployment rate together have a significant effect on economic growth in Indonesia.

3.6. Discussion

Effect of Inflation on Economic Growth

Based on the test results, it is known that the tcount value of inflation as big 3.950602 with a significant 0.0001. The ttable value in this study is calculated by $df = 714 - 4$ which is 1.963311 with a significance of 0.05. Judging from the value of $t_{count} 3.950602 > t_{table} 1.963311$ and a significant value of $0.0001 < 0.05$. Then the H1 decision is accepted, so it can be concluded that inflation positive and significant effect on economic growth in Indonesia.

Effect of Government Spending on Economic Growth

Based on the test results, it is known that the tcount value of government spending as big 5.601669 with a significant 0.0000. The ttable value in this study is calculated by $df = 714 - 4$ which is 1.963311 with a significance of 0.05. Judging from the value of $t_{count} 5.601669 > t_{table} 1.963311$ and a significant value of $0.0000 < 0.05$. Then the decision H2 is accepted, so it can be

concluded that government spending has a positive and significant effect on economic growth in Indonesia.

Effect of Unemployment Rate on Economic Growth

Based on the test results, it is known that the t_{count} value of unemployment rates is -2.009316 significantly > 0.0449 . The t_{table} value in this study is calculated by $df = 714 - 4$ which is 1.963311 with a significance of 0.05 . Judging from the value of $t_{count} - 2.009316 < t_{table} 1.963311$ and significant value $0.0449 < 0.05$. Then the decision H_3 is accepted, so it can be concluded that unemployment rate has a negative and significant effect on economic growth in Indonesia.

The Influence of Inflation, Government Expenditures, and Unemployment Rates on Economic Growth

Based on the test results, it is known that the F_{count} value is 16.70292 significantly > 0.000000 . The F_{table} value in this study is calculated by $df = 714 - 4$ which is 2.384476 with a significance of 0.05 . Judging from the value of $F_{count} 16.70292 > F_{table} 2.384476$ and significant value $0.000000 < 0.05$. Then the H_4 decision is accepted, so it can be concluded that the variables of inflation, government spending, and the unemployment rate together have a positive and significant effect on economic growth in Indonesia.

4. CONCLUSION

Based on the results of the research and discussion described above, the researchers draw the following conclusions:

1. Inflation has a positive and significant effect on economic growth in Indonesia.
2. Government spending has a positive and significant effect on economic growth in Indonesia.
3. The unemployment rate has a negative and significant effect on economic growth in Indonesia.
4. Inflation, government spending, and the unemployment rate together have a positive and significant effect on economic growth in Indonesia and spur overall economic growth.

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