



PUBLIC DEBT AND ECONOMIC GROWTH IN INDONESIA

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Article history:

Submitted: 26 April 2022

Revised: 25 Mei 2022

Accepted: 10 Juni 2022

Keywords:

Government Debt;

Government Investment;

Budget Expenditure;

Economic Growth;

GDP;

Kata Kunci:

Utang Pemerintah;

Investasi Pemerintah;

Belanja Pemerintah;

Pertumbuhan Ekonomi;

PDB;

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Abstract

This study analyzes the impact of government debt contributed to the economic growth in Indonesia over the period 2005 to 2020. We employ the ordinary least square (OLS) approach to see if other factors like government funding, government investment, inflation, and budget spending have an effect on economic growth. The findings show that government debt does not have a significant effect on economic growth in Indonesia. The results indicate that government debt over time has a negative impact on GDP. Furthermore, we discovered that government investment and the rate of inflation are decreasing functions of GDP.

Abstrak

Penelitian ini bertujuan untuk mengetahui bagaimana pengaruh dari utang pemerintah terhadap pertumbuhan perekonomian Indonesia pada Tahun 2005-2020. Metode penelitian yang digunakan adalah *ordinary least square (OLS)* yang bertujuan untuk melihat pengaruh utang, pendanaan pemerintah, investasi pemerintah, inflasi, dan belanja pemerintah terhadap pertumbuhan perekonomian. Hasil penelitian menunjukkan bahwa utang pemerintah tidak memiliki efek yang signifikan terhadap pertumbuhan perekonomian. Namun, utang pemerintah tersebut memiliki efek negatif terhadap PDB dalam jangka panjang. Penelitian ini juga menunjukkan adanya pengaruh negatif dari investasi pemerintah dan inflasi terhadap PDB Indonesia.

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INTRODUCTION

Indonesia, as other developing countries, need a fund to fund government spending. The state budget of the government increases. Based on World Bank Data, government spending is estimated to total 2,540 trillion Rupiahs. These significant expenditures, on the other hand, were not matched by state resources. Debt is widely employed in developing countries, such as Indonesia. Debt is feasible to get in order to reduce the budget deficit. In 2020, Indonesia's total debt will be 5,234 trillion Rupiahs. In fact, sixteen years ago, Indonesia's debt was just around 550 trillion Rupiahs, representing an 8.5-fold increase. The increase in debt is expected to compensate also for government's budget deficit, which was imposed in order to increase GDP.

Debt, on the other hand, has been shown in several studies to have a negative impact on a country's GDP growth. According to Doi *et al.* (2011) Japan is attempting to decrease its debt ratio, which was over 100%. Japan is in serious financial distress as a result of this circumstance. The same thing happened in Malaysia. According to research by Lee & Ng (2015), Malaysia's debt levels and GDP growth have a negative relationship. Government debt is a concern in Europe as well. In both the short and long run, Baum *et al.* (2013) discovered a non-linear link between government debt and GDP growth. Government debt appears to boost a country's GDP, causing additional issues and disrupting the economy.

Indonesia is continuously looking for new funds to support its budget deficit, which is likely to expand further, due to the negative implications of debt. One of them is subsidized by the government. Reserve fund distributions, earnings from the sale of separated regional assets, receipts of regional loans, loan acceptance, and the previous year's budget's residual surplus are all sources of financing (Mahmudi, 2016). This type of funding might increase community money volatility, allowing the economy move correctly. Indonesia's government funding has increased year after year. Based on a data that was released by World Bank, Indonesia's government finance was estimated to be 307 trillion Rupiahs in 2020, an increase of 11.32 times from 2005. This demonstrates the Indonesian government's commitment to finding alternatives to debt financing.

In order to stabilize the economy in the long run, the government needs to create more revenue in order to progressively reduce the budget deficit. This additional funding might come from government investment. According to IMF, Indonesia's government invested 65 trillion Rupiahs, 74 trillion Rupiahs, and 75 trillion Rupiahs in 2018, 2019, and 2020, respectively. The government's increased investment is intended to help the Indonesian economy. Some nations, notably Poland, the United Kingdom, and Mexico, have increased government investment (OECD, 2014). In fact, this might serve as a blueprint for Indonesia in terms of long-term revenue generation. Government investment, on the other hand, may temporarily cover the budget deficit, proving this plan ineffectual. Countries such South Korea, Poland, and Germany reduced their government spending in the previous decade.

In Indonesia, Indonesia Law Number 17 of 2003 stated that public debt ratio must be less than 60% of GDP. Several factors, according to Indonesia Ministry of Finance-Fiscal Policy Unit, impact the state debt-to-GDP ratio. To starting with, the faster the rate of economic growth, the larger the debt will rise. Second, unless the cost of debt financing increases, Indonesia's debt ratio will decrease. Third, the national debt will increase as the Rupiah exchange rate decreases.

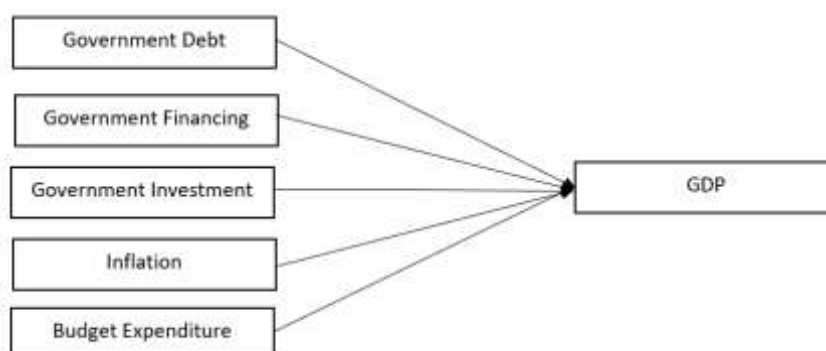
Government financing, according to Minister of Home Affair Regulation Number 13 of 2006, is described as income that must be returned and/or expenses that will be reimbursed, both in the current fiscal year and subsequent fiscal years. This financing is provided in response to the current budget shortfall. The real impact of this funding would be that it reduces the availability of funds in the community to lend or invest in other firms. The excess from the previous year's budget calculations, disbursement of reserve money, revenues from the sale of separated regional assets, receipts of regional

loans, and acceptance of loans are all sources of funding for the Indonesian National Budget. Indonesia also implements reserve fund establishment, local government capital participation (investment), principle of debt repayment, and regional lending (Mahmudi, 2016).

Capital expenditures for physical and economic infrastructure that will be used for more than a year are referred to as government investment. Direct and indirect public investment are included in public investment. Direct investment includes of the formation and acquisition of gross capital, which is then reduced by the disposal of non-financial assets that are not generated over a given period. Meanwhile, indirect investment is the government's transfer of capital to other institutions in the form of cash or goods, such as investment grants and subsidies (OECD, 2014).

Many studies on the impact of debt on Indonesian GDP growth have been completed in the past. According to Cholifihani (2008), debt and Indonesia's GDP growth have a long-term negative relationship. However, there is still a limited amount of study on the relationship between debt, government financing, and government investment in Indonesia's GDP. This encourages the researcher to initiate with the research. The research also includes other factors to support the model, such as inflation, the budget deficit, and government expenditure.

Based on the background and theory above, hipotesis yang ditetapkan dalam penelitian ini adalah sebagai berikut: H1: Government debt affects GDP; H2: Government financing affects GDP; H3: Government investment involves GDP; H4: Inflation affects GDP; and H5: Government spending affects GDP. The framework of this research is as follows.



Source: Processed Data, 2022

Figure 1.
Critical Framework

METHOD

The purpose of this study is to prove the empirical relationship of government debt, financing, government investment, inflation, government spending, and budget deficit to Indonesia's gross domestic product (GDP). This study uses ordinary least squares (OLS) multiple regression analysis to prove the relationship between these variables.

This study uses panel data from 2005 to 2020 for each variable. Furthermore, this study adopted a clustered standard error (heteroskedasticity- and autocorrelation-consistent standard error/HAC-clustered SE) to solve the serial correlation problem that arises in panel data and to ensure the robustness of the model.

The dependent variable of this study is Indonesia's gross domestic product from 2005 to 2020. GDP can be calculated using three methods: expenditure, income, and production. Each method has different variables. GDP is also one of the indicators in determining the level of economic growth of a

country. Hence, it is imperative to pay attention to what factors influence its growth. Therefore, this study examines how government debt, financing, government investment, inflation, government spending, influence Indonesia's GDP.

The $\log_gvtdebt$ is the government debt's natural logarithm, which is used to finance government spending. Government debt has the potential to boost GDP. However, if government debt is not well managed, it can pose a threat to the government, and there is an opportunity cost in the form of interest. The \log_gvtfin is the natural logarithm of government financing aimed at covering the deficit. Funding for the government can come from both within and beyond the country. The \log_gvtinv is the natural logarithm of government investment in state-owned firms, public service agencies, and other institutions. This capital investment is projected to pay off in the future by increasing government revenue.

The $infl$ variable represents the inflation rate over the course of a year. Commodity prices rise as a result of inflation, resulting in a high nominal GDP. Inflation, when measured in real terms, has the potential to reduce GDP by reducing people's purchasing power. The $\log_bgtextp$ is the natural logarithm of government spending and revenue in the state budget. Two types of government spending are direct and indirect. The distribution of government spending determines how expenditures are classified. Below is the regression equation that I use to estimate the impact of government support on SOEs' performance:

$$\log_gdp_t = \beta_0 + \beta_1 \log_gvtdebt_t + \beta_2 \log_gvtfin_t + \beta_3 \log_gvtinv_t + \beta_4 infl_t + \beta_5 \log_bgtextp_t + \mu_t \dots \dots \dots (1)$$

Where

t : year

μ_t : error term

β_0 : intercept

gdp : gross domestic product

gvtdebt: government debt

gvtfin : government financing

gvtinv : government investment

infl : inflation

bgtextp : budget expenditure

RESULTS AND DISCUSSION

Before proceeding to the primary test, namely linear regression, the researcher conducted a descriptive statistical test first to see how the data was distributed. Based on Table 1, there are average values, standard deviations, minimum values, and maximum values. The number of data observed in this study amounted to 16, according to the number of periods of each variable, namely from 2005-2020. From the table, researchers can find various interesting things, one of which is related to the homogeneity of the research variables. The inflation variable shows a relatively low standard deviation compared to other variables. This shows that inflation data is in a reasonably close or homogeneous range. The most heterogeneous variable is government investment. This is indicated by the standard deviation value of 1.56.

Table 1.
Descriptive Statistics

Variables	Obs.	Mean	Std. Dev	Min.	Max.
<i>log_gvtdebt</i>	16	34,967	,72906	33,940	36,193
<i>log_gvtfin</i>	16	32,676	,90332	30,847	33,615
<i>log_gvtinv</i>	16	30,093	1,56962	26,581	31,960
<i>log_gdp</i>	16	16,800	,47163	15,882	17,297
<i>infl</i>	16	,05968	,03073	,02035	,13316
<i>log_bgtexp</i>	16	34,888	,47993	33,967	35,471

Source: STATA Output, 2022

Table 2 displays the correlation matrix. As indicated in the table, there is a low correlation between the independent variables in general. Table 2 further shows that there are no concerns with multicollinearity between the model's predictor variables. Government debt appears to have a negative correlation with inflation but a positive correlation with GDP. According to the correlation matrix, the log of GDP is negatively connected with inflation, and inflation is negatively correlated with all other variables. The log of government debt and log of budget spending have high correlations, with a correlation value of 0.9419 showing a significant relationship between the two variables. The link between the log of government debt and inflation is the lowest.

Table 2.
Correlation Coefficient Among Dependent and Independent Variables

	<i>log_gdp</i>	<i>log_gvtdebt</i>	<i>log_gvtfin</i>	<i>log_gvtinv</i>	<i>infl</i>	<i>log_bgtexp</i>
<i>log_gdp</i>	1					
<i>log_gvtdebt</i>	,8932	1				
<i>log_gvtfin</i>	,9701	,8666	1			
<i>log_gvtinv</i>	,8992	,8660	,9232	1		
<i>infl</i>	-,8134	-,7268	-,8157	-,9152	1	
<i>log_bgtexp</i>	,9826	,9419	,9673	,9123	-,7763	1

Source: Processed Data, 2022

The most significant positive relationship between the independent and dependent variables in Table 2 occurs between government spending and GDP. Government spending has a positive correlation of 0.9826 to GDP. This relationship shows that the Indonesian government has the right fiscal policy in regulating government spending, based on research conducted by Fouladi (2010). The research shows that government spending can positively or negatively impact GDP, depending on the country's policies. The uncertainty of the relationship with GDP also occurs with government debt. Research conducted by Rahman *et al.* (2019) shows that debt can be positively or negatively correlated. There is no certainty. A positive relationship can turn into a negative one if an adequate fiscal policy does not accompany it. The positive relationship of 0.8932 between government debt and GDP shows that Indonesia has made the right fiscal policy choice.

The second-largest positive relationship is government financing with GDP, correlated 0.9701. This is following research conducted by Nelson *et al.* (2021), where financing is directly proportional to GDP. Deficit financing has the effect of increasing interest rates and decreasing the capital stock and GDP, leading to a greater risk of a fiscal crisis.

There is also a negative relationship between inflation and GDP. The negative relationship is at -0.8134. This negative relationship is not in line with the research conducted by Kryeziu & Durguti (2019). The study concludes that an increase in inflation positively impacts GDP, with a confidence level of 99,9%.

Table 3.
Regression Coefficients for the Impact government debt on the GDP

Variables	Regression Analyses
Dependent variable	<i>log_gdp</i>
Estimation method	OLS
<i>log_gvtdebt</i>	-,14258 (,09658)
<i>log_gvtfin</i>	,04711 (,10329)
<i>log_gvtinv</i>	-,11126** (,04514)
<i>infl</i>	-4,67908** (1,37769)
<i>log_bgtexp</i>	1,19266*** (,24789)
Constant	-17,73560*** (3,31891)
HAC (clustered) SEs	Yes
n	16
R ²	,9886

Note: Robust standard errors in parentheses.

*** p < 0,01, ** p < 0,05, * p < 0,1.

Source: Processed Data, 2022

Part of the debt-to-growth link indicated above could be erroneous, reflecting the influence of exogenous factors. The existence of a relationship does not imply that it is causal. Other factors may have a role in the relationship between public debt and economic progress. As a result, a regression analysis is needed to investigate the debt-growth relationship. When a number of debt indicator variables are included, such as public debt, budget expenditure, government expenditure, and government investment, the regression study investigates whether the debt-growth link is robust. The regression findings are summarized in Table 3.

The adjusted R-squared of the model is 0,988, implying that the explanatory variables account for 98.8% of the variation in economic growth. All of the variables' coefficients have the anticipated signs. Only the log of budget expenditure is statistically significant among the five independent variables in the model, indicating that government spending may have a beneficial impact on economic growth. The variables of government investment, inflation, and government spending significantly affect Indonesia's GDP. Other variables such as debt and government funding do not significantly affect GDP.

The liability of a country to repay money borrowed from a third party, principal and interest, is defined as government debt. Countries need borrowing in order to develop or respond to specific conditions, such as war, pandemics, or natural disasters. The state has a national income, although it is mostly utilized to pay for day-to-day expenses (Ulusoy, 2013). Due to a lack of internal funding throughout many developing countries, infrastructure investment is financed by debt. Adequate infrastructure development will have a multiplier impact, indicating that national income will increase and additional jobs will be created, boosting the economy of the country (Saymeh & Orabi, 2013).

Our findings suggest that the public debt has a negative and insignificant influence on GDP. As a result, an increase in public debt is related with a decrease in GDP. Previous research has shown that public debt has a negative effect on economic growth. Our empirical findings are somewhat consistent with the findings. Investors are concerned about a government's capacity to pay its creditors when it has a significant public debt. As a result, investment would be crowded out. Furthermore, creditors may demand higher interest rates as a precautionary measure due to the increased risk, in order to continue supporting the deficits. An increase in interest rates leads to the decrease in investment in the country, which is referred to as "crowding out" (Lee & Ng, 2015).

The Investment Curve may explain all of the above. Interest rates have an inverse relationship to investment (Mankiw, 2013). When the interest rate increases, the opportunity cost for investors increases as well, reducing the amount of money available to invest. Indonesia's GDP may suffer as a result of lower investment. In this circumstance, there is also a multiplier effect. It's probable that the decrease in investment resulted in an even greater decrease in Indonesia's GDP.

Indonesia's fiscal policy would be unstable due to uncontrolled government debt. This is in response to Doi *et al.* (2011) study, which examined the impact of Japanese government debt on GDP. According to this study, increasing debt actually widens the deficit. To eliminate the deficit, the government should ensure changes to its fiscal policy, including the government budget and tax rates. Due to debt and interest, the government's budget would be decreases. To compensate for the tax deficit, the government will increase the tax rate. When the tax rate reaches its optimal level, however, the state's tax revenue actually decreases. This is in accordance with the Laffer Curve (Mankiw, 2013). Government debt has a negative impact on GDP, as evidenced by this fiscal instability.

Human capital, labor, and capital stock are related to government debt. According to Cholifihani (2008), an increase in government debt will lead to a decrease in human capital, labor, and capital stock. This is due to the fact that the budget obligated to pay the debt's principal and interest could be allocated to other factors. When human capital, labor, and capital stock all decrease at the same time, a multiplier effect occurs, leading GDP to decrease.

Government debt, on the other hand, may benefit Indonesia. According to research by Reinhart & Rogoff (2010), when a country's debt to GDP ratio is between 30 and 60 percent, GDP growth is still acceptable. This demonstrates that if government debt is properly managed and maintained within reasonable bounds, economic growth can be accelerated. Indonesia's debt-to-GDP ratio is expected to reach 385 percent by 2020. With this ratio, Indonesia continues to experienced economic growth. As demonstrates by Reinhart & Rogoff (2010). If the government's debt is not adequately managed, Indonesia's debt-to-GDP ratio will soon exceed 90%. Furthermore, like Belgium, Greece, and Italy, economic growth will be negative. Debt has no substantial influence on Indonesia's GDP since government debt is still efficiently controlled and kept at appropriate levels. Government debt, on the other hand, may have a negative impact on Indonesia's GDP.

Excess revenues from the previous year's budget calculations, reserve fund disbursement, earnings from the sale of separated regional assets, receipts of regional loans, and loan acceptance are sources of government funding. Indonesia also carries out financing in the formation of reserve funds, local government capital participation (investment), payment of the principal debt, and regional lending (Mahmudi, 2016). The results of Table 3 reveal that government financing has a beneficial impact on GDP, while it is not significant.

Government financing might be a feasible option for reducing the deficit. Financing is acceptable compared to debt instruments because it has no negative impact on GDP. Funding expenditure is one of the most acceptable methods of government financing. Finance expenditure is a government-issued item that will be compensated, according to Minister of Home Affair Regulation Number 13/2006. This funding is usually allocated to ministries, institutions, and local governments.

These may result in increased revenue for Ministries, Agencies, and Local Governments. Furthermore, regional revenues will be used to generate revenue for the federal government, resulting an increase in GDP.

Another method of government finance is expenditure financing, which includes the use of debt. According to figures from the state budget for 2022, debt financing totaled 973 trillion Rupiahs. Then there's 182 trillion Rupiahs in investment finance, 585 billion Rupiahs in lending, and 1.13 trillion Rupiahs in guarantee liabilities. By presenting finance, the risk of financing is reduced, ensuring that it has no negative impact on GDP. Even if properly managed, the finance is expected to drive the economy and deliver returns to the government, resulting in an increase in GDP. Ojong *et al.* (2013), who studied the impact of government financing on Nigeria's GDP, generally found an increase in GDP as a result of increased government financing.

However, since it has no significant impact on GDP, the government should be concerned about the financial situation. According to research conducted by Nelson & Phillips (2021), government financing has a negative impact on GDP in various nations. This is due to the fact that governmental funding benefits other than debt take decades to obtain. The credit beneficiaries failed to appropriately manage the funding expenditure, which was intended to yield a return for the central government. As a result, the gap is widening, and the government is left with few options except to revert to debt financing. Unfortunately, the debt owed to GDP ratio will increase again and make GDP decline.

Government investment has a long-term goal of boosting economic growth. Roads, housing, schools, hospitals, communication networks, and other public amenities are also all funded by the government. Once it comes to investment allocation, there are differences between countries. Some governments actively engage in infrastructure (greater than 15% of total investment spending) to build or upgrade it. Slovak government investment decreased to 11% from 24% in 2000 to 2009, decreasing from 24% in 2000. Japan, Korea, Switzerland, Greece, Hungary, Portugal, Iceland, Luxembourg, Austria, and Germany are among the ten countries which investment has decreased so far. In addition to the decreases in several countries, Mexico, Poland, and the United Kingdom had increases over the same time period (Saymeh & Orabi, 2013)

Based on Table 3, government investment has a significant and negative effect on GDP. This shows that government investment can cause a decrease in Indonesia's GDP. The government's investment is aimed at SOEs, and Public Service Agencies (PSA) expected to generate returns to the government. As of 2020, the government has invested in SOEs amounting to 17 billion Rupiahs and 52 billion Rupiahs to PSA. This negative effect is in line with the results of Nugroho (2019), which states that government assistance to SOEs has a negative effect on the performance of the SOEs themselves. This suggests that SOEs have not managed their businesses properly, resulting in the government not generating income. Government investment will not be profitable due to the low return, causing the budget to be spent. Furthermore, this situation will have an impact on Indonesia's GDP drop.

The negative impact of government investment could also be explained by government debt crowding out the investment model. Clements *et al.* (2003) discovered a one-of-a-kind phenomenon in developing countries like Indonesia. Government investment will be reduced if the government focuses on funding debt instruments to increase GDP. The reason for this is that government will focus on managing and paying the interest, resulting in a lack of finances for government investment. This is considered to as investment crowding out. Because the government invests far less in SOEs and PSAs, they are unable to maximize their operations, leading to a reduction government returns on their investments. If this continues for an extended period of time, the government's investment budget will not be financially beneficial, and the budget would be affected.

From a different perspective, Ahmed (2016) research demonstrates how government investment effects Bangladesh's GDP. The government's investment is linearly related to GDP, according to this

study. Another factor, specifically a favorable tax policy, has an impact on this. Bangladesh could decrease its debt financing costs by shrinking its budget deficit through effective taxation strategies. In Indonesia, the government does not need to focus on paying both principal and interest.

Kuijs (2005), Fouladi (2010), and Iamsiraroj & Ulubaşolu (2015) all found the same thing in their research. Government support might improve a country's GDP increase, particularly in emerging countries, if other factors are appropriate. Fiscal policy, government debt, and SOE performance are the variables. Government investment will be highly profitable, and it may even be capable of paying the deficit in future years. According to a study conducted in China, domestic investment in SOEs will become more profitable than international investment. Government investment might provide large returns if SOEs continue to function well. As a result, the multiplier effect of domestic investment on GDP will be greater than that of foreign investment.

Inflation is described as the ratio at which prices increase through time. Inflation is defined broadly as an increase in the price or cost of living in a country, or even more precisely as an increase in the price of specific commodities and services. Inflation reflects how much the cost of products and services has increased over a specific time period, generally a year (Gonçalves & Salles, 2008).

Based on the regression results in Table 3, inflation has a negative and significant relationship to Indonesia's GDP. This shows that there will be a reduction in GDP when inflation occurs. Inflation makes the prices of goods and services more expensive to reduce people's ability to buy (Mankiw, 2013). The effect will impact the decline in public consumption and GDP. This condition will be worse if the relationship between GDP sustainability and inflation continues to occur as in the study of Koulakiotis *et al.* (2011). Inflation will cause a decrease in GDP this year and increase inflation the following year. This happens because with low GDP, the country's productivity will decrease. The commodities become scarce. With this scarcity, the prices of goods and services increase again.

Davcev *et al.* (2018) examined the effect of inflation on the Balkan countries, most of which are developing countries such as Indonesia, also found the same. Inflation has a negative effect on the GDP of Balkan countries. Inflation will have a more substantial impact on GDP if it is balanced with the country's exchange rate instability. Both variables are part of monetary policy that have an impact on Indonesia. If the monetary policy set by the central bank is unstable, inflation and the Rupiah exchange rate will reduce Indonesia's GDP.

According to the New Keynesian view, inflation can increase GDP in nominal terms. This makes it seem as if inflation positively affects GDP (Chen, 2020). In fact, people find it difficult to consume so that real GDP falls (Saymeh & Orabi, 2013). This is also reinforced by Krznar & Kunovac (2010) research, which examines the effect of inflation on the GDP of European Union countries. If inflation very uncontrollable, it become hyperinflation and cause a shock to the economy. When a shock occurs in the economy, not only public consumption affected, but also all aspects of GDP, including government spending, investment, exports, and imports. Indonesia experienced in 1965. At that time, Indonesia's inflation reached 600% which made the Indonesian economy depressed.

Behind the bad impact of inflation, it turns out that inflation has benefits. Controlled inflation can smooth the economy. From the producer's side, rising prices increase the supply of goods. When the supply of goods increases, the price will return to its equilibrium point. Research conducted by Mubarik (2005) and Gonçalves & Salles (2008) proves that GDP will increase if a country's inflation is controlled. This is why Indonesia, through Bank Indonesia, regularly sets inflation targets every year. The targeted inflation balanced the economy both in terms of demand and supply to positively affect Indonesia's GDP.

State spending is an obligation owed by the central government, according to Law No. 17 of 2003, and it decreases the state's net worth. Direct and indirect spending are the two kinds of state spending. A type of expenditure that budget is strongly impacted by related activity is known as direct

expenditure. Indirect spending, on the other hand, signifies the exact reverse (Soleh & Rochmansjah, 2010).

Dudzevičiūtė *et al.* (2018) studies reveal that government spending in various European Union countries is directly linked to economic growth. They discovered three different versions. Initially, great economic growth is accompanied by increased government spending. Countries with significant economic growth but low government spending seem to be the second group to consider. Countries with low economic growth and government spending are indeed the third group to evaluate. The relationship between government spending and economic growth is significant in eight EU countries. In France, Belgium, Portugal, and Cyprus, positive relationships were found. Sweden, Germany, Poland, and Slovakia all shows a negative relationship.

After compared the other factors in the analysis, government spending has the highest significance effect. According to Table 3, government spending has a linear effect on Indonesia's GDP. Government spending and transfers to the regions are both included in government spending. This government spending would either directly or indirectly move the economic growth, resulting an increase in Indonesia's GDP. Subsidies are an illustration of government spending. The subsidy allows lower-income people to consume and, as a result, contribute to an overall growth in GDP.

Education and health spending are equally essential government expenditures. According to World Bank research (2019), spending on education and health plays a critical effect in developing nations' GDP growth. This is due to a lack of knowledge and health care in these countries. It is intended that, with government aid, these sectors will develop. Increases in education and public health will almost certainly result in increased production, which will boost the economy. Baum *et al.* (2013) in their research discovered that budget expenditure had a significant influence on GDP, particularly in emerging countries, such as Kosovo, urgently require government aid in order to survive.

Qatar, like other developed countries, needs government assistance. Government support, both physical and non-physical, has a nearly linear effect on Qatar's GDP, according to Eid research (2020), and budget expenditure could be a catalyst in increasing GDP in the long run. The same thing was confirmed by Gemmell *et al.* (2016). In their economic cycles, OECD countries like Canada and the United Kingdom require government support as well. The long-term beneficial association between GDP and budget expenditure demonstrates this.

Despite the above-mentioned positive effects of budget spending, there remains the risk of inefficient government-to-community budget spending. Nguyen (2019) found that non-public budget expenditure had a significant impact on GDP after conducting research in Vietnam. On the other hand, government spending on public goods has had no significant influence. This is due to the fact that many public assets are underutilized or inappropriately employed, rendering them ineffective in stimulating the economy. Giordano *et al.* (2007) found the same finding, with public-goods spending having no substantial impact on Italy's GDP. According to Landefeld's (2008) research, budget expenditure in supporting benefits the community and might drive the economy rapidly.

CONCLUSION AND RECOMMENDATION

Developing countries, such as Indonesia, must spend a significant amount of money in order to become developed. The Indonesian government is focused on financing rather than achieving revenue. To finance the budget deficit, the government will continue to consider for funding sources such as debt, government investment, and non-debt government financing. Government debt is the financing with the

most significant portion compared to other instruments. This study shows a non-significant opposite relationship between government debt and Indonesia's GDP. If properly managed, government debt has been shown to benefit the Indonesian economy. The advantages of debt will outweigh the disadvantages as long as the debt-to-GDP ratio does not exceed 60%. If the debt is not adequately managed, Indonesia might assume the position of other countries with debt-to-GDP ratios over 90%. Debt will cause the economy to suffer under these conditions.

The Indonesian government needs to find other alternatives besides using debt instruments. Other sources of funding, such as surplus from the previous year's budget calculations, reserve fund disbursement, earnings from the sale of separated regional assets, receipts of regional loans, and loan acceptance, might be utilized to decrease the debt and cover the budget deficit. Indonesia also integrates in reserve fund formation, local government capital participation (investment), principle debt repayment, and regional lending. Other than debt, government finance has a positive relationship with GDP. Non-debt government funding is less risky than debt since it does not create new issues like fiscal and monetary instability. Government investment and inflation need to be managed properly to carry this funding to enhance the country's economy.

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