

IMPACT OF GOVERNMENT FISCAL SPACE AND MAN POWER TO THE GROSS DOMESTIC PRODUCTS OF INDONESIA PERIOD 1990-2015

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ABSTRACT

To purpose of this study was to examine and analyze the effect of fiscal space and labour absorption to Indonesia Gross Domestic Product (GDP) within period 1990-2015. This study uses the least squares method or Ordinary Least Square (OLS) with time series data. Variables used in this study is the Gross Domestic Product (GDP) as the dependent variable, whereas for independent variables using the fiscal space and labour absorption. The results of regression calculations using the least squares method or Ordinary Least Square (OLS) in this study indicate that the fiscal space variable has a positive significant effect, and labour absorption variable has a positive significant effect to Indonesia Gross Domestic Product (GDP).

Keywords: *Gross Domestic Product (GDP), Fiscal Space and Labor Absorption, Ordinary Least Square (OLS)*

JEL: E20,H30

To cite this document: Enjarwati, T. & Mursinto, D., (2018). Impact of Government Fiscal Space and Man Power to The Gross Domestic Products of Indonesia Period 1990-2015. JDE (Journal of Developing Economies), 3(1), 16-25.

Introduction

Economic growth is a process of a change in economic activity countries seen from the increase in Gross Domestic Product (GDP) as one indicator of the economy (Arsyad, 1999: 7). Increase in GDP from time to time can encourage economic development aimed at improving the welfare of the community. According to Makmun and Yasin (2003), the successful growth GDP can not be separated from increasing investment and labor.

State Budget (APBN) is a tool that can be used by the government to be able to realize the goals of national development. APBN is expected to expand to stimulate more productive economic activities and to encourage economic growth to bring prosperity to the community. The ability of the state budget to expand through the provision of fiscal space (fiscal space) with regard to the ability of state finances and economic conditions.

ARTICLE INFO

Received: April 18th, 2018
Revised: May 13rd, 2018
Accepted: June 25th, 2018
Online: June 30th, 2018

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Indonesia's fiscal space is still narrow, marked by a deficit budget. The narrower the government's fiscal space, then the government space to provide economic stimulus through fiscal becomes weaker. The magnitude of mandatory spending has become one of the reasons for the limited fiscal space as a space for government to enforce fiscal policy, so that when the revenue target is not achieved, the budget deficit will be greater. This mandatory spending is related to the APBN 2013 in the law such as the education budget of 20% of the APBN / regional budget (APBD) in Law Number 20 Year 2003 on the National Education System. While the provision of budget allocation in the health sector by 5% of the state budget in accordance with Law no. 36 Year 2009 on Health. Structural issues such as the amount of energy subsidies and the lack of tax revenues are also the cause of the narrowness of fiscal space in Indonesia.

Another factor that can affect the output of a country is the human resources that are reflected by the working population. Workforce absorbed is some of the workforce that has worked (absorbed in the economic sectors). Based on the above background, the formulation of the problem in this research is whether the government fiscal space and labor absorbed together or partially affect the GDP in Indonesia. The purpose of this study is to examine and analyze the influence of government fiscal space and labor absorbed jointly or partially to the GDP in Indonesia.

Theoretical Basis

Theory of Economic Growth

Economic growth is defined as the development of activities in the economy that cause goods and services produced in society increases and the welfare of the community increases (Sukirno, 2000). This increase is due to the addition of factors of production both in quantity and quality. Therefore, if an increase in GDP in an economic region can be said that the region has increased economic growth. GDP is presented in two price concepts, e.g., current or nominal prices and constant or real prices.

The theory of classical economic growth further highlight the factors of population growth as a factor that affects economic growth. David Ricardo and Robert Malthus as classical economists have views contrary to Adam Smith regarding the role of the population in the process of economic development. Adam Smith is optimistic that population growth will expand the market and accelerate economic growth. Ricardo and Malthus meanwhile that rapid population growth will double the number of people that will cause the rate of development to decline to the lowest level.

Solow's economic growth theory focuses on the supply aspect. Bidding is based on a production function that states that output depends on the capital stock and labor. The aggregate production function is the basic model of Solow's growth (Armstrong and Taylor, 2007: 66). Meanwhile, Keynes's theory analyzes economic growth only in the short run, where national output and employment are determined by aggregate demand (static conditions). Harrod-Domar analyzes long-term economic growth, where economic conditions can achieve steady growth (steady growth) needs investment (dynamic conditions).

Fiscal Space

Heller (2005) argues that fiscal space is the availability of space that allows governments to be able to provide certain resources to achieve a particular goal without threatening the sustainability of the government's financial position. In general fiscal space is as total

expenditure minus nondiscretionary expenditures (such as personnel expenditures, interest payments on debt, subsidies, and transfers to regions).

According to [Schick \(2009\)](#) the amount of fiscal space depends on four variables, namely government expenditures, tax inclination, loan lending, and economic performance. In principle there are different ways for a government to create fiscal space, such as by raising tax revenues, cutting or removing non-priority state expenditures, domestic and / or foreign loans, printing of money by the central bank for lending to the government, and grant receipts ([Heller, 2005](#)).

Government Expenditures

Government spending is the consumption of government goods and services as well as government financing for government administration and development activities ([Sukirno, 2002](#)).

a. Rostow Government Spending Theory

The theory was developed by Rostow and Musgrave which links the development of government spending with the stage of economic development. In the initial stage, the percentage of government investment to total large investment because at this stage the government must provide infrastructure. In the intermediate stage, government investment is still needed to avoid market failures caused by increasing private investment. At an advanced level, government activity shifts to spending on social activities ([Mangkoesebroto, 2008: 170](#)).

b. Wagner's Theory of Law

Wagner's Theory of Law states that in an economy, if per-capita income increases, relative government spending will increase. According to Wagner (in [Dumairy, 1997: 162](#)) there are five causes for increased government expenditures: the demand for increased security and defense protection, rising levels of people's income, urbanization that accompanies economic growth and the development of democracy and bureaucratic inefficiencies that accompany government development. Wagner's law explains the ratio of per capita government expenditure to per capita national income.

Labor

According [Simanjuntak \(1998\)](#) population is divided into two parts, namely labor and not the labor force. According to the Labor Basic Act No.13 of 2003 on employment chapter 1 Article 1 concerning general provisions explains that the workforce is any individual who is capable of performing the work to produce goods or services to meet his own needs as well as for society. Of the large population of productive age it will be able to increase the number of available labor force and will eventually be able to increase output production.

Methodology and Data

The analysis model used as the analytical tool in this research is multiple linier regression analysis model. In econometric model, the influence of each variable can be measured its significance level. In general, multiple linear regression models can be expressed as follows:

Where:

PDB = Gross Domestic Product;

RF = Government Fiscal Space;

NAKER = Absorbed Workforce;

β_0 = Constants; β_1 ,

β_2 = regression coefficient of independent variables;

ϵ = Error term.

The research approach used in this research is quantitative approach and using analytical tool with econometric model that is multiple linear regression which is used to test the hypotheses from measured data so that obtained parameters from the influence of change from an economic variable to other economic variables. Then, the results of the analysis will be interpreted into a description.

The variables used in this study are: (1) GDP as a dependent variable which is the added value of goods and services produced in a certain (national) area within a certain time period usually in one period using GDP data at constant prices year 2000 with rupiah units obtained from the Central Bureau of Statistics; (2) Fiscal space as an independent variable which is the total expenditure minus indirect spending. Indirect spending consists of personnel expenditures, principal interest payments, subsidies, transfers, realization of education expenditures, and realization of health spending. Data using units of rupiah obtained from the Ministry of Finance; (3) Labor absorbed as independent variables which is a number of workforce that has worked (absorbed in various economic sectors) that produce goods or services to meet their own needs or to meet the needs of society in the unit of the soul obtained from the Central Bureau of Statistics.

This study uses multiple linear regression analysis using the least squares method or so-called Ordinary Least Square (OLS) with the help of computer program Eviews 4.1. The type of data used in this study is secondary data in the form of time series period 1990-2015.

Stages of processing the data in this study is to do OLS regression and statistical testing (F test and t test) to see the effect of fiscal space and labor absorbed to GDP. The second stage is to test the classical assumption. To obtain a BLUE estimator it is necessary to test multicollinearity, heterokedastisitas, autocorrelation and normality.

Research Analysis

Based on Table 1 , it is explained that the positive sign on the variable of the fiscal space (RF) and labor absorbed (Naker) explains that the fiscal space (RF) and labor absorbed (Naker) have a positive effect on GDP, while the negative sign on the constant means when the fiscal space and labor absorbed fixed value (ceteris paribus) then the value of GDP in Indonesia amounted to (8.49).

Table 1: OLS Regression Result

Variabel	Coefficient	Std.Error	t-Statistik	Prob.
RF	20.81351	2.106868	9.878886	0.0000
NAKER	1.02E+08	19570889	5.236932	0.0000
C	-8.49E+15	1.63E+15	-5.198492	0.0000

Variabel	Coefficient	Std.Error	t-Statistik	Prob.
R-squared	0.982670	Meandependentvar		3.46E+15
AdjustedR-squared	0.981163	S.D.dependenvar		3.57E+15
S.E.ofregression	4.90E+14	Akaikeinfocriterion		70.59816
Sumsquaredresid	5.53E+30	Schwarzcriterion		70.74332
Loglikelihood	-914.7761	F-statistic		652.1024
Durbin-Watsonstat	0.822057	Prob(F-statistic)		0.000000

Source: Author's Estimation Result, using Eviews4.1.

F Test (Simultaneous Test)

F Test is performed to explain the effect of independent variables together to the dependent variable. The calculation results show the probability value of the model is 0.000000. With the level of trust (α) used 5%, the F-Statistic test in this study shows probability value of $0.000000 < 0.05$. It can be concluded that the Fiscal Space (RF) and Manpower Absorption (Naker) together have a significant influence on the GDP of Indonesia period 1990-2015.

T Test (Partial Test)

T Test is used to see the role of each variable partially, by comparing the partial probability value with the level of trust used ($\alpha = 5\%$). If p-value of independent variable is smaller than $\alpha = 5\%$ then partially independent variable has significant effect to the dependent variable. Conversely, if the independent p-value is greater than $\alpha = 5\%$ then the partially independent variable has no significant influence on the dependent variable.

Table 2: T Statistics Test Result

Variable	Coefficient	Prob.	$\alpha=5\%$	Signification
RF	20.81351	0.0000	0.05	Significant
NAKER	1.02E+08	0.0000	0.05	Significant

Source: Author's Estimation Result, using Eviews 4.1.

Based on regression estimation result, there are probability values of 0.0000 for variable of Fiscal Space (RF) and probability value for variable of Labor Absorbable (Naker) equal to 0.0000. By using confidence level ($\alpha = 5\%$), it can be concluded that the variable of Fiscal-Space (RF) partially significant positive effect to the GDP of Indonesia period 1990-2015 and Labor Absorbed (Naker) partially significant positive effect to GDP Indonesia for period 1990-2015.

Coefficient of Determination (R2)

Based on the results of data processing in Table 2, the coefficient of determination (R2) produced by 0.982670. The results illustrate that 98.27 percent change in the dependent variable (GDP) is perfectly explained by the independent variables used in the model, the Fiscal Space (RF) and the Absorbed Workforce (Naker) while the rest of 1.73 percent is explained by the variable others not included in the model (error term). While the adjusted coefficient of adjusted (R2 adjusted) is 0.981163 which shows that taking into account the degrees of freedom, all independent variables included in the model are able to explain the dependent variable of 98.12 percent, while the rest of 1.88 percent is explained by other variables that are not included in the model.

Classic Assumption Test

Multicollinearity Test

Multicollinearity test is used to determine the relationship between independent variables in a regression. To see the presence or absence of multicollinearity in a model, it can be seen from the correlation coefficient of each independent variable. In this study, if the correlation coefficient between each independent variable is greater than 0.8 then multicollinearity occurs. Summary of multicollinearity test results are presented in Table 3 below.

Table 3: Correlation Matrix Test Result

	RF	NAKER
RF	1.000.000	0.912023
NAKER	0.912023	1.000.000

Source: Author’s Estimation Result, using Eviews4.1.

In Table 3, Correlation Matrix test results indicate that the value of Correlation Matrix of 0.912023. This result shows the value of Correlation Matrix of 0.912023 > 0.8 which means each independent variable namely Fiscal Space (RF) and Absorbed Labor (Naker) found the existence of symptoms of multicollinearity. However in Table 5 shows that the probability of free variables shows significant at 5% confidence level so that the next step in curing multicollinearity is no improvement.

Heterocedasticity Test

The heteroscedasticity test aims to determine whether the interference variable has a non- constant variant. In this study using White Heteroskedasticity test. Testing criteria if the value of chi squares greater than $\alpha = 5\%$ it can be concluded that there is no violation of the classical assumption heteroskedastisitas. Summary of heterocedasticity test results are presented in Table 4 below.

Table 4: Heterocedasticity Test Result

F-statistic	2.033173	Probability	0.126424
Obs*R-squared	7.258168	Probability	0.122858

Source: Author’s Estimation Result, using Eviews4.1.

Autocorrelation Test

Autocorrelation shows the relationship between residuals. Based on Table 1 shows that Durbin Watson value of 0.822057 means that there is an autocorrelation problem model. So it is necessary to heal the model by way of regression with GLS (General Least Square) or WLS (Weighted Least Square) method is to determine the size of the rho hat. The regression results are then re-tested by LM test to find out whether there is still an autocorrelation problem or not. LM test results can be seen in Table 5.

Table 5: LM Test Result

Breusch-Godfrey Serial Correlation LMT est			
F-statistic	1.996616	Probability	0.161962

Obs*R-squared	4.160790	Probability	0.124881
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Source: Author’s Estimation Result, using Eviews4.1.

Based on the results of the autocorrelation test in Table 5, in the GDP model it is known that the probability of Obs*R-squared is 0.124881 (12.48%) greater than 5%. So it can be concluded in the model there is no autocorrelation problem.

Normality Test

Normality test aims to see that a data is normally distributed or not. To test whether the residual is normally distributed or not, this study uses Jarque-Bera (J-B) test. Based on Jarque-Bera statistical test (Figure 1), Jarque-Bera statistic value of 0.047806 with a big probability of 0.976380 or 97.63%. Therefore H0 is accepted because p-value 0.976380 > α = 5%. So it can be concluded that with a 95% confidence level (α = 5%) the residual is normally distributed.

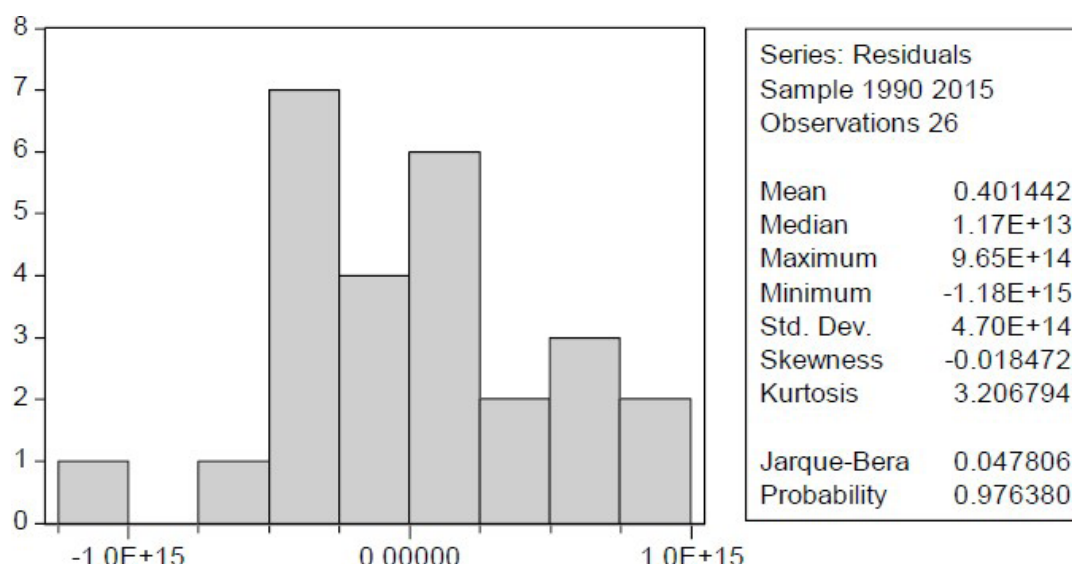


Figure 1: Normality Test Result

Source: Author’s Estimation Result, using Eviews 4.1.

Research Discussion

The government’s fiscal space is a central government budget allocated for infrastructure, education, health and other development to achieve the Millennium Development Goals (MDGs) which are considered to encourage government spending. Where increased government spending will affect the increase of Gross Domestic Product (GDP). While the absorbed workforce is a workforce that has worked both full and seasonal. Some experts argue that employment is absorbed which is considered to have an influence in the process of increasing economic growth.

Based on the research that has been done about fiscal space (RF) period 1990-2015, shows that in general fiscal space move in the direction of GDP. This can be seen from the t- statistic test shown in Table 1 shows that fiscal space has significant influence to GDP with probability value of 0.000 and F-statistic equal to 0.0000. The probability value is less than the level of significance (α) determined at 5%, so this suggests the first hypothesis in this study

was accepted as it is statistically proven. The value of fiscal space coefficient is positive value of 20.81 which means the higher fiscal space will increase the GDP, where if the government's fiscal space increased by 1 Rupiah it will increase GDP by 20.81 Rupiah.

Measurement of fiscal space in this study is the difference between total expenditure with personnel expenditure, principal payments and interest on debt, subsidies, regional transfers, as well as spending on education and health spending. The amount of fiscal space used for infrastructure development and other government activities in improving people's welfare. Infrastructure plays an important role in increasing GDP where higher GDP occurs in areas with good infrastructure availability. Its role as a driver of the economy will be able to drive the growth of related sectors as multipliers and will ultimately create new business fields and increase output.

These results concur with the research conducted by Moeis (2012) states that the fiscal space has a significant effect and has a positive relationship to GDP. This is supported by research conducted by Annisa (2012) who found that government fiscal space will increase Indonesia's GDP where GDP is an indicator of economic growth.

Based on the estimation results Table 1 states that absorbed labor has a significant positive effect on Gross Domestic Product (GDP) in Indonesia period 1990-2015. In Table 1 shows the probability value of labor absorbed t-statistics of 0.000 and F-statistics of 0.0000. The probability value is smaller than the specified significance level (α) that is 5%, so this shows the hypothesis in this study accepted because it is statistically proven. The variable coefficient of labor absorbed positive signified that is equal to 1.02 which means that each employment increase is absorbed by 1 soul it will increase the GDP by 1.02 Rupiah. Assuming the other variable is constant.

The results of this study also support the empirical findings conducted by Paude (2009) and also reinforced by research conducted by Nasriyah (2013) which explains that the absorbed workforce has a significant effect and has a positive relationship to GDP. The results of this study are in accordance with Adam Smith's theory where Adam Smith is optimistic that population growth will expand the market and accelerate economic growth. This is reinforced by research from Prasetyo and Firdaus (2009) which concludes that the economy in Indonesia is more labor intensive than capital-intensive so the need for investment in human resource development (education) will bring the same positive impact on production figures even greater if the growing number of workers to support sustainable development in development so that the creation of human capital quality both skilled and trained labor that can increase productivity so as to encourage increased output.

Conclusion

Based on the results of research on the influence of government fiscal space and labor absorbed to Gross Domestic Product (GDP) of Indonesia period 1990-2015 obtained, it can be concluded that simultaneously fiscal space government and labor absorbed have a positive and significant influence on Indonesia's GDP period 1990-2015. this study also concludes that partially government fiscal space has a positive and significant impact on Indonesia Gross Domestic Product (GDP) period 1990-2015. While the absorbed labor also has a positive and significant influence on Gross Domestic Product (GDP) of Indonesia period 1990-2015.

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