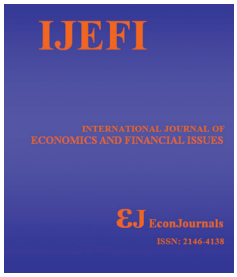

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Does Government Budget Drive Regional Economic Growth?

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ABSTRACT

Regional Economic Growth in Indonesia varies in each region due to differences in geographic conditions between regions. This Research related to the relationship of government spending and economic growth which is still a debate among academicians. This study aims to analyze the effect of government spending, investment and labor on regional economic growth. The method used is fixed effect method. Investments procured by domestic investment have no significant and obvious effect on economic growth in Indonesia. Government spending has a positive and significant impact on economic growth. An increase in government spending can lead to an increase in economic growth. As policy makers, the government should play an active role to stimulate the economy through countercyclical fiscal policies. The labor force has a positive effect on regional economic growth. This result shows that the worker has been absorbed so as to encourage regional economic growth.

Keywords: Economic Growth, Government Budget, Regional Economics
JEL Classifications: H0, H50, O40, O47

1. INTRODUCTION

In accelerating economic growth, emerging market economies are not spared the government's role through the policies implemented. Various policies have been carried out by the government to promote sustainable economic growth. According to Anitasari and Soleh (2012), changes in the level and composition of government budgets, both taxes and government spending, can affect aggregate demand variables and levels of economic activity, resource distribution patterns, and income distribution.

One of the fiscal policies in Indonesia is to regulate the pattern of government spending by determining the amount of government revenues and expenditures each year, which is reflected in the document of National Budget (APBN) and Regional Expenditure Budgets (APBD). The purpose of this fiscal policy is to stabilize prices, levels of output and employment opportunities and to stimulate or encourage economic growth. This is supported by Olukayode (2009) which states that government spending has a significant positive effect on economic growth.

The research related to the relationship of government spending and economic growth is still a debate among academicians. The direction of their relationship is still a problem for academics because of the findings that show a negative relationship between government spending and economic growth. The effect of government spending on economic growth can be positive or negative or even no relationship. Sáez et al. (2017) found that the relationship between government spending on economic growth can be positive or negative depending on which country as the research sample is. For cases in developed countries such as Europe shows a positive relationship between government spending and economic growth. While the case study in Kenya shows the impact of public spending on negative economic growth (Egbetunde, 2013).

The economists who examine the relationship between government spending and economic growth have different points. Keynes regards public expenditure as an exogenous factor that can be used as a policy instrument to encourage economic growth. However, the impact of government spending on economic growth is not without controversy in the empirical literature. Dandan (2011) and Sáez et al. (2017) conclude that the impact of government

spending on economic growth is positive. On the other hand, Egbetunde (2013) found a negative relationship between the two. Therefore, this research becomes interesting if it is related to the case in Indonesia by looking at how the influence of government spending on economic growth.

The higher economic growth is usually the higher the welfare of society, although there is another indicator that is the distribution of income. In recent years, Indonesia's economic growth has continued to slow. Based on data from the Central Bureau of Statistics (BPS), Indonesia's economic growth in 2015 of 4.79% is the lowest in the last quarter of the year. If seen in the whole province in Indonesia, economic growth per province continues to slow down.

Literature studies that examine the effect of government spending on economic growth are relatively large. However, this research is still relevant to study because the direction of the relationship is still different. In Indonesia there are several literatures that analyze this, among others: Anitasari and Soleh (2012) found a positive impact on economic growth in Bengkulu while Priyantoro (2012) and Ramayandi (2003) found that government spending tends to have a negative impact on economic growth both short term and long term.

In addition to government spending, one of the most influential factors in economic growth is human resources. Population that increases over time can be a driver or a hindrance in economic growth (Fauzan, 2015). Increasing population will increase the number of labor and the addition allows an area to increase production. But on the other hand, the adverse effects of the increasing population that are not offset by employment opportunities will cause economic growth not in line with the increase in welfare.

Although research on the relationship between government spending and economic growth has been done in Indonesia, this research can provide information related to the direction of their relationship. By adding data and using different methods, this research is expected to strengthen the previous analysis or provide new findings which will be discussed in future research.

Based on the above background, the problem of inter-regional economic growth can be caused by various factors such as government expenditure, investment and labor. This research is important to know the effect of government expenditure, investment and labor on economic growth. The Chapter II of this study will discuss the theories used to build a framework. Furthermore, Chapter III will review the methodology used. Chapter IV presents the results of research and discussion. In the last chapter can be concluded the results of this study.

2. LITERATURE REVIEW

Economic growth is strongly influenced by the role of capital formation. This theory also discusses national income and employment. Lincolyn (1992) in Sinaga (2005) describes the views of Robert Sollow and Trevor Swan on the relationship of economic growth and employment. Swan argued that economic growth depends on increasing the quality and quantity of production factors. This theory supports the opinion of the neo classical theory, namely the economy in full employment if the factors of production always develop in harmony.

Some literature has discussed the relationship of government spending and economic growth. Landu (1985) shows that there is a negative relationship between government spending and economic growth. This shows that the increase in government spending is related to slowing economic growth. This result is supported by Devarajan et al. (1996) which shows that there is a negative relationship between government spending and economic growth. In their research, they distinguish productive and unproductive expenditure. The results show expenditures that are considered to be productive to be unproductive if in excessive amounts.

The relationship between economic growth and aggregate expenditure can be positive or negative or even no relationship. Attari and Javed (2013) divided government spending into current government expenditure and development government expenditure. His research used Pakistan time series data with ARDL test, Johansen cointegration test and Granger-causality test. The results show there is a long-term relationship between inflation, economic growth and government spending. It means that government spending provides externalities and a positive relationship to economic growth but in the short-term government spending does not affect economic growth. Based on the causality Test shows that there is an indirect relationship between economic growth and government spending. Roşoiu (2015) analyzed the impact of fiscal policy shock using the Vector Autoregressive method. Based on the impulse response results, GDP increased due to a positive surprise from government spending.

Anitasari and Soleh (2012) analyzed how the influence of Government Expenditures on Economic Growth in Bengkulu Province. The results of his research show that government spending has a positive and significant effect on economic growth in Bengkulu Province. While the influence of government spending on economic growth in the city area shows that out of the 10 cities in Bengkulu Province, Rejang Lebong and Bengkulu cities have the result that government spending has a positive and significant impact on economic growth in the region. North Bengkulu Regency has a negative influence while the other 7 districts have positive but insignificant results. Most districts in Bengkulu Province are categorized as newly developed areas which are the result of the expansion after the implementation of regional autonomy. So that in the short-term government expenditure is considered not able to stimulate the activities of the economic sectors and spur economic growth in the area.

Government spending on public goods and financing transfers has many positive effects on economic growth (Schumacher, 2015). However, there are some American countries that are the object of their research that experienced diminishing returns from the amount of government expenditure. That is, the addition of government spending continuously decreases economic growth.

Furthermore, Priyantoro (2012) examined the effect of infrastructure public expenditure on Gross Regional Domestic Product (GRDP) in six districts in the West Nusa Tenggara Province. Data analysis uses descriptive method with econometric approach and uses multiple linear regression models. Infrastructure public expenditure assessed is public expenditure on transportation infrastructure, irrigation public expenditure and agricultural public expenditure. Simultaneously the test results proved that public transport infrastructure spending and regional autonomy policy had a significant effect on GRDP. Other findings indicate the impact of government spending can be positive or negative. Some European countries such as Portugal and the United Kingdom have a positive influence on government spending on economic growth, while other countries are not significant (Sáez et al., 2017).

3. RESEARCH METHODOLOGY

The object of this study is all Provinces in Indonesia. The scope of study will be emphasized on the influence of Labor, Investment and government spending on Economic Growth during the observation year 2010–2016 using panel data. Data was taken from Central Bureau of Statistics (BPS), Bank Indonesia (BI), and Ministry of Finance.

The model used in this study can be written as follows:

$$Q=f(K, L) \quad (1)$$

Where capital consists of investments and aggregate expenditures so that it can be written as follows:

$$Economicgrowth=f(labor, investment, Gspending)..... \quad (2)$$

The function of economic growth consists of 33 objects, namely 33 provinces in Indonesia so that it can be written in panel regression equation as follows:

$$lnEconomicgrowth_{i,t}=\beta_0+\beta_1 lnLabor_{i,t}+\beta_2 lnInvestment_{i,t}+\beta_3 lnGspending_{i,t}+\varepsilon \quad (3)$$

Where β_0 is an intercept, β_1, β_2, β_3 dan β_4 is parameters of variable estimation, and ε is an error term. $lnEconomicgrowth_{i,t}$ represents the economic growth variable, $lnLabor_{i,t}$ shows the number of labors, $lnInvestment_{i,t}$, $\beta_3 lnGspending_{i,t}$ is the regional income and expenditure budget. While *i* presented 33 provinces and showed the study period from 2010 to 2016. The panel data estimation models are dependent on assumptions to intercepts, coefficients, and their interference variables, error terms. Some possible assumptions are as follows:

1. The assumption that intercepts and slope coefficients are constant over time and space and the interference variables capture differences between time and individual.
2. Constant coefficient and different intercept between individual (fixed effect models).
3. The constant coefficient slope but the intercept varies between individuals and time.
4. All coefficients (intercepts and coefficients) vary between individuals.
5. Interspace and slope coefficients vary between individuals and time.

To estimate the model parameters with panel data, this study uses the Fixed Effect Model.

4. RESULTS AND DISCUSSION

Based on the redundant fixed effects tests and hausman tests that have been done, the final model used in this research is the Fixed Effecs model. The estimation results in Table 1 with the confidence level of 95% (α = 5 persen), with df = (128–3 = 125), then obtained t-table of 1.658. The estimation results show that t-statistics on the main variable of this study (Government spending) is 12.91657, where the value is greater than t table value (t satistic > t-table). It can be concluded that the H0 is rejected and Ha is accepted, which means that the variable government spending has a significant influence on economic growth at a 99% confidence level. Furthermore, the value of t statistic of labor variable is 8.185488, where the value is greater than t table value (t satistic> t-table). Besides that, the probability value t statistic in the equation is 0.0000 which is smaller than alpha 5% (probability t statistic <α). It can be concluded that the equation H0 is rejected and Ha is accepted, which means that the labor variable has a significant effect on economic growth at a 99% confidence level. While the investment variable has no significant effect on economic growth. By using fixed effect mode, the influence of government expenditure, investment, labor to growth in Indonesia obtained $R^2 = 0.994407$. it means that the independent variables that exist in the model can explain unemployment of 0.99% while the remaining 1.00% is explained by other variables not included in the model.

Each province has initial intercept or condition when there is no different government spending. Aceh, West Sumatra, Riau, Bengkulu, Bangka Belitung, Jakarta, Yogyakarta, NTB, NTT, West Kalimantan, Central Kalimantan, South Kalimantan, North Sulawesi, Southeast Sulawesi, Gorontalo, West Sulawesi, Maluku, North Maluku, West Papua and Papua have positive intercepts. Whereas North Sumatra, South Sumatra, Riau Islands, Lampung, West Java, Central Java, East Java, Banten, Bali, North Kalimantan, East Kalimantan and South Sulawesi showed negative intercepts. The influence Government spending on GRDP indicate that the government spending can encourage economic growth with a multiplier effect of 3.557615 for each rupiah spent.

Based on the estimation of panel data regression using the fixed effect method in Table 2, it can be seen that the variable government spending has a positive and significant effect on economic growth. The increase in government spending can encourage economic growth. As policy makers, the government should play an active role to push the economy through a countercyclical fiscal policy. The government should descreases the government spending during the boom before the economic recession, while the analysis of the effect of government spending on economic growth at the time of recession must provide a stimulus for the economy, one of which is through government spending. The theory has been validated in the United States. The United States Government used Government spending as an instrument to save its country

Table 1: The result estimation

Variable	Coefficient	SE	t-statistic	Prob.
C	218810.7	37156.39	5.888911	0.0000
Gspending?	3.557615	0.275430	12.91657	0.0000
Investment?	−0.041104	0.156732	−0.262257	0.7935
Labor?	0.097132	0.011866	8.185488	0.0000
R^2	0.994407			

Source: BPS. *P<0.1, **P<0.05,***P<0.01

Table 2: The result of fixed effect method

Provinces	Intercepts
_ACEH—C	57143.15
_SUMUT—C	−82234.92
_SUMBAR—C	42348.97
_RIAU—C	73598.16
_JAMBI—C	57743.57
_SUMSEL—C	−1563.611
_BENGKULU—C	88417.02
_LAMPUNG—C	−46735.06
_BABEL—C	65892.56
_KEPRI—C	−30647.75
_JKT—C	497817.3
_JABAR—C	−579016.7
_JATENG—C	−747819.2
_JOGJA—C	25241.45
_JATIM—C	−572746.9
_BANTEN—C	−29769.02
_BALI—C	−8399.213
_NTB—C	27470.68
_NTT—C	17819.77
_KALBAR—C	14973.62
_KALTENG—C	55498.32
_KALSEL—C	43021.99
_KALTIM—C	−61574.06
_KALTARA—C	−73701.15
_SULUT—C	74771.91
_SULTENG—C	59296.22
_SULSEL—C	−1563.611
_SULTENGGA—C	91458.46
_GORONTALO--C	118584.7
_SULBAR—C	110954.0
_MALUKU—C	119906.7
_MALUT—C	123741.4
_PBARAT—C	4106.451
_PAPUA—C	44799.80

Source: BPS

from the great depression (1929–1939). During that period, the government drastically increased its spending budget. However, the Indonesian Government is not necessarily able to replicate what the United States Government does to encourage the economy in the Indonesian Provinces with government spending.

The government must also consider other factors such as differences in urgency where when the United States uses government spending to boost the economy, its economy is experiencing depression/recession while in the case of provinces in Indonesia only experienced an economic slowdown driven by the global economic slowdown. In this case the government should also consider the revenue side. Budgets that come from taxes can reduce people's consumption and purchasing power. Communities that have fixed income, with the presence of tax havoc can reduce consumption.

It is in line with Sodik's (2007) research which shows that government spending has a positive effect on economic growth in Indonesia. Whereas in Nigeria government spending has a positive but not significant effect on economic growth (Olukayode, 2009). Government spending in the form of public spending is more of an accumulation of capital stock. This condition is expected to be a concern for the government, especially the recent province to further increase the allocation of development spending so as to stimulate economic growth.

The same result was also obtained from Haryanto (2013) which showed that government spending indirectly had a positive impact. The high concentration of economic activities in certain regions is one of the factors that causes development inequality between regions. Economies from regions with high concentrations tend to grow rapidly compared to regions with low economic concentration levels that tend to have lower levels of development and economic growth.

5. CONCLUSION

Government spending has a positive and significant impact on economic growth. The increase in government spending can encourage economic growth. As policy makers, the government should play an active role to drive an economy through a countercyclical fiscal policy. the researcher can explore more opportunities to cooperate with Regional Economist (RE), BI and BPS in making further research more comprehensive and accurate by incorporating other variables that participate affect the economy and allow it to be included in the model. Researchers can open up opportunities to work together with RE, BI and BPS to apply similar research at the regional level with adjustments so that more research can reflect the conditions of the Provinces of Indonesia.

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