The Effect of Government Expenditures and Tax on Investment and Economic Growth in Indonesia

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Abstract
Fiscal policy is an economic policy to guide to better the economic condition by changing the government's revenue and expenditure. Keynesian model theoretically expect that investment should be pushed by government expenditure, which in turn increases economic growth. This research aims are: 1) to analyze the effect of government expenditure and tax revenue on private investment in Indonesia; 2) to analyze the effect of government expenditure and tax revenue on economic growth in Indonesia; and 3) to analyze the effect of government expenditure and tax revenue on economic growth through private investment in Indonesia. The indirect effect on economic growth is only government expenditure through investment.
Keywords: Government expenditure, tax revenues, private investment, economic growth.

1.1 INTRODUCTION

Fiscal policy is an economic policy to guide to better the economic condition by changing the government's revenue and expenditure. Theoretically, fiscal policy is the economic policy undertaken by government towards revenue and expenditure to achieve goals such as economic growth and economic stability in general. The existence of two main instruments used in fiscal policy, i.e. state revenues and expenditures, indicates that fiscal policy closely relates to attainable state target / budget finances. Changes in level and composition of government budget, both tax and government expenditure, can affect aggregate demand variables and economic activity, patterns of resource distribution, and income distribution (Prasetiya, 2011).

The government expenditure is a most effective tool of government intervention on economy. During this time, effectiveness level of government expenditure can be measured through how much the economic growth. The success of development in an area is also determined by amount of government expenditure and investment. Investment is one of pillars of economic growth (Sajafii, 2009). Investment can be the starting point for success and sustainability of development in future because it can absorb the workforce, to open new job opportunities for community, which in turn will have an impact to increase people's income. The changing the applicable tax rate will affect the economy. Lower tax can increase purchasing power of people and industry will be able to increase the amount of output in investment. Keynesian model theoretically expected that investment could be pushed in by government expenditure. However, higher tax will decrease the purchasing power of society and decrease the industrial output, which generally affect the investment. Therefore, fiscal policy emphasizes more on regulation of government revenues and expenditures or government expenditure (Dernburg and Muschtar, 1994).

One of main factor or component to promote economic growth is capital accumulation, covering all forms or types of new investments invested in land, physical equipment and capital or human resources. Capital accumulation occurs when a portion of income is saved and reinvested for investment purposes to increase output and future income (Todaro & Smith, 2003). The investments provide important roles for economic growth, increasing output and reducing poverty. Investments increase the production capacity through the accumulation of resources to encourage higher output and drive sustainable economic growth. The investment can be done by all parties, either by public as a business activity or social activities and by government as the State organizer and as an activity for service needed by community as its main duty. On other hand, investment is an activity to produces value added as main source of social welfare to affects economic growth. To spur economic growth it requires new investment, which is additional net reserve or capital stock (Todaro, 2004).

Based on description described above, this research aims are: (1) to analyze the effect of government expenditure and tax revenue on private investment in Indonesia; (2) to analyze the effect of government expenditure and tax revenue on economic growth in Indonesia; (3) to analyze the effect of private investment on economic growth in Indonesia?

II. THEORETICAL REVIEW

2.1. The Effect of Government Expenditure and Tax revenue on Private Investment

Fiscal policy is an economic policy in order to improve economic condition by changing the government revenue and expenditure. Based on tax perspective, it is clear that changing the prevailing tax rate will affect the economy. If the lower tax will increase, the purchasing power and industry will be able to increase the amount of output in investment. Theoretically, Keynesian model expected that investment could be pushed in by government expenditure. However, higher tax will decrease the purchasing power of society and decrease the

industrial output, which generally affect on the investment. Therefore, fiscal policy emphasizes more on regulation of government revenues and expenditures (Dernburg and Muschtar, 1994).

In government sector, economic activities are related to households where the government receives a household tax payment for operational needs, development in government expenditure. In relationships with companies, governments get tax revenue from entrepreneurs and governments buy products from companies based on existing budgetary funds. international / overseas sector with households relationships are providing goods and services for benefit of households. For relationships with companies, international world exports its products to company's businesses.

Jhingan (2004) explained that tax is an effective instrument in an effort to increase the economic development of a country. The tax can be used to achieve the following objectives. First is limit consumption by transferring the source of consumption to investment. Therefore, appropriate taxes are direct taxes to limit consumption by taking a portion of income from high-income groups. While indirect taxes on luxury goods aimed to reduce the consumption power of low-income groups. Secondly is to increase the impetus of saving and private investment. The tax is not solely to gain greater revenue, but as an incentive to save and invest. Third, transfer funds from the people to government, thus allowing for government investment. Fourth is modifying the investment, in which case the tax will encourage redirecting private investment to a more productive path. Fifth is to reduce economic inequality with progressive tax deductions (income tax for individual taxpayers / taxable income). The last is, to mobilize economic surplus.

Assuming that investment expenditure (I) and government expenditure (G) are autonomous, tax will affect on consumption expenditure through its effect on consumption function (Dernburg and Muschtar, 1994). However, there is a positive expectation from private sector on government expenditure. With increase in government expenditure it is expected that fulfillment of public goods is more secure. In reality, however, poor infrastructure issues are an inhibiting factor of investment in Indonesia (Tambunan, 2006)

2.2. The Effect of Government Expenditure and Tax Revenue on Economic Growth

The Peacock-Wiseman theory suggests another opinion to explain the governmental development behavior based on an analysis of "government revenue-expenditure dialectics". The government is always trying to enlarge its expenditure by relying on revenue from taxes. In fact, people do not like the bigger tax payments (Mankiw and Wilson, 2008).

Referring to voting theory, they argue that society has a tax tolerance limit, a level where people can understand size of tax levy required by government to finance its expenditures. This tax tolerance level is a constraint to limit government arbitrary to raise tax levies.

The Peacok and Wiseman theory is based on a view that governments are always trying to increase expenditure while people do not like to pay greater taxes to finance the government expenditure growth. However, society has a tax tolerance level where people can understand amount of tax levies required by government to finance government activities so that they have a level of public willingness to pay the taxes (Mankiw and Wilson, 2008).

This theory led to higher tax collection, although the tax rate does not change. Increased tax revenues can increase cause government expenditure. Therefore, in normal circumstances, increasing GRDP causes greater government revenue and government expenditure.

2.3. Impact of Fiscal Policy on Economic Growth and Investment

The model of economic growth in Harrod-Domar's "steady growth theory" is the development of Keynesian analysis. It emphasizes on the key role for investment in process of economic growth (Mangkoesobroto, 1993). The theory is supported by classical economic growth theory that economic growth and development are the main source of capital. Capital as a production factor in economic development is not money but real capital / capital goods. The process of capital expenditure in government is known as capital expenditure / development.

The relationship of tax revenues to private investment can be explained by theory of a standard business investment model called neoclassical model of investment. It examines the benefits and costs for companies to have goods capital. The model shows how the level of additional investment inventory capital is attributed to marginal product of capital, interest rate, and tax rules to affect the company (Mankiw, 2006).

The effect of private investment on economic growth is seen in theory of economic growth, as a basis in growth theory is the Solow-Swan model. The basic equation of this model is $Y = f(K, L)$, where Y is economic growth, K is stock capital while L is Labor. The equation above capital shows that stock (capital accumulation) has direct effect on economic growth (Sukirno, 2015).

Capital accumulation occurs when a portion of its income is saved and reinvested in order to increase future output and income. Spurring economic growth requires new investment as additional net reserve or capital stock (Todaro, 2004). The procurement of new factories, new machinery and equipment and raw materials increase the physical stock of capital, it certainly enables higher output in future. The productive investment must be

balanced by investment of economic and social infrastructure provided by government's expenditure for regional development in providing infrastructure. For example, road construction, telecommunication, electricity supply, water etc are necessary to support productive investment. Investment plays an important role in development theory. It is often called "engine of growth." Classic and neo classical growth models rely on investments to boost economic growth to achieve high investment capital accumulation. Direct investment will have an impact on absorption of labor and in end can increase the national output.

Schumpeter's theory emphasizes on the importance role of entrepreneurs to realize the economic growth. This theory shows that entrepreneurs are a group that will constantly make innovations in economic activity. The innovation introduces new goods, enhances efficient ways to produce goods, expands new goods market to new markets, develops new sources of raw materials and conducts organizational changes in order to enhance the efficiency of corporate activities. These innovations will require new investments (Sukirno, 2015).

III. RESEARCH METHOD

3.1. Types and Data Sources

This study uses secondary data from Indonesian Economic and Financial Statistics (SEKI), and Indonesian Central Bureau of Statistics. Data is time series (quarterly) from 2010 to 2016 period. It is government expenditure (capital expenditure), taxes, domestic investment, and economic growth of Indonesia.

3.2. Data analysis method

Path analysis is used to explain the relationship between variables with intervening variable to know the direct or indirect effect of a set of independent variables (exogenous) to dependent variable (endogenous) (Riduwan and Sunarto, 2015). The equations are follows:

1). $Y_1 = \beta_1X_1 + \beta_2X_2 + \varepsilon_1$

2). $Y_2 = \beta_3X_1 + \beta_3X_2 + \beta_4Y_1 + \varepsilon_2$

Description:

X_1 = Government Expenditure
X_2 = Tax revenue
Y_1 = Private Investment
Y_2 = Economic Growth
ε_1 = Error of first equation
ε_2 = Error of second equation

IV. RESEARCH RESULTS

The data analysis is done by Eviews program. The summary of path analysis results are below.

Table 1. Analysis Results

Effects among variables	Beta Path Coefficient	T value	F value	Determination Coefficient (R^2)	Description
X1 on Y1	0.3034	36.914			Significant
X2 on Y1	0.0078	2.0887	1048.389	0.9900	Significant
X1 on Y2	0.2899	63.4237			Significant
X2 on Y2	0.0098	0.2104	3187.344	0.9967	Insignificant
Y1 on Y2	0.9613	44.6506	1993.680	0.9890	Significant

Table 1 shows first regression equation model for individually (partial) test. The effect of government expenditure on private investment has t value of 36.914 with significance value of 0.000 <0.05, Ho is rejected and Ha is accepted. It means the government expenditures have a significant effect and positive correlation to private investment in Indonesia. The effect of tax revenue on private investment has t value of 2.0887 with significance value of 0.000 <0.05, Ho is rejected and Ha is accepted. It means the tax revenue has a significant and positive correlation to private investment.

First regression model with overall test (simultaneous) shows that government expenditures and tax revenues collectively have an effect on investment of private sector. The f value is 1048.389 with significance value of 0.000 <0.05, Ho is rejected and Ha is accepted. It means that government expenditure and tax revenue simultaneously has significant and positive correlation to private investment.

The second regression model examines individual (partial) test. The effect of government expenditure on economic has t value of 63.4237 with significance value of 0.000 <0.05 probability value, Ho is rejected and Ha is accepted. It means government expenditure has significant and positive correlation to economic growth. The effect of tax revenue on economic growth has t value of 0.2104 with significance value of 0.8102 > 0.05, Ho is accepted and Ha is rejected. It means the tax revenue does not significantly affect and not correlate to economic growth. The effect of private investment on economic growth has t value of 44.6506 with significance value 0.000 <0.05, Ho is rejected and Ha is accepted. It means private investment has a significant and positive

correlation to economic growth.

Second regression equation model analyze the simultaneous test. The simultaneous effect of government expenditure and tax revenue, to economic growth through private investment has f value f of 1993.680 with significance value of 0.000 <0.05, Ho is rejected and Ha is accepted. It means simultaneously the government expenditure and tax revenue through private investment have a significant effect and positive correlation to economic growth.

V. DISCUSSION

5.1. The Effect of Government Expenditures and Tax revenue on Private Investment in Indonesia

Government expenditure is the government consumption of goods and services as well as government financing for government administration and development activities (Sukirno, 2002). This study shows the government expenditures directly have no significant effect and positive correlate to private investment in Indonesia from year 2010 to 2016. This indicates that government efforts to allocate local expenditure, include general allocation funds and special allocation funds, have not been able to increase private investment.

This study support the research of Wahyuningtyas (2010) which states that government expenditure does not affect the private investment. However, this study results are not consistent consistent with Sasana (2008) that Government expenditure has a positive relationship and significant effect on development of private investment in Central Java.

The tax has function as an revenue. It is a tool or source to include as much money into state or regional treasury in order to finance the expenditure of State or region (routine and development expenditure) and as a regulator of its function to stimulate foreign and domestic investors to embed with provision of tax incentives (Pudyatmoko, 2008). Government also eases the tax payment through integrated services from government in order to facilitate the administration of tax administration.

In a study shows directly tax, revenue has a significant and positive correlation to private investment in Indonesia from 2004 until 2014. This study results are supported by theory of Neoclassical Investment Model to examine the benefits and costs for companies to have capital goods. The model shows that level of additional investment of capital stock is attributed to marginal product of capital, interest rate, and tax rules (Mankiw, 2006).

Therefore, taxes are not only aimed at getting a large income, but also play a role as stimulants to save and make private investment. The local government of Indonesia supports to facilitate regional taxation to business actors by providing one-stop, one-stop, easy, transparent, one-stop integrated permitting services so that business actors has desire to invest or keep investing to increase investment. This study results are in line with Roy (2013) which states that local tax revenues positively correlated and have a significant effect on private investment.

5.2. The Effect of Government Expenditure and Tax revenue on Economic Growth in Indonesia

The direct government expenditures have significant and positive correlation to economic growth in Indonesia from 2004 to 2014. This shows a direct relationship between government expenditure and economic growth in Indonesia. The increase in government expenditure will increase economic growth. It is supported by Keynesian expression of Harrod-Domar theory that economic growth is increasing along with higher investment, government expenditure, and export-import in terms of demand. The neo-Classical growth proposals by Abramovits and Solow states that economic growth depends on factors of production that is capital increase, labor increase, and technological progress.

The role of government is necessary to regulate the economy. One government's role to regulate the economy is by applying fiscal policy by allocating government expenditure to build the facilities and infrastructure needed by community. Government expenditure is the most effective government intervention tool to economy. The effectiveness level of government expenditure can be measured by how much economic growth can be achieved. This is because government expenditure is more closely relates to regional budget, which directly affects on local revenue in form of local taxes and regional financing that will affect economic growth.

This study results support Wahyuni et al. (2014) that government expenditure from 2000 to 2012 has a positive correlation and significant effect on economic growth of Regency / City in Bali Province and research from Rustiono (2008) showing that government expenditure in the region has a positive impact on development of GRDP in Central Java Province. According to Aschauer (2000), tax burden associated with accumulation of public capital can have a negative impact on economic growth. Such negative effects are through excessive taxes imposed on private sector, which in turn will reduce the economic growth.

The data analysis shows that during the 2010 to 2016 period, tax revenue does not have positive correlation and insignificant effect on economic growth in Indonesia. This indicates that although tax revenues have an effect on investment but have not been able to affect economic growth in Indonesia due to taxes determined by Indonesian government policy is still relatively low. This study results support Roy (2013) that local tax revenues have no effect on economic growth in East Kalimantan. However, it does not support Sumaryani (2015)

that tax revenue has a significant and positive impact on economic growth in Indonesia. Emmanuel Jimenez (1994) who conducted a study on government expenditure on infrastructure associated with economic growth. His study assumes development expenditures and routine expenditures are government investments. The conclusion is that government investment has a positive impact on economic growth.

5.3. The Effect of Government Expenditure and Tax revenue on Economic Growth through Private Investment in Indonesia

Government expenditure partially has no effect on private investment but affects on economic growth while tax revenue affects on private investment but does not affect on economic growth. Statistical test results the simultaneous effect of government expenditure and tax revenues on private investment and simultaneously government expenditure and tax revenues have an effect on economic growth in Indonesia. Therefore, simultaneously government expenditures and tax revenues indirectly affect on economic growth through private investment. This means that private investment can mediate the effect of government expenditure and tax revenues on economic growth.

The data analyses indicate that directly private investment has significant and positive correlation to economic growth in Indonesia. This indicates higher private investment from year to year and no fluctuations, it can have a significant effect on economic growth. The study results support Mahnaz Rabiei & Mazoidi (2012) which examines foreign investment to economic growth in eight countries with the majority of population are Muslim, such as Egypt, Iran, Malaysia, Pakistan, Nigeria, Bangladesh, Indonesia and Turkey. This study concluded that investment has positive effect on economic growth of each country. This research is supported by Neo-Classical economic growth theory of Solow analysis, which states that most important factor to embody economic growth is not capital increase and labor increase. The most important factor is technological progress and increment of skills and expertise of labor. It is also supported by Harrod-Domar's theory that continues investment will increase economic growth.

The this study support Rinaldi (2013) that private investment does not affect on regional economic growth in East Java Province. However, it does not support Wahyuni et al (2014) that from 2000 to 2012 investment has a positive and significant effect on economic growth of Regency / City in Bali Province. Phetsavong and Ichihashi (2012) stated that domestic investment of private sector has a positive effect on economic growth in Asian countries as well as research from Rustiono (2008) which shows that private investment has a positive impact on GDP growth in Central Java Province.

VI. CONCLUSIONS AND SUGGESTIONS

6.1. Conclusion

From result of data analysis and discussion in this research, it can be concluded below.

1. The government expenditures directly have a significant effect on private investment in Indonesia from 2010 until 2016. The tax revenue also has significant and positive correlation to private investment in Indonesia.
2. The government expenditure directly has a significant and positive correlation to economic growth in Indonesia from 2010 to 2016. While the direct tax revenue is does not have significant effect on economic growth in Indonesia.
3. The government expenditure and tax revenue indirect affect on economic growth through private investment. This means that private investment may mediate the effect of government expenditure and tax revenues on economic growth in Indonesia. Data analysis results show that from in 2010 until 2016 directly private investment does not have significant effect on economic growth in Indonesia.

6.2. Suggestions

1. Indonesia Government should further optimize government expenditure to provide better public goods and services to push further private investment in future.
2. Indonesia Government should further optimize the public service especially for tax revenue by providing excellent service provided, namely Integrated Licensing Service Agency One Door. This is expected to be effective in providing ease and quick service, transparent and friendly in serving the community to increase public expectations for investment because tax revenue can help to finance regional development that will improve economic growth in future.
3. Indonesia Government should further optimize the provision of goods or services for better and more convenient public services, especially in road construction infrastructure as a link to economic activity, so that people are more likely to invest and to encourage foreign investors from outside the region or foreign investors to invest in Indonesia so as to encourage economic growth.

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