The Effect of Government Capital Expenditure on Economic Growth and Its Impact on Community Welfare

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Abstract: Capital expenditure is government expenditure for development activities such as infrastructure development, basic facilities, and other infrastructure. In economic theories, it is stated that government spending is one of keys to economic growth. Economic growth is an indicator that a country/region experiences a development. In turn, continuous and sustainable economic growth will improve the welfare of the community. This study used panel data related to the variables studied from 34 provinces in the 2012-2016 periods. Multiple regression analysis is used to test and analyse the effect of growth and capital expenditure on the human development index. From the results of this study it can be concluded that government capital expenditure and economic growth together influence the welfare of the community. But partially, only capital expenditure has a significant positive effect on people's welfare, while economic growth shows no influence.

1 INTRODUCTION

Because of limited resources, regional government must be able to allocate revenue obtained for productive expenditures. Capital expenditures and goods/services expenditures are government expenditures which are expected to have an influence on the economic growth of a region, beside private, household and foreign sectors (Arsa & Setiawina, 2015).

Economic growth is a change in economic conditions of a country/region which is getting higher/better than the previous period. Economic growth is one indicator that a country/region experiences development success. Economic growth is closely related to the increasing availability of goods and services in community. Productivity of goods and services reduce unemployment. In turn, continuous and sustainable economic growth will improve the welfare of the community.

Community welfare occurs due to economic growth, among others, through the decline in poverty. In the implementation of development, high economic growth is the main target for developing countries because economic growth has a close relationship with the increase in goods and services produced in the community, so that the more goods and services produced, the more welfare of society will increase (Arini, 2016).

The success of economic development is shown by many indicators; they are economic growth, increased employment, increased purchasing ability, health care quality improvement, and many other indicators. From the various indicators of the economic development progress, one of which is a success in improving the quality of human development (Maqin & Abdullah, 2017).

Increasing of allocation of capital expenditure should also improve the quality of human development as measured through the HDI. If it can be known the effect of government capital expenditure on economic growth and employment, as well as the influence of private investment on economic growth and employment, then the improvement of welfare level will be accelerated

Human Development Index is very close with policies carried out by the government to improve the quality of human resources. It is based on the idea that education is not just preparing students to be able to enter the job market, but more than that. Education is one of the nation's character development efforts (national character building) such as honesty, fairness, sincerity, simplicity and

exemplary. This research was conducted with a view to seeing the effect of capital expenditure on economic growth and human development index in all provinces in Indonesia for the 2013-2016 periods.

2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Capital Expenditures

According to Indonesia Government Regulation number 71 year 2010 concerning Government Accounting Standards (SAP), the definition of capital expenditure is expenditure made in the framework of capital formation which is to add fixed assets/inventories that provide benefits for more than one accounting period, including expenses for expenses maintenance that is to maintain or add to the useful life, as well as increase the capacity and quality of assets

2.2 Economic Growth

Economic growth is the process of improving the economic conditions of a country or region continuously towards a better state during a certain period. Besides that economic growth is also a process of increasing the production capacity of goods and services in an economy, so that economic growth is considered as an indication of the success of economic development of a country or nation. As an indicator of a success of economic development, economic growth is often used to measure the level of prosperity of the population. Economic growth leads to human development and that macro economic policies aimed at achieving sustainable economic growth should be maintained (Abraham & Ahmed, 2011). Increasing productivity of goods/ services in a country/government means that the country's economy is getting better. This has an impact on the decline of unemployment rate, and on the other hand an increase in the level of community income means an increase in the welfare of society.

2.3 Community Welfare

Economic development is one of some ways to improve community welfare, which is a series of activities carried out by the government together with all levels of society to achieve a better life. The poverty level and human development index (HDI) are two indicators to determine the level of community welfare. HDI measures the level of physical and non-physical quality of the population, namely health, education level and other economic indicators. To measure poverty level, the concept of the ability to fulfill basic needs is used. In this approach, poverty is seen as an economic inability to meet basic food and non-food needs. So the poor people are people who have an average per capital expenditure below the poverty line.

Based on the description above, the research hypothesis is formulated as follows:

H_1: Capital expenditure affect to economic growth in Indonesia in the 2012-2016 periods

H_2: Capital expenditure affect to community welfare in Indonesia in the 2012-2016 periods

H_3: Economic growth affect to community welfare in Indonesia in the 2012-2016 periods

H_4: Capital expenditure and economic growth affect to community welfare Indonesia in the 2012-2016 periods

3 RESEARCH METHODOLOGY

This study used the entire population of 34 provinces in Indonesia with the 5 years of research data (2012-2016). Variables of this research are government capital expenditure, economic growth, and human development index (HDI). Multiple regression analysis is used to test and analyze the effect of growth and capital expenditure on HDI by using Eviews 9 program. The equation of regression is as follow:

(1) $EG = \alpha + \beta_1 LNGE + \varepsilon$

(2) $HDI = \alpha + \beta_1 LNGE + \beta_2 EG + \varepsilon$

Notes: ED = economic growth proxy by Gross Domestic Product; LNGE = logarithm natural of capital (local government) expenditure; HDI = community welfare, proxy by human development index)

4 RESULT AND DISCUSSION

4.1 Result

From the results of the study it can be seen that for periods of 2011-2017 the province with the highest economic growth is Central Sulawesi with an

average index of 9.55, followed by Southeast Sulawesi with an index of 8.03, and then by West Sulawesi with an index of 7.96. The province with the lowest index was East Kalimantan with an index of 2.44, followed by Aceh with a 2.58 of index, and then Riau 2.81.

HDI is a comparison of life expectancy, literacy, education, and living standards for all countries throughout the world. The HDI is used to classify whether a country is a developed country, a developing country, or a backward country and also to measure the influence of economic policies on quality of life of people in a country. From the data, it can be seen that the highest human development index is owned by DKI Jakarta province, followed by DI Yogyakarta, and the province of Riau Islands. The lowest of human development index occurs in the provinces of North Kalimantan, Papua, and West Papua.

From the data (Table 3), it can be seen that the greatest local government capital expenditures (average) is held by DKI Jakarta province, followed by East Kalimantan, and Papua. While the lowest local government capital expenditures (average) is held by Bangka Belitung province, and then followed by Gorontalo, and Bengkulu.

The statistical analysis obtained the results for the three panel data models, namely: Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The three panel data models are then tested to get the best model through these 3 following tests: 1) Chow Test , 2) Hausman Test, and 3) Lagrange Multiplier Test (LM Test)

Chow test is a test to determine whether the Common Effect or FEM is the most appropriate to be used in estimating the research panel data. Model selection is done by comparing the value of F-statistics (F_{stat}) with F-table. If the F-statistics result is greater (>) than F-table, the selected model is FEM. If F-statistics is smaller (<) than F-table, the selected model is CEM. The Cross-section F-value of the Chow test above obtained a value of 437.5378. F-table values from numerator (dF-1) and denumenator (dF-2) at α: 5%, is 1.5464. From the results of the Chow Test above it can be concluded that F-stat is greater than F-table (437.5378 > 1.5464), so the model chosen from this Chow test is FEM.

The Hausman test was conducted to test whether the selected model for analyse research data using the FEM or REM. If value of Chi Square statistics > Chi Square table then the model used is FEM. Whereas if Chi Square statistic < Chi Square table

then the chosen model is REM. In this study the value of Chi Square calculated/statistic was obtained at 5.5711. While the Chi Square table (df = 2, α = 0.05) is 5.9915. Based on the Hausman test, the Chi Square statistics (5.5711) shows that the value is smaller than the Chi Square table (5.9915), then the best model for Hausman test is REM.

Lagrange Multiplier (LM) is a test to find out whether the REM or the Common Effect (OLS) model is the most appropriate to use. The basis of the selection is to use a calculated Chi Square/statistical value compared to the calculated LM value. If LM counts > the critical value of chi-squares statistics, the model used is the Random Effect, and vice versa if LM counts < critical value of chi-squares statistics, then the right model for panel data regression is the CEM.

Based on LM statistics obtained that is 282.8001, greater than Chi Square statistic of 5.5711 then the selected model of the LM test is REM.

From the results of the 3 above tests, it can be conclude that the best model is REM.

Estimation Equation from REM:

$$HDI = \alpha + \beta_1 LNGE + \beta_2 EG + \varepsilon$$
$$HDI = 27.8466288389 + 1.47011327607 * LN\_GE - 0.0104448476419 * ED + e$$

From the above equation can be stated as follows. In general, government capital expenditure variables (X1) have a significant positive effect (coefficient = 1.4701) on public welfare which is represented by human development index (Y) with p-value of 0.0000. This means that every increase of 1 unit (one hundred billion IDR) in government capital expenditure will increase 1.4701 points of the human development index. For other variables, economic growth (X2) does not affect the human development index. However, together all variables, namely government capital expenditure and economic growth affect the human development index. This can be seen from the p-value of F-statistic of 0.0000, which is smaller than α (5%).

In this study, the result of the coefficient of determination (R^2) is 0.2976 or 29.76%. The coefficient of determination (R^2) reflects 0.2976 or 29.76% of the human development index can be explained by the variable government capital expenditure, while the remaining 70.24% is explained by other variables outside this study.

From the results of the selected output model can be calculated and interpreted the individual effect value (C_i) of the selected model (Random Effect Model). This individual effect value shows the sensitivity of each regional (provincial) government.

The sensitivity of each province can be calculated by adding the individual effect value to the value of the intercept. The greater the results of the calculations obtained, the more sensitive the local (provincial) government, on the contrary the smaller the results of the calculations obtained the more insensitive the local (provincial) government. From Individual Value Effect Model Random Effect, it can be seen Bangka Belitung Province has the highest intercept value, namely 11.8761 while West Papua Province has the lowest intercept value of -7.2965. This means that, if it is assumed that all independent variables have no influence (ceteris paribus), Bangka Belitung Province has the highest human development index, while West Papua Province has the lowest human development index

4.2 Discussion

The results of this study indicate that government capital expenditure has a significant positive effect on the human development index. Capital expenditure is used to finance expenditures made by the government in order to provide services to the community. This government expenditure is a purchase/ procurement or construction of a fixed asset that has a value of more than one year, such as land, equipment and machinery, buildings and buildings, roads, irrigation and networks, and other fixed assets.

Each province has different types, amounts and values of fixed assets. This is related to the policies and work plans (short and long term) established by the regional government. The capital expenditure structure needs attention, because not all capital expenditures have an impact on public services. Some types of capital expenditure which generally have an impact on public services are capital expenditures for infrastructure development, education and health buildings.

The Human Development Index (HDI) measures the level of physical and non-physical quality of the population, namely health, education level and economic indicators. Therefore, the capital structure is considered as government capital expenditure which influences human development. The results of this study support the study conducted by Mirza (2011) and Arini (2016) before.

Economic growth is a picture of the total output of goods and services from the input function of production units used in an area within a certain period. In practice, the value of GRDP is often used as a macroeconomic indicator in measuring the level of economic growth by comparing the increase/decrease in the value of a particular year's GRDP with the previous year. Economic growth shows the development of a region's financial condition. The human development index is the level of the physical and non-physical quality of the community which is not only seen from the economic side but also from the issues of education and health, therefore in this study it can be seen that the results of the study indicate that economic growth has no effect on the human development index.

As mentioned earlier, capital expenditure shows expenditure allocations set by the government for the provision/development of regional government assets. The capital expenditure structure shows the amount of expenditure allocated to each fixed asset. For this as a managerial implication, the government needs to establish policies not only to achieve the target of increasing economic growth but also the target of increasing human development because economic growth itself is not sufficient to improve the quality of human resources, especially in the aspects of education, health and community income

5 CONCLUSIONS

From the results of this study it can be concluded that government capital expenditure and economic growth together influence the welfare of the community. But partially, only capital expenditure has a significant positive effect on people's welfare, while economic growth shows no influence

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