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Email: fauzia.sahi@yahoo.com

The Impact of Government Infrastructure Spending on Economic Growth and Poverty in Gorontalo Province

Destin Fauzia Sahi[1], Muhammad Amir Arham[2], Ivan R. Santoso[3]

Faculty of Economics, Gorontalo State University[1,2,3]

Abstract. *This research aims to analyse the impact of government infrastructure spending on economic growth and poverty in Gorontalo Province. This research uses datasets on government expenditure, economic growth, and poverty rate from Central Statistics Bureau (Badan Pusat Statistik, BPS), Directorate General of Fiscal Balances Ministry of Finance. This research uses panel data regression in 5 regencies during 2013-2017 in Gorontalo Province. The main results of this research show that (i) public works has negative and insignificant impact on economic growth; (ii) the public housing sector has a negative and not significant impact on economic growth; (iii) the transportation sector has a positive and insignificant impact on economic growth; (iv) the public works sector has a negative and not significant impact on poverty; (v) the public housing sector has a positive and insignificant impact on poverty; (vi) the transportation sector has a negative and not significant impact on poverty.*

Keywords: Economic Growth; Poverty; Infrastructure; Government Spending.

Economic growth became the main indicator that portray the level of economic development. It is evident that high and stable level of economic growth portrays sustainable economic development. Moreover, higher economic growth may boost economic productivity that will further solve problems of poverty.

However, it is evident that economic growth fails to reduce or alleviate poverty over the past decade. Previous studies stated that despite the increase in economic growth, few countries face the consequences of poverty trap. Poverty trap is referred to a condition where the people who lives below the minimum standard of living simply unable to get out of poverty due to its problematic association with socio-economic aspects, such as education and health.

In accordance to that, this research focuses in Gorontalo Province. Gorontalo province currently faces the issue of inequality, poverty, with low level of economic growth. In addition, Gorontalo also faces the problems of disparities and

inadequate access on infrastructure services.

Furthermore, in order to solve such problems in Gorontalo, the government has determined eight Advanced Programs. One of the Advanced Programs includes infrastructure development to achieve equality, to improve quality of life, and connectivity between regions, which in turn will open up employment opportunities, facilitate the growth of the industrial sector, small medium enterprises, agriculture, and mining which leads to improved welfare and poverty alleviation.

Economic growth of Gorontalo Province fluctuates during 2013-2017 and reaches 6% in 2017. While it is evident that poverty rate in Gorontalo Province reaches 17,65% in 2017 (BPS, 2017). Despite high level of economic growth, poverty rate in Gorontalo Province is slightly higher.

Based on the explanation above, this research would like to investigate the impact of government infrastructure spending on economic growth and poverty in Gorontalo Province.

LITERATURE REVIEW
Economic Growth

Economic growth is an economic improvement in terms of an increase in per capita income in in the long run (Boediono, 1995). Hence, the percentage of output growth must be higher than the percentage of population growth. There are three main factors in the economic growth of each nation. First, capital accumulation, which contains all forms or types of new investments that are invested in land, physical equipment, and capital or human resources. Direct productive investment must be supplemented by supporting investment called economic and social infrastructure investment. Examples are road construction, electricity supply, clean water supply and sanitation improvement, construction of communication facilities and so on, all of which are needed in order to support and integrate all productive economic investment.

Second, population, which in turn increases the labour force. Traditional increase on population and labour force is considered to have positive and significant impact on economic growth.

Third, technological progress, such as neutral advances in technology, labour advances in technology, and capital advances in technology.

Poverty

Poverty is a socio-economic condition where a person is unable to fulfil

basic needs (Ritongga, 2003). BPS (2010) uses the concept of the ability to satisfy basic needs (basic need approach) to measure poverty. With this approach, poverty is seen as an inability from the economic side to satisfy basic needs of food and non-food which are measured in terms of expenditure. Hence, poverty is seen as an economic inability to meet basic food and non-food needs.

The poor are further defined as those whose income (expenditure approach) is less than the minimum standard of living. The need for a decent life is further translated as the amount of money that can satisfy the needs of food consumption that is equivalent to 2100 calories a day, housing, clothing, health, and education. The amount of money is then referred to as the poverty line.

Government Infrastructure Spending

Infrastructure is an important factor of production activities and can boost economic activities in various ways, both directly and indirectly. Infrastructure is not only a production activity that will create output and employment opportunities, but the existence of infrastructure also has an impact on the efficiency of economic activity in other sectors.

RESEARCH METHODOLOGY

This study aims to analyse the impact of government spending on infrastructure (such as housing, public works, and transportation) on economic growth and poverty. This study uses secondary datasets on government spending, economic growth, and poverty for 5 districts and 1 city in Gorontalo Province. The secondary datasets were acquired from BPS, Ministry of Finance of the Republic of Indonesia, and related agencies, and other sources. The selected time period in this study is five years, which includes the datasets from 2013 to 2017 in the panel data analysis.

Panel Data Model

This research uses panel data regression model with *fixed effect model* (FEM). We develop two panel data model in estimating the impact of government infrastructure spending on economic growth and poverty. First panel data model used in this research is written in Equation 1 as follows:

$$Growth_{i,t} = \alpha_0 + \alpha_1 PR_{i,t} + \alpha_2 PU_{i,t} + \alpha_3 PERHUB_{i,t} + \varepsilon_{i,t} \quad (1)$$

where $Growth_{i,t}$ is economic growth of regencies i during period t; $PR_{i,t}$ is government infrastructure spending on housing of regencies i during period t; $PU_{i,t}$

is government infrastructure spending on public works of regencies *i* during period *t*; $PERHUB_{i,t}$ is government infrastructure spending on transport of regencies *i* during period *t*.

Second panel data model used in this research is written in Equation 2 as follows:

$$Poverty_{i,t} = \beta_0 + \beta_1\,PR_{i,t} + \beta_2\,PU_{i,t} + \beta_3 PERHUB_{i,t} + \varepsilon_{i,t} \quad (2)$$

where $Poverty_{i,t}$ is poverty rate of regencies *i* during period *t*; $PR_{i,t}$ is government infrastructure spending on housing of regencies *i* during period *t*; $PU_{i,t}$ is government infrastructure spending on public works of regencies *i* during period *t*; $PERHUB_{i,t}$ is government infrastructure spending on transport of regencies *i* during period *t*.

RESULTS AND DISCUSSION

Average rate of economic growth of Regencies and City in Gorontalo Province reaches 8.71 percent during 2013-2017. The panel data regression results show that public works spending has negative impact on economic growth, where a percent increase of public works spending will reduce economic growth by 0,22 percent.

Public housing spending has negative impact on economic growth, where the increase of 10 percent of public housing spending will reduce economic growth by 0.004 percent. While on the other hand, transport spending has positive impact on economic growth, where 10% increase in transport spending will increase economic growth by 0.13 percent. However, transport spending may have insignificant impact on economic growth.

The second panel data model derived different result. The average poverty rate of regencies and city Gorontalo Province during 2013-2017 reaches 23.05 percent. Public works spending has negative impact on poverty rate, which means that 10 percent increase in public works spending will reduce poverty rate by 0.21 percent. However, public works spending may have insignificant effect on poverty.

Public housing spending shows positive but insignificant impact on poverty, where 10% increase of public housing spending will increase poverty rate by 0.03 percent. Whereas transport spending shows negative impact on poverty rate, where 10 percent of increase in transport spending results in the reduction of poverty rate by 0.28 percent.

Email: fauzia.sahi@yahoo.com

CONCLUSION AND RECOMMENDATION

Based on the explanation above, several conclusions regarding this research are as follows: (i) government infrastructure spending in regencies and city in Gorontalo Province mostly has insignificant impact on economic growth and poverty rate; (ii) public works and public housing both has negative impact on economic growth and poverty rate; (iii) transport spending has positive impact on economic growth, but has negative impact on poverty rate.

Based on the conclusion, this research further recommends that each regency and city in Gorontalo Province focuses on infrastructure development through government infrastructure spending. Government is also recommended to measure physical realization of budget and programs with high quality outcomes.

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Email: fauzia.sahi@yahoo.com

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