East Asian Journal of Multidisciplinary Research (EAJMR)
Vol.2, No.5 2023: 1933-1956

Government Expenditure according to Functions and Economic Growth in Indonesia

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ARTICLEINFO

Keywords: Government Expenditure, Economic Growth, Autoregression Vector

Received : 05, March
Revised : 10, April
Accepted: 15, May

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ABSTRACT

The purpose of this study is (1) To analyze the causal relationship of government spending based on functions with economic Growth in Indonesia and (2) To analyze the impact of government spending based on functions on economic growth. The data used in this study is panel data for all provinces in Indonesia from 2005 – 2020. The data collection technique used is a documentation technique, with all data collected being secondary data. These data were obtained from the Central Bureau of Statistics (BPS), Ministry of Finance. Research results show that variable financial spending has a positive relationship between Economic Growth, variable government spending the Education function has a positive relationship between Economic Growth and government spending on the Education function, Variable government spending on housing and public facilities has a positive relationship between Economic Growth, variable government spending on housing and public facilities has a positive relationship between government spending on housing and public facilities with Economic Growth, variable spending government economic function has a positive relationship between Economic Growth and government spending the Economic function, Variable government spending the tourism function and culture has a positive relationship between Economic Growth, variable government spending public service function has a positive relationship between government spending public service function with Economic Growth , variable government spending function order and security has a positive relationship between Economic Growth.

DOI prefix: https://doi.org/10.55927/eajmr.v2i5.3957
ISSN-E: 2828-1519
https://journal.formosapublisher.org/index.php/eajmr

INTRODUCTION

Keynes' view of the importance of the government's Role in the economy through fiscal policy in stabilizing poor economic conditions and in stabilizing investment that has decreased, the government regulates its spending in supporting economic improvement (Pressman, 2006: 140). Likewise, Musgrave revealed that the Role of government is needed in increasing economic growth and improving a decent standard of living, where the function of government here is to function allocation, function distribution, and stabilization functions. These functions are intended as a form of government service to the public (Musgrave and Musgrave, 2003: 7).

Government spending issued by the government is in accordance with government policies in running the economy, which is reflected in the State Revenue and Expenditure Budget (APBN) and the Regional Revenue and Expenditure Budget (APBD). According to the Regional Financial Management Guidelines Regulation of the Minister of Home Affairs Number 13 of 2006, which has been revised by the Minister of Home Affairs Number 21 of 2011, the classification of government expenditure according to its function is divided into 9 (nine) functions, namely, the functions of health, education, housing and public facilities, public services, economy, tourism and culture, order and peace, environment, and social protection.

That an increase in the portion of regional government spending will stimulate economic growth that focuses on improving public services in the education and health sectors as well as infrastructure, expenditures in this sector are required in regulations as mandatory spending. (Sumardjoko, 2020). According to government activities, it shifts from providing infrastructure to spending on social activities such as welfare and health service programs (Musgrave and Musgrave, 2003:9).

As in the empirical literature which analyzes the problem of government spending (Arin et al., 2019) that there is an impact of fiscal policy on economic growth, so does the empirical study (Alponso et al., 2012) which emphasizes public spending such as education and infrastructure in the long term. The long-term effect on economic growth.

Figure 1. The proportion of spending per function in 2018 – 2020 in Indonesia

Source; Indonesian Central Bureau of Statistics

It can be seen in the graph that central government spending changed in 2020 when compared to the proportions of previous years. One function that has experienced an increase in the public service function, from 27% in 2019 to 38 percent in 2020. Likewise, the proportion in the social protection function, which was originally 12 percent in 2018, has increased to 13 percent in 2020. This is due because, in 2020, the government will focus on handling the impact of the Covid-2019 pandemic (Reference, 2020: 2)

Some components of public spending are seen as more productive than others in terms of their impact on economic activity, and a country can improve its economy by changing the level of composition of public spending (Devino et al., 2019). Central and local government spending includes military equipment, services, roads, and other expenses that do not include individual transfer payments such as social security and welfare (Mankiw, 2003: 253).

Controversy in the literature regarding whether government spending has an impact on economic growth or economic growth affects government spending. As is the opinion of Keynes' theory and Wagner's theory, which is contained in the empirical literature (Sedrakyan et al., 2019; Bayrakdar et al., 2015; Irandust, 2019), several expenditures that increase continuously, such as health, education, defense are caused by economic activity, so it is said that government spending is affected by changes in GDP.

Table 1. Growth Rate of Gross Regional Domestic Product at Constant 2010 Prices by Province (Percent)

	Year		
	2018	2019	2020
INDONESIA	5,17	5.02	-2.07

Source; Indonesian Central Bureau of Statistics

Table 1 shows that the GRDP growth rate in 2018 and 2019 was 5.17 percent and 5.02 percent, then decreased in 2020 to -2.07 percent. This was related to the condition of the Covid-19 outbreak that hit globally. So that various efforts have been made to increase growth by increasing government spending in various functions, as shown in Graph 1.

Differences in statistical findings lead to an interest in conducting empirical research to examine the relationship between government spending

and economic growth (Wu et al., 2019; Narayan et al., 2012; Narayan et al., 2008) found a two-way relationship between GDP and government spending, Wagner's theory occurs in developed/high-income countries, while in low-income countries, on the contrary, government spending causes economic growth. The assumption is that government spending activities will increase as a result of economic growth in a long-term trend, according to Wagner (Wagner, 1883). Negative coefficient results on government spending, especially infrastructure, have no effect on growth in empirical studies (Shi et al., 2017).

According to economist Wagner, government spending is increasing over time, related to the law *of ever-increasing state activity* (the law is always increasing the Role of government). Based on a comparison of the national products of European countries such as the United States and Japan, in the 19th century, government activity in the economy tended to increase (Azwar, 2016).

The form of efforts made by the government to strengthen fiscal decentralization in 2019 is that in the RAPBN, the allocation of transfer funds increased to 9% of the estimated realization in 2020. It is hoped that the planned transfer of funds will independently carry out the authority delegated to all sectors. The inability of the regions to fulfill their own fiscal so that a third of net national income is transferred to local governments. Thus the regional share is almost doubled in overall government spending (Sidik, 2002: 20).

The share of regional government spending has changed a lot after decentralization in Indonesia. In 2000 the share of local government spending was 16.19%, but this portion increased sharply to 27.31% in 2001. In subsequent years, this portion has been continuously increasing. Increased to around 40% in 2007–2011, but decreased in 2005 and 2006. The average post-decentralization share of local government spending is 36.24 %, slightly higher than OECD countries and more than double that of developing countries. (Harjowiryono, 2011).

As with infrastructure spending in the previous two years, APBN infrastructure spending continues to increase. Infrastructure spending was recorded at 14.2 % of total state spending in the 2015 FY APBN. Furthermore, the infrastructure budget increased to 15.2 % of state spending in the 2016 FY APBN. And in the 2017 FY APBN, infrastructure spending 2017 continued to increase to 18.6 % from state spending (Sumardjoko, 2020). In fact, even in the previous year, expenditure developments in the three sectors, namely education, health, and infrastructure, experienced an increase of Rp. 45 trillion, Rp. 12 trillion, and Rp. 27.5 trillion in 2006, and in 2008 it increased to Rp. 74.9 trillion, Rp. 23.7 trillion, and Rp. 46.8 trillion. The increase in economic growth also occurred in line with the increase in spending from 4.7 percent of economic growth to 5.42 percent (Prasetya et al., 2011).

These conditions indicate that there is an influence of government spending on improving macroeconomic indicators such as economic growth. As in the theory of government spending with economic growth, namely, Rostow's theory regarding the theory of the development of government spending for the initial stage, a large percentage is needed for government

investment. At this stage, the government provides infrastructure such as spending on education, health, infrastructure, transportation facilities, and so on. The expected implication is that government spending through investment in facilities and infrastructure is expected to boost output (Mangkoesoebroto, 2010).

Likewise, the theory of government spending put forward by Musgrave explains that the early stages of economic development require large public spending. This expenditure is intended to strengthen investment in road infrastructure, health, education, and housing. In the next stage, the Role of private investment is more developed than state spending to boost the rate of economic growth. The final stage of the movement of economic growth is marked by government spending that is still needed but is more focused on welfare matters such as the availability of social security (Musgrave and Musgrave, 2003: 10)

The impact of Covid-19 has caused a global recession resulting in many people being unable to work and at risk of losing their income. If left like this, it will disrupt the country's financial stability. Reforms were carried out in various fields to overcome the global crisis, including the determination of the Macroeconomic Framework (KEM) indicators and the Main Fiscal Policy Indicators (PPKF), which focused on fundamental economic recovery efforts.

Fiscal policies related to priority programs are directed at strengthening the quality of human resources, accelerating infrastructure development, social protection related to demography, and anticipating population aging. The quality of fiscal decentralization in encouraging regional independence and anticipating global uncertainty will lead to a setting or planning a budget deficit of 1.76 percent of GDP. Research conducted by Arin et al. (2019) showed that there is an impact of fiscal policy on economic growth, productive government spending has a strong growth effect in the medium to long term, but in the short term, the effect has not been seen.

The management of fiscal policies and public finances needs to pay attention to the global economy and its risks. In 2018 and 2019, the world economy is predicted to grow from 0.2 % to 3.9%. However, there are still challenges and risks to be faced in 2019 with the presence of Covid-19. In the current conditions, economic growth has decreased to -3.0. This condition also led to a budget deficit of Rp. 682.1 trillion because state revenues are not comparable to government state expenditures. Inequality between regions is still in the moderate category above 0.39 (Gini ratio), it is possible that in urban areas, the inequality can be much better nationally, but income inequality needs to be improved equity. So that in managing issues, fiscal policy is needed that is linked to the implementation of the State Budget because economic issues related to economic growth are still in an *upward trend,* and the engine of growth is increased investment in terms of infrastructure development, government spending, and tax revenues.

Various studies on government spending on economic growth are more directed towards health, education, and infrastructure spending, but not much has discussed the linkages of government spending based on functions such as

government spending on the economic function, the function of housing and public facilities, the function of public services, the function of tourism and cultivation, the function of public order. And security, as well as social service functions, and in addition to the functions of education health. Based on this explanation, this study tries to analyze both theoretically and empirically how the causality of government spending is based on function and economic growth, using the Granger panel test and the VAR model in Indonesia.

THEORETICAL REVIEW

Public Economic Theory

Public economics (*public economics*) can be interpreted as a branch of economics that examines public affairs, general affairs, the affairs of many people, community affairs, government affairs, or state affairs (Khusaini, 2019:46). The public economy in terms of meeting the needs, desires and improving the quality of life or society, so that the public economy is defined as a national economic activity to achieve the welfare of society which is responsible and implemented by the state, in this case, the government. The relationship with the provision of public goods will be stated in the preparation of the budget by the executor, especially in spending on the public budget (Idris, 2018: 5)

Various theories regarding public goods that discuss procurement and financing, from these theories, have weaknesses and strengths so that each theory complements the other. There are several public goods theories, including Pigou's theory, Lindhl's theory, Samuelson's theory, and budget allocation theory. This study leads to the theory of budget allocation, where the function of budget allocation is to make sure that economic resources are carried out efficiently so that there are activities that can be added or reduced in preparing goods or services. In this case, the government knows the public goods that people want, and regulation of public goods for sufficient quantities and affordable prices is very necessary. The government, in carrying out its functions, makes various regulations to create a business and investment climate so that it contributes to economic growth (Khusaini, 2019:50).

The argument is that Keynesian Economics is a theory of total spending in the economy (aggregate demand) which has an impact on output and inflation. According to Keynesian economics, it holds the principle of developing the economy to work, namely (Ismail, 2016: 79)

1. Total spending is affected by a number of decisions in both public and private economics. The public decisions in question are those related to monetary and fiscal policies such as expenditures and taxes. There was a difference of opinion where the Keynesian saying that monetary policy could not overcome the occurrence of economic conditions that were experiencing a crisis was denied by the monetarists who said that fiscal policy was also powerless in dealing with an increasingly bad economic situation. However, monetarists and Keynesians, over time, say that both fiscal and monetary policies affect aggregate demand.
2. According to the theory of Keynesian that, changes in aggregate demand have a short-term effect on real output and employment, not on prices.

Keynesianism believes that what is true in the short term cannot be summed up in the long term. Keynes believed that because of sticky prices, fluctuations in the components of consumer spending, investment, and government spending were the cause of fluctuating output.

3. Prices and wages respond to changes in supply and demand, especially in labor, causing a shortage of surplus.

Keynesians don't advocate what's known as *fine running*, which is adjusting government spending, taxes, and money to the budget every few months to keep the economy at full employment. Because there is a lag between the times that causes a change in policy, a lag causes a change in policy to take action. In the understanding of new Keynesian theories, recessions are caused by some economic market failures and then the new Keynesian reasons for the importance of government intervention in the economy, such as monetary or fiscal policy. Of course, both monetary policy and fiscal policy offered will see the achievement of targets in increasing economic Growth (Ismail, 2019: 79).

The government's Role is needed to increase economic growth and improve the standard of living of a decent population. As for the functions of the government, it is explained that the functions of the government are an allocation function, a distribution function, and a budget function. In this case, the relation to the function of the budget is public goods as a form of government service (Musgrave and Musgrave, 1993: 7),

Keynes' view of the importance of the government's Role in the economy through fiscal policy is related to stabilizing the level of investment when a country is in bad condition. In other words, it needs to stabilize investment that has decreased. The need for the government to regulate spending in support of economic improvement so that Keynes' view emphasizes more on the selection of fiscal policies related to the function of the budget in overcoming poor economic conditions (Pressman, 2006: 140).

Government Spending Theory

Government *expenditure* in the macroeconomic context is one of the variables forming the Gross Domestic Product (GDP), which is mathematically formulated as Y = C + I + G + (X -M). In this mathematical equation, it can be seen how the circular flow of money through the economy is that households receive income and use it to pay taxes to the government, consume goods and services and also save through the money market. Sales of products and services generate income for the business, which is then used to pay for the inputs required for manufacturing. To purchase investment products like homes and factories, communities and businesses borrow money on the financial markets. Tax revenue will be received by the government, which will then utilize it to fund expenditures. When tax collection exceeds spending, the difference is converted to public savings and is referred to as a surplus, or the opposite is true and the difference is referred to as a deficit (Mankiw, 2003: 40).

Economists and decision-makers do not only look at the output of goods and services, but there are also various alternatives, such as the

components contained in GDP, namely consumption (C), investment (I), government purchases (G), and net exports (NX). Related to government purchases in question are goods and services purchased by the central government and regional governments, including military equipment, services, roads, and other expenditures. However, it does not include individual transfer payments such as social security and welfare (Mankiw, 2003: 253).

In theory, government spending is a component of fiscal policy, with higher spending resulting in higher planned spending for all levels of income. Fiscal policy has a *multiplier effect* on income because according to the consumption function C = C (YT), that is, higher income will lead to higher consumption (Mankiw, 2003: 253).

1. Musgrave and Rostow's theory

   Musgrave's view of the growth of government expenditure in absolute terms has increased, but when it is linked to population and to per capita expenditure, expenditure in absolute terms has decreased. Then Musgrave developed his argument regarding the relationship between growth and expenditure. After the inclusion of the population variable in determining the amount of government spending, there has been an increase in productivity. The argument from Musgrave's theory is that the relationship between the ratio of total government spending to GNP increases. This ratio will continue to increase until it reaches a constant level. The level of increase varies in each decade, so the law of increasing the share of expenses from Wagner occurs if it takes a longer decade (Musgarave and Musgarave, 2003: 124).

   Growth for this type of government expenditure can fluctuate due to several factors, namely the growth factor in per capita income, technical (technology), population change factors, the relative cost factor of public services, and urbanization factors. However, this expenditure must be distinguished as expenditure on goods and services and expenditure for transfers (Musgrave and Musgrave, 1993:122).

   Rostow's theory of the development of government spending is divided into three, namely: early, intermediate, and advanced stages. In the early stages, a large percentage is needed in preparing facilities and infrastructure such as education, health, infrastructure, and others, because government investment is very necessary for total investment. At the intermediate stage, Rostow believes that the Role of private investment is getting bigger in increasing economic growth. For the advanced stages, economic development from social spending activities shifts to the provision of infrastructure and community service programs.

2. Theory of Adolph Wagner

   In the 1880s, the German economist Adolph Wagner expressed the "law of increasing government spending". Increased spending is used to anticipate pressure on the progress of a modern industrialized modern society politically (legally), as well as social considerations (education, recreation, culture, etc.) in the future. The increase in the portion of the

government must be considered and estimated in relation to the economy (Musgrave and Musgrave, 2003: 122).

Previous Research Review

As in the study (Arin et al., 2019) use the Bayesian model Averaging (BMA) approach to revisit the growth effect of fiscal policy, resulting in the influence of fiscal policy on economic growth. In this case, government spending has a strong effect in the long term, but in the short term, it has no impact or no visible effect. Likewise, in research (Alponso et al., 2012), the results of his study are the need for four pillars, namely consumers, companies, academics, government, and more emphasis on public spending. Long-term economic growth is highly dependent on basic and sustainable public investments, namely education and infrastructure.

Related to fiscal policy, the results of an empirical study (Kim, 2019) in relation to Government Spending Policy Uncertainty and Economic Activity: US Time Series Evidence from an SVAR-Based Model that GDP is not significant to government spending, but private investment, markup, statistically significant because in the first shock, there is a spending policy restriction. However, when there is uncertainty over government expenditure policies, the response from private investment and consumption becomes insignificant.

There is controversy in the literature about whether government spending has an impact on economic growth or whether economic growth affects government spending. As are the opinion of Keynes's theory and Wagner's theory, which is contained in the empirical literature (Sedrakyan et al., 2019) discussing the *Wagner law versus Keynes hypothesis*, reviewing the debate on whether government spending has an impact on economic growth and looking at the causal relationship between government spending and economic growth. By using the Granger causality test methodology, VAR, IRF, and FEVD. There are different results in the country where the research is conducted, some are related in one direction, and some are related to two-way causality. If we return to Wagner and Mugrave's law that there are several expenditures that increase continuously, such as health, education, and defense expenditures which are caused by growth in economic activity.

Public spending on growth has been a long-standing debate and a broad topic of discussion for economists and policymakers. The assumption is that government spending activities will increase as a result of economic growth in a long-term trend, according to Wagner (Wagner, 1883). Regarding the causal relationship, according to Wagner, it starts from national income to public spending. While the perspective built by Keynes in the short term, an increase in government spending has an impact on demand and becomes an effect on increasing income.

If it is associated with the macro concept that GDP = C+I+G+(XM), it is made into a mathematical equation to become GDP = f (G), which means GDPi = b0 + b1 Gi where b0 > 0 or 0 < b1 < 1. The value of b1 is expected to have a positive relationship when government spending on the public increases. Several studies in various countries found the coefficient (b1) =

0 and b > 0 statistically significant. But there are also those who find b1 < 0, government spending increases, but GDP decreases. Or in other words, there are significant, and some are not significant. It is this different from the empirical results that later emerge Wagner's law.

According to Wagner's law, the equation formed is Gi = b0 + b1 GDPi, where GDP is economic activity. Several empirical studies have found that the coefficient (b1) is positive, b1> 0, which means it is significant. That is, when GDP increases, public spending increases. Empirical studies that support Wagner's law and also see a two-way causality relationship between public spending to national income or vice versa, such as in empirical studies (Bayrakdar et al., 2015) *Testing the Validity of Wagner's Law: 1998-2004, The Case of Turkey,* uses the Grenger analysis to test the validation of Wagner's law in Turkey with the result that there is unidirectional causality from GDP to government spending, an increase in GDP causes government spending to increase, but government spending does not cause a relationship to GDP. In this case, it can be said that government spending is affected by changes in GDP.

Likewise with the study (Irandust, 2019) regarding *Wagner on government spending and national income: a new look at an old* IP relationship. The study was conducted in OECD member countries, using cross-sectional data, with the Granger test found results in the countries where the research was conducted that there were several countries where there was a two-way causality relationship, but there were also countries that had a one-way relationship, and there were also countries that had no relationship. either from government spending to economic growth or from economic growth to government spending. So that it can be said that this result is not fully supported by the amount of data.

Several studies are interested in testing with Granger panels, such as the study conducted by (Wu et al., 2019). How sensitive to the level of development is the effect of government spending on economic growth? There are 182 countries with several combinations of variables that are made to see the causality between government spending and economic growth. Countries are grouped into low, middle, and high-income countries. This grouping of countries found different results. For high- and middle-income countries, Wagner's law is found. In contrast, for low-income countries, the opposite is true. Namely, government spending causes economic growth.

If you look at the arguments formed, Wagner's law is supported by developed and middle-income countries, while for low-income countries, there are no significant results. In terms of the variables measured at the aggregate or per capita level in this study, it turns out that if it is linked to real GDP with real government spending, real GDP per population with real government spending, real GDP per population with real government spending per population, it will give the same results. Differ in low, medium, and high-income countries. It can be seen from the results of this study that Wagner's law applies to developed countries, while in developing countries, Wagner's law is still weak.

In an empirical study conducted (Narayan et al., 2012), The Granger panel was used in India to demonstrate Wagner's law using evidence from Indian state courts. Real GDP and real GDP per capita are the variables for economic growth, and the government expenditure chosen as the variable is real expenditure, capital expenditure, real consumption expenditure, real per capita expenditure, per capita real capital expenditure, and per capita real consumption expenditure. The results of the study show that Wagner's law is found in low-income states of India, where long-term and short-term causality is dominated by consumption expenditure, not capital expenditure, in contrast to capital expenditure, which appears to increase due to increased economic activity (GDP).

In previous empirical studies using country samples, however (Narayan et al. 2008) examined *Panel data, cointegration, causality, and Wagner's law: Empirical evidence from Chinese provinces*. The methodology used is panel data, cointegration, and causality. The study was conducted in China with the result between real GDP and real government spending according to Wagner's law. However, for the two-way relationship of real per capita GRDP and real government spending for the eastern, central, and western regions, there is causality in the short term.

(Shi et al., 2017) in his empirical study on *The Role of infrastructure in China's regional economic growth*, in China with the ECM methodology with panel data with the result that large amounts of infrastructure spending do not always have a rapid growth effect. The resulting coefficient is negative, so it can be said that spending too much on infrastructure does not increase economic growth. However, from this study, it is possible to further develop the expenditure relationship based on Wagner's law.

In contrast to the study conducted by (Prasetyo et al., 2019) in relation to the effectiveness of government spending on human development. By using the DEA (employment data analysis) approach in 81 countries with the results of several expenditure variables such as health, education, transfer funds, and subsidies as in several research countries, they were able to increase and stabilize HDI scores, but there were also several countries which were unable to stabilize their expenditures. Or increase the HDI value. The same relationship is also explained in Giammanco's study (2019) regarding the relationship between health spending and FDI (foreign direct investments) in Europe, where there is a relationship between health spending and FDI that is positively related.

Likewise, the empirical study conducted by Atmanti (2016), relating to the Effectiveness of Public Spending For Human Development in Some Central Java Districts During based on the DEA approach that there are several regions in Java where government spending is still not efficient, but some are already efficient.

Olaoye et al. (2020), in an empirical study on *Government spending and economic Growth in ECOWAS: An asymmetric analysis*, using a panel approach in 15 countries. The result of the approach used is that there is an asymmetry in the relationship between government spending and economic growth during the study period. There is a response of economic growth to government

spending shocks that vary according to the nature of the shock. More specifically, the cumulative effect of an expansionary government spending shock on economic growth is positive and statistically significant. Meanwhile, the cumulative effect of contractionary government spending has a negative and statistically significant effect but cannot have an impact on economic growth. So the findings in developing countries, according to this study, economic activity (economic growth) has increased spending, namely on capital spending (physical and human).

Based on the explanation of the theory and the results of empirical studies related to government spending and economic growth, which have various differences of opinion as in the theory of Keynes and Wagner. Later this study will lead to a causal relationship so that the theory from Keynes and Wagner and from several studies previously described can be proven in every province in Indonesia. The views of these two theories will lead to this study being analyzed in provinces in Indonesia because, from several existing empirical studies, it has been explained in several countries, be it developed countries, developing countries, or countries with high, middle, and low incomes. But there are also those who conduct studies in regions in a country and produce evidence of causality that varies.

From several empirical studies, Wagner's law can only be proven or used up to the provincial level in a country. The functions that can be developed are; $G_i^{prov} = f\ (PDRB_i^{Prov})$ Whereas GRDP increases, expenditure increases. The argument built is that the more the population, the circulation of economic activity will increase, and the increase in economic circulation will increase the demand for TK, which will also increase wages, so that it will increase taxes, such as taxes contained in the province. However, it is different from regencies and cities with the argument that there are policies/regulations related to taxes given to district/city governments, which of course, will vary in regional conditions or, in other words, the tax object is limited so that in regencies/cities expenditures are not related to economic activity,

According to Wagner, public spending is an endogenous factor referred to as a result, not a cause of economic growth. Meanwhile, according to Keynes, government spending is an exogenous factor that can affect economic growth. So from this difference and some empirical literature, a causality test is carried out with the Granger test as an empirical tool that can finally detect one-way or two-way causality from public spending to national income or vice versa (Sedrakyan et al., 2019).

METHODOLOGY

Model Specifications

The test used in this analytical study is the econometric model, namely the VAR (Vector Autoregression) model, with the first stage carrying out the Granger panel causality test. The choice of the VAR model is because it is able to answer the challenge of difficulties due to a structural model that refers to theory. In other words, the VAR model does not depend on theory (Nachrowi and Usman, 2006: 289). To find the reaction of the dependent variable or see its

impact on the VAR system using the *Impulse Reaction Function* (IRF) technique to provide shocks to the error (u) (Gujarati and Porter, 2012: 491).

Variable Operational Definition

Variable	Variable Description	Source
Economic Growth	Increase in per capita output of material goods within a certain period of time. The indicator used is the GRDP growth rate in each province.	Indonesian Central Bureau of Statistics
Shopping Health function	local (Provincial) government spending based on health function from 2005-2020.	Ministry of Finance
Shopping function Education	regional (Provincial) government spending based on education function from 2005-2020.	Ministry of Finance
Government spending for housing and public facilities	Realization of Regional Government (Provincial) Expenditure based on the function of housing and public facilities from 2005-2020	Ministry of Finance
Government spending is an economic function	regional (provincial) government spending based on economic function from 2005-2020.	Ministry of Finance
Government spending on tourism and cultural functions	Regional (provincial) government spending based on tourism and cultural functions from 2005-2020.	Ministry of Finance
government spending public service function	Regional (provincial) government spending based on public service functions starting in 2005-2020.	Ministry of Finance
government spending social protection function	Realization of local (provincial) government spending based on the social protection function starting in 2005-2020.	Ministry of Finance
government spending for the function of order and security	Regional (provincial) government spending based on order and security functions from 2005-2020.	Ministry of Finance

Methods of Data Collection

The data used in this study is panel data for all provinces in Indonesia from 2005 – 2020. The data collection technique used is a documentation technique, with all data collected being secondary data. These data were obtained from the Central Statistics Agency (BPS), Ministry of Finance.

Estimation Stages/Econometric Procedures

Model estimation for all provinces in Indonesia with analytical procedures. (Nachrowi and Usman, 2006: 290)

Step 1

To find out how the causal relationship between GRDP and government spending is based on function, two stages of regression are carried out:

$$PDRB_t = \sum a_i\, BK_{t-i} + \sum b_i\, PDRB_{t-j} + u_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$$BK_t = \sum c_i\, BK_{t-1} + \sum d_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$PDRB_t = \sum a_i\, BP_{t-i} + \sum b_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

$$BP_t = \sum e_i\, BP_{t-1} + \sum f_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

$$PDRB_t = \sum a_i\, \mathrm{BPPF}_{t-i} + \sum b_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots (5)$$

$$\mathrm{BPPF}_t = \sum g_i\, \mathrm{BPPF}_{t-1} + \sum h_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots (6)$$

$$PDRB_t = \sum a_i\, \mathrm{BE}_{t-i} + \sum b_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (7)$$

$$\mathrm{BE}_t = \sum i_i\, \mathrm{BE}_{t-1} + \sum j_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (8)$$

$$PDRB_t = \sum a_i\, \mathrm{BPB}_{t-i} + \sum b_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (9)$$

$$\mathrm{BPB}_t = \sum k_i\, \mathrm{BPB}_{t-1} + \sum l_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (10)$$

$$PDRB_t = \sum a_i\, \mathrm{BPPU}_{t-i} + \sum b_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots (11)$$

$$\mathrm{BPPU}_t = \sum m_i\, \mathrm{BPPU}_{t-1} + \sum n_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots (12)$$

$$PDRB_t = \sum a_i\, \mathrm{BPPS}_{t-i} + \sum b_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots (13)$$

$$\mathrm{BPPS}_t = \sum o_i\, \mathrm{BPPS}_{t-1} + \sum p_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (14)$$

$$PDRB_t = \sum a_i\, BPKK_{t-i} + \sum b_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots (15)$$

$$\mathrm{BPKK}_t = \sum q_i\, \mathrm{BPKK}_{t-1} + \sum r_i\, PDRB_{t-j} + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots (16)$$

This model describes:

a. GRDP in year t has a relationship with past GRDP and Health Expenditures.
b. Health function government spending in year t has a relationship with GRDP and health function government spending in the past.

Both government spending based on function and GRDP in this model are required as endogenous variables, so there are no exogenous variables. This model will later form the basis for the formation of the VAR model.

RESULTS

Stationary data

Table 1 stationary test data

Date: 10/03/22 Time: 08:58						
Samples: 2010, 2020						
Included observations: 11						
Autocorrelation	Partial Correlation		air conditioning	PAC	Q-Stat	**Prob**
. |***** |	. |***** |	1	0.751	0.751	8.0566	**0.005**
. |***. |	. **| . |	2	0.461	-0.235	11,431	**0.003**
. |** . |	. *| . |	3	0.216	-0.085	12,263	**0.007**
. | . |	. *| . |	4	-0.014	-0.180	12,267	**0.015**
. *| . |	. *| . |	5	-0.183	-0.080	13,063	**0.023**
. **| . |	. *| . |	6	-0.323	-0.175	16054	**0.013**
.***| . |	. *| . |	7	-0.417	-0.117	22,260	**0.002**
.***| . |	. | . |	8	-0.423	-0.034	30,794	**0.000**
.***| . |	. | . |	9	-0.368	-0.035	40,452	**0.000**
. *| . |	**. |* . |**	**10**	**-0.200**	**0.168**	**46,167**	**0.000**

a. The value of the autocorrelation coefficient (large AC column) is 0.751 (values between -1 and +1) and decreases slowly.

b. The value of the Q statistic up to leg 10 is 46.167> from the value of Kai Square X^2 43,77

c. The probability value from leg 1 to leg 20 is close to zero, less than alpha 5%, which means that the **null hypothesis is rejected (data is stationary).**

VAR (Vector Autoregressive) Models

$PDRBt = 60509.56\ BKt - i - 0.294065\ PDRBt - j + uit$ …… .(1)

From the results of equation 1 above, it can be seen that the financial expenditure variable (BK) has a positive relationship between GRDP and financial expenditure, namely 60509.56, meaning that government expenditure for the health function has a unidirectional causality relationship (if economic growth increases, government expenditure for the health function also increases). with economic Growth in Indonesia

$BK_t = 0.033955\ BK_{t-1} + 5.46\ PDRB_{t-j} + u_{it}$ ……..(2)

From the results of equation 2 above, it can be seen that the financial expenditure variable (BK) has a positive relationship between GRDP and financial expenditure, namely 5.46, meaning that government expenditure for the health function has a unidirectional causality relationship (if economic growth increases, government expenditure for the health function also increases). with economic Growth in Indonesia

$PDRB_t = 118158.5\ BP_{t-i} - 0.216994\ PDRB_{t-j} + u_{it}$ ……..(3)

From the results of equation 3 above, it can be seen that the variable government spending on the Education function (BP) has a positive relationship between GRDP and government spending on the Education function, namely 118158.56, meaning that government spending on the education function has a unidirectional causality relationship (if economic growth increases, government spending as a function education also rose) with economic Growth in Indonesia

$BP_t = 0.043391\ BP_{t-1} + 1.87\ PDRB_{t-j} + u_{it}$ …….(4)

From the results of equation 4 above, it can be seen that the variable government spending on the Education function (BP) has a positive relationship between GRDP and government spending on the Education function, namely 1.87, which means that government spending on the education function has a unidirectional causality relationship (if economic growth increases, government spending on the education function also rose) with economic Growth in Indonesia.

$PDRB_t = 19765.67\text{BPPF}_{t-i} - 0.047844\ PDRB_{t-j} + u_{it}$ .....(5)

From the results of equation 5 above, it can be seen that the variable government spending on the function of housing and public facilities (BPPF) has a positive relationship between GRDP and government spending on housing and public facilities (BPPU), namely 19765 .67 meaning that government spending is the function of housing and public facilities (BPPU) has a unidirectional causal relationship (if economic growth increases, government spending on the education function also increases) with economic Growth in Indonesia.

BPPF $t = 0.380336\ BPPFt - i + 3.29\ PDRBt - j + uit$ …… ..(6)

From the results of equation 6 above, it can be seen that the variable government spending on housing and public facilities (BPPF) has a positive relationship between GRDP and government spending on housing and public facilities (BPPF), which is 3.29, meaning that government spending is on housing and public facilities (BPPF) has a unidirectional causal relationship (if economic growth increases, government spending on the education function also increases) with economic Growth in Indonesia

$PDRBt$ = 23015.49BE $t - i$ − 0.106574 $PDRBt - j + uit$ …… .(7)

From the results of equation 7 above, it can be seen that the economic function government spending variable (BE) has a positive relationship between GRDP and economic function government spending (BE), namely 23015.49, meaning that government spending the economic function (BE) has a unidirectional causal relationship (if growth the economy goes up, the government expenditure of the economic function also goes up) with economic Growth in Indonesia.

BE t = 0.377395 $BEt - i$ + 5 ,84 $PDRBt - j + uit$ ……..(8)

From the results of equation 8 above, it can be seen that the variable government spending on the economic function (BE) has a positive relationship between GRDP and government spending on housing and public facilities (BE), which is 5.84, meaning that the government spending on the economic function (BE) has a unidirectional causality relationship (if economic growth increases, government spending for the economic function also increases) with economic Growth in Indonesia.

$PDRBt$ = 8172.586BPB $t - i$ − 0.008630 $PDRBt - j + uit$ …… ..(9)

From the results of equation 9 above, it can be seen that the variable government spending on the function of tourism and culture (BPB) has a positive relationship between GRDP and government spending on the function of tourism and culture (BPB), namely 8172.58 meaning that government spending on the function of tourism and culture (BPB) has a unidirectional relationship causality (if economic growth increases, government spending on tourism and culture functions (BPB) also increases) with economic Growth in Indonesia.

BPB t = 0.116908 $BPBt - i$ + 8 ,30 $PDRBt - j + uit$ ……...(10)

From the results of equation 10 above, it can be seen that the variable government spending on the function of tourism and culture (BPB) has a positive relationship between GRDP and government spending on the function of tourism and culture (BPB) which is 8.30 means that government spending on the function of tourism and culture (BPB) has a unidirectional relationship causality (if economic growth increases, government spending on tourism and culture functions (BPB) also increases) with economic Growth in Indonesia.

$PDRBt$ = 132615.4BPPU $t - i$ − 0.202408 $PDRBt - j + uit$ …… .(11)

From the results of equation 11 above, it can be seen that the variable government spending on the public service function (BPPU) has a positive relationship between GRDP and government spending on the public service function (BPPU), namely 132615.4 meaning that government spending on the public service function (BPPU) has a causal relationship that is in the same direction (if economic growth increases, government spending on public service functions (BPPU) also increases) with economic Growth in Indonesia.

BPPU t = 0.100211 $BPPUt - i$ + 1 .76 $PDRBt - j + uit$ ……..(12)

From the results of equation 12 above, it can be seen that the variable government spending on the public service function (BPPU) has a positive relationship between GRDP and government spending on the public service function (BPPU), which is 1.76, meaning that government spending on the public service function (BPPU) has a causal relationship that is in the same direction (if economic growth increases, government spending on public service functions (BPPU) also increases) with economic Growth in Indonesia.

$PDRBt$ = −31578.08BPPS $t - i$ − 0.857942 $PDRBt - j + uit$ … .(13)

From the results of equation 13 above, it can be seen that the variable government spending on the social protection function (BPPS) has a negative relationship between GRDP and government spending on the social protection function (BPPS), namely = −31578.08 meaning that government spending on the function of public services (BPPU) has a causal relationship that is in contrast to economic Growth in Indonesia (if economic growth increases, government spending on the social protection function (BPPS) will decrease)

BPPS t = −0.083168 $BPPSt - i$ + 2 ,90 $PDRBt - j + uit$ ……..(14)

From the results of equation 14 above, it can be seen that the variable government spending on the social protection function (BPPS) has a positive relationship between GRDP and government spending on the social protection function (BPPS), which is 2.90, meaning that government spending on the public service function (BPPU) has a unidirectional causality relationship.
with economic Growth in Indonesia (if economic growth increases, government spending on the social protection function (BPPS) will increase)

$PDRBt$ = 6959.075 $BPKKt - i$ − 0.363839 + uit …… ..(15)

From the results of equation 15 above, it can be seen that the government spending variable for the order and security function (BPKK) has a positive relationship between GRDP and government spending for the order and security function (BPKK), namely 6959.075, meaning that government spending for the order and security function (BPKK) has a relationship causality in line with economic growth in Indonesia (if economic growth increases, government spending on the order and security function (BPKK) will increase)

BPKK t = 4.25 $BPKKt - i$ + 0.021494 + uit …… ...(16)

From the results of equation 16 above, it can be seen that the government spending variable for the order and security function (BPKK) has a positive relationship between GRDP and government spending for the order and security function (BPKK), which is 0.021, meaning that government spending for the order and security function (BPKK) has a positive causality relationship. in line with economic growth in Indonesia (if economic growth increases, government spending on the order and security function (BPKK) will increase)

DISCUSSION

From the results of data analysis, it can be seen that the variable financial expenditure (BK) has a positive relationship between GRDP and financial spending, meaning that government spending on the health function has a relationship or causality with Economic Growth in Indonesia, while the financial expenditure variable (BK) has a positive relationship between financial spending (BK) between PDRB means that government spending on the health function has a relationship or causality with Economic Growth in Indonesia. The variable of government spending for the Education function (BP) has a positive relationship between GRDP and government spending for the Education function, meaning that government spending for the education function has a causal relationship that is in the same direction as economic Growth in Indonesia. The education function government spending variable (BP) has a positive relationship between education function government spending (BP) and GRDP, meaning that the education function government spending has a causal relationship that is in the same direction as economic Growth in Indonesia.

Variable government spending on housing and public facilities (BPPU) has a positive relationship between GRDP and government spending on housing and public facilities (BPPU), meaning that government spending on housing and public facilities (BPPU) has a causal relationship that is in line with economic Growth in Indonesia. Variable government spending on housing and public facilities (BPPF) has a positive relationship between government spending on housing and public facilities (BPPF) and GRDP, meaning that government spending on housing and public facilities (BPPF) has a causal relationship that is in line with economic Growth in Indonesia, Variable government spending economic function (BE) has a positive relationship between GRDP and government spending the economic function (BE) means that government spending the economic function (BE) has a causality relationship that is in the same direction as economic Growth in Indonesia. Variable government spending economic function (BE) has a positive relationship between government spending economic function (BE) and GRDP meaning that government spending Economic function (BE) has a causal relationship in the direction of economic Growth in Indonesia.

Variable government spending on the function of tourism and culture (BPB) has a positive relationship between GRDP and government spending on the function of tourism and culture (BPB), meaning that government spending on the function of tourism and culture (BPB) has a causal relationship that is in the same direction as economic Growth in Indonesia. Variable government spending on the function of tourism and culture (BPB) has a positive relationship between government spending on the function of tourism and culture (BPB) and GRDP, meaning that government spending on the function of tourism and culture (BPB) has a causal relationship that is in the same direction as economic Growth in Indonesia, variable spending government public service function (BPPU) has a positive relationship between GRDP and government spending public service function (BPPU) meaning that government spending

public service function (BPPU) has a causal relationship in the direction of economic Growth in Indonesia. Variable government spending on the public service function (BPPU) has a positive relationship between government spending on the public service function (BPPU) and GRDP, meaning that government spending on the public service function (BPPU) has a causal relationship that is in the same direction as economic Growth in Indonesia.

Variable government spending social protection function (BPPS) has a negative relationship between GRDP and government spending social protection function (BPPS) meaning that government spending the function of public services (BPPS) has a causality relationship that is inversely related to economic Growth in Indonesia variable government spending protection function social protection function (BPPS) has a positive relationship between the social protection function (BPPS) and GRDP, meaning that government spending on the public service function (BPPU) has a causal relationship that is in the same direction as economic Growth in Indonesia, the variable government spending on the order and security function (BPKK) has a relationship The positive relationship between GRDP and government expenditure for the order and security function (BPKK) means that government spending for the order and security function (BPKK) has a causal relationship that is in the same direction as economic Growth in Indonesia. Variable government spending on the order and security function (BPKK) has a positive relationship between government spending on the order and security function (BPKK) and GRDP, meaning that government spending on the order and security function (BPKK) has a causal relationship that is in line with economic Growth in Indonesia.

CONCLUSIONS

1. The causal relationship between government spending based on function and economic growth in Indonesia where the variable financial spending (BK) has a positive relationship between GRDP and financial spending, the variable financial spending (BK) has a positive relationship between financial spending (BK) between GRDP, variable government spending the Education function (BP) has a positive relationship between GRDP and government spending on the Education function, the variable government spending on the Education function (BP) has a positive relationship between government spending on the Education function (BP) and GRDP, Variable government spending on housing and public facilities (BPPU)) has a positive relationship between GRDP and government spending on housing and public facilities (BPPU), variable government spending on housing and public facilities (BPPF) has a positive relationship between government spending on housing and public facilities (BPPF) with GRDP, variable spending government economic function (BE) has a positive relationship between GRDP and government spending the Economic function (BE), variable government spending the economic function (BE) has a positive relationship between government spending the economic function (BE) and GRDP, Variable

government spending the tourism function and culture (BPB) has a positive relationship between GRDP and government spending on tourism and culture (BPB), variable government spending on tourism and culture (BPB) has a positive relationship between government spending on tourism and culture (BPB) with GRDP, spending variable government public service function (BPPU) has a positive relationship between GRDP and public service function government spending (BPPU), variable government spending public service function (BPPU) has a positive relationship between government spending public service function (BPPU) with GRDP , Expenditure variable government social protection function (BPPS) has a negative relationship between GRDP and social protection function government spending (BPPS), variable government spending social protection function (BPPS) has a positive relationship between social protection function (BPPS) and GRDP, variable government spending function order and security (BPKK) has a positive relationship between PDRB and government spending on the order and security function (BPKK), variable government spending on the order and security function (BPKK) has a positive relationship between government spending on the order and security function (BPKK) and GRDP.

2. Impact of government spending by function on economic growth where government spending on health has an impact on economic Growth in Indonesia, Government spending on education has an impact on economic Growth in Indonesia, Government spending on housing and public facilities (BPPU) has an impact on economic Growth in Indonesia, Government spending on the Economic function (BE) has an impact on economic Growth in Indonesia, Government spending on the function of tourism and culture (BPB) has an impact on economic Growth in Indonesia, Government spending on the function of public services (BPPU) has an impact on economic Growth in Indonesia, Government spending on the public service function (BPPS) has an opposite impact on Economic Growth in Indonesia, Government spending on the public service function (BPPU) has an impact on economic Growth in Indonesia, Government spending on the order and security function (BPKK) has an impact on growth economy in Indonesia.

REFERENCES

Atmanti, Hastarini Dwi .(2016). *The efficiency of Government Spending For Human Development Some Districts in Central Java During 2008 – 2012*. Journal of Developing Economies December 2016; 01(2):29-36.

Devino, Jose Angelo., Maciel. Daniel TGN., Sosa. Wilfredo (2019). Government size, the composition of public spending, and Economic Growth in Brazil. Journal Pre-proof 6 August 2019. https://doi.org/10.1016/j.econmod.2020.06.001

Idris, Amiruddin. (2018). Public Economics. Deepublish. Ed 1. Yogyakarta

Interpretation, Ahmad. 2019. Philosophy of Science. Bandung

Irandoust, Manuchehr. (2019). Wagner on government spending and national income: A new look at an old relationship. Journal of Policy Modeling Volume 41, Issue 4, July–August 2019, Pages 636-646**.** https://doi.org/10.1016/j.jpolmod.2019.02.003

Ismail, Priyono Zaenudin. (2019). Economic Theory. Dharma Science

Khusaini, Mohamad .(2019). Public Economy. UB Press.

Kim, Wong. (2019). Government Spending Policy Uncertainty and Economic Activity: US Time Series Evidence. *Journal of Macroeconomics Volume 61, September 2019,103124.* https://doi.org/10.1016/j.jmacro.2019.103124

Mangkoesoebroto, Guritno. 2010. Public Economics Edition-III BPFE. Yogyakarta

Mankiw, N. Gregory. (2003). *Macroeconomics*. Seventh Edition. Worth Publishers. ISBN-13: 978-1-4292-1887-0

Musgrave, Richard A. & Musgrave, Peggy. B. (2003). *State finance in theory and practice*. Jakarta, Erlangga

Nachrowi, D., Usman, Hardus., (2006). Popular and practical econometric approaches to economic and financial analysis. The publishing institution of the Faculty of Economics and the University of Indonesia.

Narayan, Paresh Kumar., Nielson, Ingrid., Smyth Russell. (2008). *Panel data, cointegration, causality, and Wagner's law: Empirical evidence from Chinese provinces.* China Economic Review 19 (2008) 297–307. https://doi.org/10.1016/j.chieco.2006.11.004

Narayan, Seema. , Rath, Badri Narayan., Narayan ,Paresh Kumar .(2012). Evidence of Wagner's law from Indian states. Economic Modeling 29 (2012) 1548–1557. https://doi.org/10.1016/j.econmod.2012.05.004

Olaoye, Olumide O., Eluwole, Oluwatosin O., Yesha, AzizA., Afolabi, Olugbenga, O. (2020). *Government spending and economic Growth in ECOWAS: An asymmetric analysis*. The Journal of Economic Asymmetries Volume 22, November 2020, e00180. https://doi.org/10.1016/j.jeca.2020.e00180

Prasetya, Ferry., Wulandari, Farah., Hutama, Ri Setia., (2011). Public sector experience, economic growth, and poverty in Indonesia. Indonesian Journal of Economics and Development Vol.X1 No.2, 2011: 99-116

Prasetyo, Ahmad Danu., Zuhdi, Ubaidillah. (2013). *The Government Expenditure Efficiency towards the Human Development.* Journal: Procedia Economics and Finance 5 (2013) 615 – 622. https://doi.org/10.1016/S2212-5671(13)00072-5

Pressman, S., 2000. *Fifty Thinkers of World Economics.* Translated by Triwibowo Budi

Santoso, Jakarta, PT. King of Grafindo Persada

Sedrakyan, Gohar Samvel., Candamio, Laura Varela. (2019). *Wagner's Law vs. Keynes' Hypothesis is very different*. Journal of Policy Modeling Volume 41, Issue 4, July–August 2019, Pages 747-762 https://doi.org/10.1016/j.jpolmod.2019.02.011

Shi , Yingying ., Sun, Shen ., Puyang, Guo . (2017). The Role of Infrastructure in China's regional economic growth. Journal of Asian Economics Volume 49, April 2017, Pages 26-41. https://doi.org/10.1016/j.asieco.2017.02.004

Sumardjoko, Imam (2020). Implications of Fulfillment of Mandatory Expenditures on Improving the Quality of public services in Indonesia. Defis Journal Edition 6. Volume VI. January – April 2020

Suparno, Heri. (2014). The effect of government spending on education, health, and infrastructure on economic growth and increased human development in East Kalimantan Province. Journal of Innovation in Business and Economics (JIBE) Vol. 5 No. 1 (2014). https://doi.org/10.22219/jibe.v5i1.2254

Wu, Shih-Ying., Tang, Jenn Hong. , Lin, Eric S. (2010). The impact of government expenditure on economic Growth: How sensitive to the level of development ?. Journal of Policy Modeling Volume 32, Issue 6, November–December 2010, Pages. https://doi.org/10.1016/j.jpolmod.2010.05.011

Zahara, Lulu Ervita. , Andini, Mutiara Shinta., Wulandari, Savitri. ,(2020). Reference: Development of the composition of central government spending based on

function, type, and organization. Center for budget review DPRI Expertise Agency.