

Effect of village funds and other variables on economic growth of Central Java Province 2015–2018

Rizka Amalia Farentina¹, Risni Juliaeni Yuhan²

¹Badan Pusat Statistik, rizka.amalia@bps.go.id;

²Politeknik Statistika STIS, risnij@stis.ac.id.

Abstract

The Economic growth of Central Java Province from 2015 to 2018 experienced a slowdown compared to other provinces in Java. One of the main focuses on improving the economy is fiscal decentralization which is manifested in the form of village funds. This is in line with one of nine development priorities for the next five years agendas, or so-called Nawacita, namely to develop Indonesia from the periphery by strengthening regions and villages within the framework of a unitary state. The village funds data from the Ministry of Finance shows that Central Java Province receives the largest village funds each year, but this does not necessarily increase economic growth in the recipient districts. In addition to the economic growth policy, the government also plans through investment and government spending. The purposes of this study are to determine the effectiveness of the village fund budget and the effect of the realization of village funds, capital expenditure, goods and services expenditure, and the level of open unemployment on economic growth. The method used in this study is the panel data regression analysis method with the research locus of 29 districts receiving village funds in Central Java Province from 2015 to 2018. The results of the study using the selected panel data regression model that is the Fixed Effect Model FGLS SUR show that all independent variables influence significantly to economic growth (GRDP). The variable realization of village funds and goods and services expenditure has a significant positive effect, while the variable realization of capital expenditure and the variable open unemployment has a significant negative effect on economic growth (GRDP).

Keywords : Economic growth, effectiveness, village funds, panel data regression

JEL Classification: O47, H30, C23

Abstrak

Pertumbuhan ekonomi Provinsi Jawa Tengah dari tahun 2015 hingga 2018 mengalami perlambatan dibanding provinsi lainnya di Pulau Jawa. Salah satu upaya meningkatkan perekonomian yaitu melalui desentralisasi fiskal yang terwujud dalam bentuk dana desa. Hal tersebut sejalan dengan salah satu agenda Nawacita yaitu membangun Indonesia dari pinggiran dengan memperkuat daerah dan desa dalam kerangka negara kesatuan. Data menunjukkan bahwa Provinsi Jawa Tengah mendapat dana desa terbesar setiap tahunnya, namun hal tersebut tidak serta merta meningkatkan pertumbuhan ekonomi di kabupaten penerima dana desa. Selain kebijakan tersebut, pemerintah juga mencanangkan melalui investasi dan pengeluaran pemerintah. Tujuan dari penelitian ini untuk mengetahui efektivitas anggaran dana desa serta pengaruh realisasi dana desa, realisasi belanja modal, realisasi belanja barang dan jasa, dan tingkat pengangguran terbuka terhadap pertumbuhan ekonomi. Metode yang digunakan adalah analisis regresi data panel dengan fokus penelitian 29 kabupaten penerima dana desa di Provinsi Jawa Tengah periode 2015 hingga 2018. Hasil penelitian dengan model regresi data panel yang terpilih yaitu Fixed Effect Model FGLS SUR menunjukkan bahwa seluruh variabel independen berpengaruh signifikan terhadap pertumbuhan ekonomi. Variabel realisasi dana desa dan realisasi belanja barang dan jasa berpengaruh signifikan positif, sedangkan variabel realisasi belanja modal dan tingkat pengangguran terbuka berpengaruh signifikan negatif terhadap pertumbuhan ekonomi.

Kata kunci: Pertumbuhan ekonomi, efektivitas, dana desa, regresi data panel

Klasifikasi JEL: O47, H30, C23

INTRODUCTION

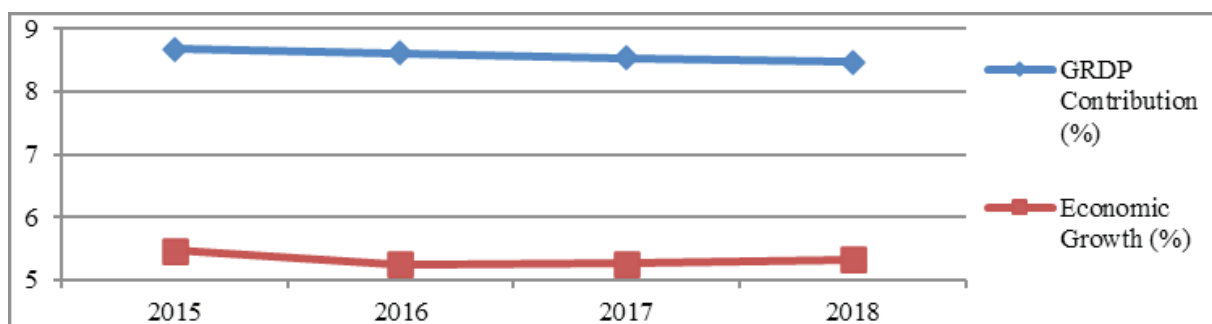
Economic development is a series of multidimensional processes to improve the economic welfare of a country. This is supported by the definition of economic development according to Todaro & Smith (2014), which is a process of economic transformation from stagnant to growth and from low income levels to high income levels, as well as overcoming the problem of absolute poverty. The Neo-Classical theory of economic growth in Sukirno (2004) looks at economic growth from the supply side. The theory states that economic growth depends on the development of production factors such as capital growth, population growth, and technological growth.

In the second quarter of 2019, Java Island took first place among the five other large islands in contributing to the Indonesian economy, namely 59.11 percent with an economy that grew by 5.68 percent (y-on-y). Central Java Province is ranked 4th in Java Island for the contribution of Gross Regional Domestic Product (GRDP). Central Java Province has had economic growth that has increased not too much from 2016 to 2018. In contrast to its economic growth, Central Java Province is the only province on Java Island that continues to experience a decline in the contribution of GRDP to the total GRDP of 34 provinces. This shows that other provinces are experiencing growth and contributing more to GRDP than Central Java Province itself.

Economic growth has become one of the main focuses of President Joko Widodo's administration which were proclaimed in Nawacita with nine

agendas, one of which is to develop Indonesia from the periphery by strengthening districts and villages within the framework of a unitary state. One of the policies implemented to increase economic growth is fiscal decentralization. The realization of this program is in the form of Transfers to Regions and Village Funds Account. The Village Fund Account is a State Budget fund allocated to villages that are transferred through the Local Government Budget and are prioritized for the implementation of development and empowerment of rural communities.

Currently, there are still not many studies related to the effect of village funds on economic growth even though the budget spent on village funds is not small and is targeted to increase economic growth. The purpose of village funds is to improve public services in villages, eradicate poverty, promote the village economy, overcome development gaps between villages, and strengthen village communities as subjects of development. Data from the Ministry of Finance show that the realization of village funds in Indonesia has always increased from year to year. Central Java Province has consistently been the largest recipient of village funds since 2015. Central Java Province has the largest number of villages among other provinces, namely 7809 villages spread across 29 districts, and consistently ranks 3rd in the province with the largest population. Before the existence of village funds (2011-2014), the economic growth of Central Java Province was volatile. At the district level in Central Java Province, economic growth before the existence of village funds tended to fluctuate. After the village fund policy



Source: Central Bureau of Statistics

Figure 1. Contribution of GRDP to GRDP of 34 provinces and economic growth in Central Java Province 2015-2018 (percent)

was implemented, an increase in economic growth occurred in only a few districts, for example, Grobogan, Pemalang, and Rembang. There are several districts that have experienced a sharp decline in the rate of economic growth, for example, Kudus and Klaten.

Another policy that can be implemented in the State Medium Development Plans to increase economic growth is encouraging investment and government spending. It was further explained that the strengthening of investment could encourage investment and business development in Indonesia in an inclusive and equitable manner, especially in the productive sector which prioritizes local resources. Meanwhile, in terms of government spending, this component will trigger an increase in demand so that it has an impact on increasing economic growth.

The labor side does not escape influencing the economy, one of which is the unemployment rate. Arthur Okun's theory in Mankiw (2015) states that the unemployment rate has a negative effect on economic growth. The lower the unemployment rate, the higher the economic growth is expected. A large population will trigger economic growth if many people work. However, if the population is unemployed, it will slow down and even reduce economic growth.

Research by Lin & Liu (2000) shows that fiscal decentralization contributes significantly to economic growth. Research by Nurmainah (2013) shows that capital expenditure is one of the variables that affect economic growth. Ma'ruf & Wihastuti (2008) in their research concluded that government spending has a significant positive effect on economic growth in Indonesia. Noor, Nor, & Ghani (2007) in their research concluded that unemployment has a significant negative effect on GDP.

Based on the description above, this study will further examine the effectiveness of the village fund budget and the effect of the realization of village funds, capital expenditures, goods and services expenditures, and the open unemployment rate on economic growth in Central Java Province in 2015-2018. This study was analyzed using panel data regression analysis.

LITERATURE REVIEW

Economic growth is influenced by various factors. One of the theories of economic growth is Solow's theory of economic growth which says that economic growth is influenced by capital and labor. In addition, according to Keynes, economic growth is influenced by the role of government. The theory says that to ensure stable economic growth, the government's role in managing the economy is needed, one of which is through fiscal policy (Azwar, 2016). Based on this theory, an explanation of the component variables in this study that affect economic growth will be explained later.

Economic Growth and GRDP

According to Sukirno (2004), economic growth is the fiscal development of the production of goods and services that applies in a country, such as the increase and production of industrial goods, infrastructure development, increase in the number of schools, increase in service sector production and increase in the production of capital goods. Economic growth is measured by the total income of each person in a country, namely Gross Domestic Product (Mankiw, 2015). Gross Regional Domestic Product (GRDP) is the amount of added value generated by all business units in a certain area (BPS, 2020). GRDP at current prices is used to see economic shifts and structure, while GRDP at constant prices determines economic growth from year to year. Economic growth is influenced by several factors such as capital, population, and technology (Sukirno, 2004).

Realization of Village Funds

Village funds are funds from the State Budget allocated to villages that are transferred through the Local Government Budget and are prioritized for the implementation of development and empowerment of rural communities. The purpose of village funds is to improve public services in the village, alleviate poverty, advance the village economy, overcome development gaps between villages, and strengthen rural communities as the subject of development. Village funds are a form of fiscal decentralization

launched by the government. The existence of fiscal decentralization provided by the central government to regional governments, one of which aims to create regional independence (Haryanto, 2015). Besides regional independence, the existence of Transfer ke Daerah dan Dana Desa (TKDD) is also aimed at increasing the economy and regional development. This is in line with research by Lin and Liu (2000) which states that fiscal decentralization has a significant contribution to economic growth.

Realization of Capital Expenditures

Capital expenditure is an expenditure that is used for the purchase/procurement or construction of tangible fixed assets whose benefit value is more than a year (BPS, 2017). Capital spending is part of the investment. The aim of promoting investment is to increase economic growth, create jobs, increase sustainable economic development, increase the competitiveness of the business world, increase the capacity and technological capabilities, encourage social economic development, transform potential economies into real economic strengths. This increase in the amount of capital goods allows the economy to produce more goods and services in the future. The Solow theory in Mankiw (2015) states that investment will affect economic growth because with investment the capital stock increases, where the capital stock is the key determinant of economic output.

Realization of Goods and Services Expenditures

Goods and services expenditures are expenditures used for the purchase/procurement of goods whose benefit value is less than a year and or using services in implementing local government programs and activities (BPS, 2018). Expenditure for goods and services is one part of government spending. According to Sukirno (2000), government spending is part of fiscal policy (Rustiono, 2008). The objective of this fiscal policy is to stabilize prices, output levels, and employment opportunities and spur economic growth. Rustiono (2008) further explains that an increase in government spending will cause

regional income to increase because an increase in aggregate demand will encourage an increase in production.

Open Unemployment Rate

Unemployment in the BPS definition is those who do not have a job and are looking for work, those who do not have a job and prepare a business, those who do not have a job and are not looking for work because they feel it is impossible to get a job and those who already have a job, but have not started working. The open unemployment rate is the percentage of the total unemployed against the total labor force. Unemployment influences the economic growth of a region. One of the factors that influence economic growth in Solow's theory is labor. If more and more labor is used, the production of goods/services produced will be even more so that it will increase economic growth in the long run. Unemployment indicates wasted resources. The unemployed have the potential to contribute to national income, but they don't. This is in line with Okun's law, that is, when the employed labor produces goods and services while the unemployed does not, an increase in the unemployment rate will decrease the real Gross Domestic Product.

Related Research

Research by Lin and Liu (2000) aims to examine the impact of fiscal decentralization on economic growth using panel data regression analysis. The research took the locus of all provinces in China from 1970-1993. The results showed that fiscal decentralization contributed significantly to economic growth. This is consistent with the research hypothesis, which states that fiscal decentralization can increase economic efficiency.

Research by Adi (2005) aims to determine the effect of fiscal decentralization on economic growth and to compare regional economic growth before and after the implementation of fiscal decentralization. This study took the locus, namely all districts and cities in Java-Bali in the 1998-2003 period. The method used is the T-test to see if there are differences in economic growth before and after decentralization and the ANOVA test to see if there are differences in

economic growth between regions according to their typology. The results of the study concluded that economic growth during the implementation of fiscal decentralization was significantly better than before the implementation. Other results show that regions with better economic growth before fiscal decentralization still had better economic growth during the implementation of fiscal decentralization.

Research by Noor et al. (2007) aims to determine whether Okun's law applies to the relationship between output and unemployment in the Malaysian economy. The data used are time series data for the period 1970-2004 in Malaysia, with the GDP variable as a proxy for output and the unemployment variable. The results of this study concluded that Okun's law applies in Malaysia, namely that there is a negative relationship between the two variables, and the unemployment variable has a significant negative effect on GDP.

Research by Ma'ruf & Wihastuti (2008) aims to analyze the effect of government spending and several other variables that affect long-term economic growth at the provincial level in Indonesia. This study uses panel data analysis consisting of 26 provinces from 1980 to 2006. The results of this study indicate that government spending has a significant positive effect on economic growth in Indonesia.

Research by Nurmainah (2013) examines the effect of capital expenditure from local governments, labor absorption, and the Human Development Index on economic growth and poverty in districts/cities in Central Java Province. The data used are secondary data from the period 2003-2017. The method used is Structural Equation Modeling, and the conclusion is that capital expenditure, labor, and HDI significantly affect economic growth.

Several studies related to village funds have not been linked to economic growth. Thus, based on theory and literature as well as related research, this study will examine the effect of village funds, capital expenditures, goods and services expenditures, and open unemployment rates on economic growth.

RESEARCH METHOD

In this study, two analyzes were conducted, namely descriptive analysis and inferential analysis.

Descriptive Analysis: Village Fund Budget Effectiveness

Effectiveness refers to the relationship between the output and the goals or objectives to be achieved. Effectiveness is important in any policy program. A policy is effective if the desired goals and objectives are achieved. Mardiasmo (2009) states that the budget is a statement regarding the estimated performance to be achieved during a certain period of time which is stated in financial measures (Sumenge, 2013). Based on this definition, the effectiveness of the village fund budget is a measure of the extent to which the village fund budget can be realized by the government based on predetermined budget allocations or targets. The budget effectiveness formula is:

$$Effectiveness = \frac{Budget\ Realization}{Budget\ Target} \times 100\% \quad 1)$$

The budget allocation or target used in this study is the budget ceiling. The budget ceiling, according to the Peraturan Menteri Keuangan Republik Indonesia Nomor 7/PMK.02/2014 is a budget allocation set for funding central government expenditures and/or budget financing in the State Budget. Meanwhile, budget realization is the actual budget implementation or realization.

Inferential Analysis: Panel Data Regression

The inferential analysis method used in this study is panel data regression analysis. This method is carried out to answer the purpose of analyzing the effect of village funds, capital expenditures, goods and services expenditures, and the open unemployment rate on economic growth. Panel data regression analysis was carried out because the estimation with panel data could take heterogeneity into account explicitly by allowing individual-specific variables, in which case the locus taken had 29 individuals/districts.

In addition, panel data will also be able to produce more efficient estimates (Gujarati & Porter, 2008).

The scope of this research covers 29 districts that receive village funds in Central Java Province. The period for this research starts from 2015 to 2018. The data used in this study are secondary data obtained from the Central Bureau of Statistics and the Ministry of Finance with an annual data series. The variables used in this study include the Gross Regional Domestic Product at Constant 2010 Prices as dependent variables, while the independent variables are the realization of village funds, the realization of capital expenditures, the realization of goods and services expenditure, and the open unemployment rate. The general model used in this research is:

$$\ln PDRB_{it} = \alpha + \beta_1 \ln RDD_{it} + \beta_2 \ln BM_{it} + \beta_3 \ln BBJ_{it} + \beta_4 TPT_{it} + u_{it}$$

Notes:

$PDRB_{it}$: GRDP of the i-th district in the year-t

RDD_{it} : Realization of the village funds for the i-district district in the t-year

BM_{it} : Realization of the capital expenditure of the i-th district in the t-year

BBJ_{it} : Realization of goods and services expenditure in the i-th district in the t-year

TPT_{it} : Open unemployment rate in the i-th district in the t-year

α : intercept

u_{it} : error term in the i-th district in the t-year

According to Baltagi (2005) and Greene (2012), the panel data regression analysis method in this study has several stages as follows:

1. Estimating the panel data regression model in three models, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM).
2. Perform the Chow test to select a better model between CEM and FEM.
3. Perform the Breusch Pagan Lagrange Multiplier test to select a better model between CEM and REM.
4. Based on steps 2 and 3, the panel model selected is FEM. So, it is continued by examining the structure of the covariance variance matrix.

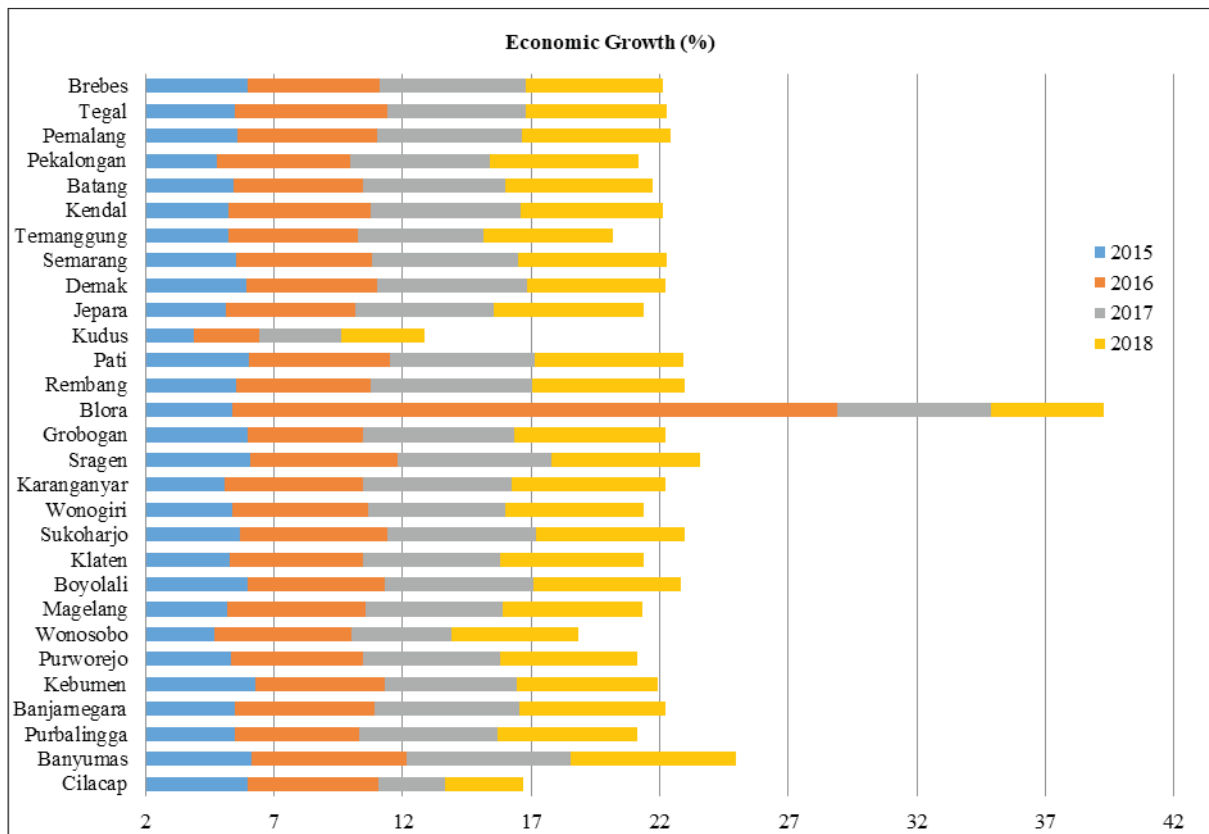
5. Perform the LM test to determine whether the covariance variance of the residuals is homoscedastic and the λ_{LM} test to determine whether there is a cross-sectional correlation.
6. Perform the meaning of the model test (partial T test, simultaneous F test, and R-square).
7. Interpret the model equations obtained.

RESULTS AND DISCUSSION

Research Overview

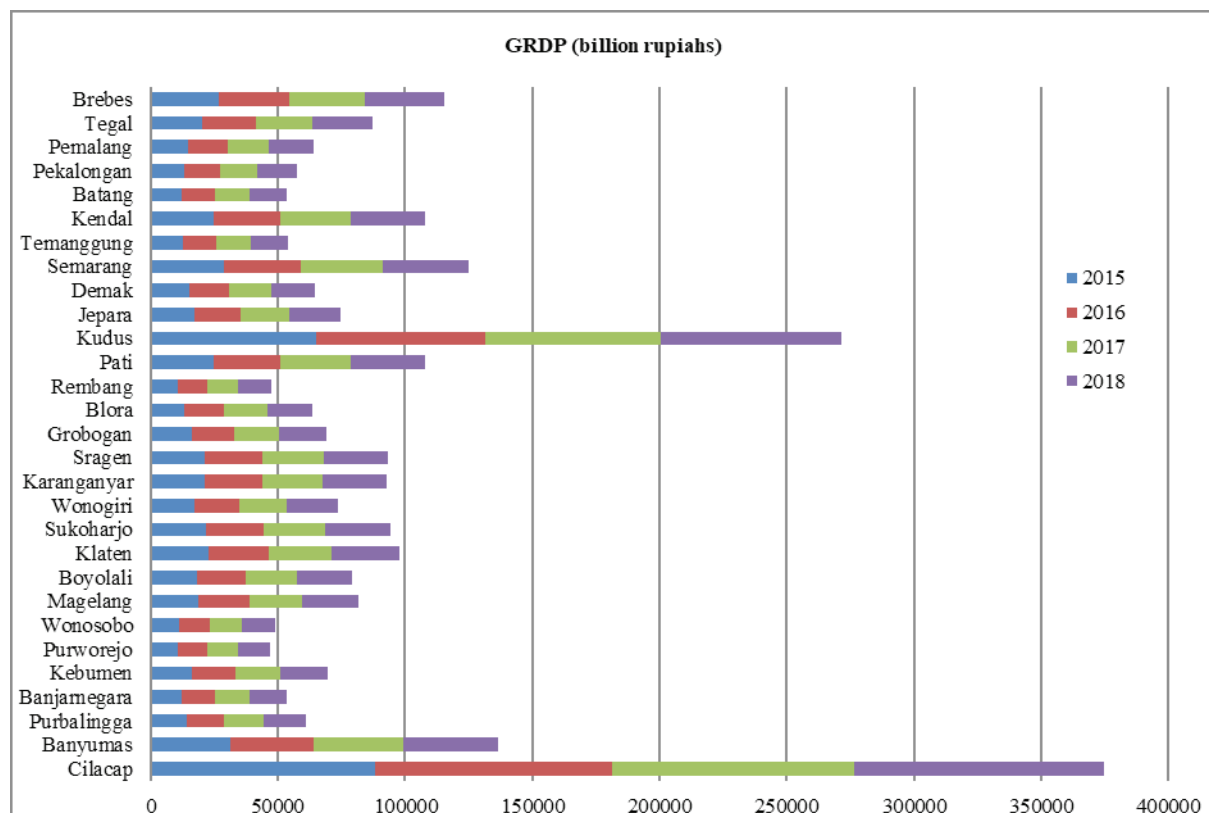
The economic growth of Central Java Province from 2015 to 2018 experienced a slowdown among other provinces on Java Island. In 2017 and 2018, it had the lowest economic growth compared to the other five provinces in Java, namely 5.26 percent and 5.32 percent respectively. At the district level, there are 17 districts that have experienced an increase in economic growth since 2016, such as Banyumas, Banjarnegara, Pati, Semarang, Kudus, and Jepara. Although Kudus is a district with relatively low economic growth compared to others, it has continued to experience increased growth since 2016. In 2016, Blora became the district with the highest economic growth and even surpassed the economic growth of Central Java. This is because the mining and quarrying sector has the highest growth in the economy in Blora, followed by the transportation and warehousing sector and the construction sector. In general, the economy of Blora is still dominated by the agricultural sector with a large contribution to GRDP of 24.8 percent.

In general, GRDP in all districts continues to increase. Cilacap had the highest GRDP from 2015 to 2018. The processing industry is the sector that contributes the most to the GRDP of Cilacap. There are a lot of potential and national scale activities in the district, such as an oil refinery that supplies 30 percent of the national needs and 60 percent of the needs of Java Island, a PLTU connected to the Java Madura Bali electricity grid and a cement factory with a capacity of three million tons per year. In contrast, Rembang has the lowest GRDP. The economy of Rembang is still dominated by the agricultural sector. Although Kudus has relatively low economic growth,



Source: Central Bureau of Statistics

Figure 2. Economic growth of 29 districts in Central Java Province 2015-2018 (percent)



Source: Central Bureau of Statistics

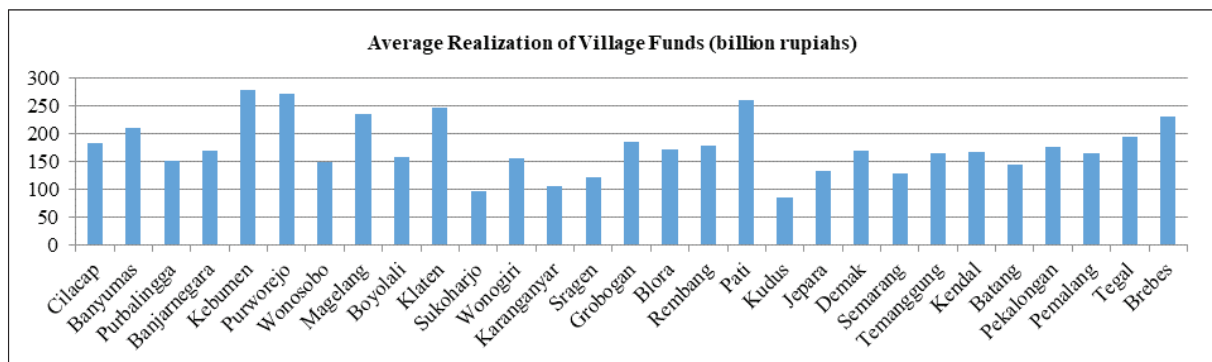
Figure 3. GRDP at constant prices for 29 districts in Central Java Province 2015-2018 (billion rupiahs)

its GRDP is in the second highest position. The economy of Kudus is supported by the proliferation of processing industries, especially the tobacco processing industry.

The realization of the village fund program since 2015 has continued to increase until 2018. In 2015 the total realization of Central Java Province was 2.23 trillion rupiahs and in 2018 the total realization was 6.73 trillion rupiahs. Central Java has consistently been the largest recipient of village funds among other provinces. 10.42 percent of villages throughout Indonesia are located in Central Java, with a total of 7809 villages making Central Java the province with the largest number of villages spread across 29 districts. There are 21 of 29 districts that continue to experience an increase in village

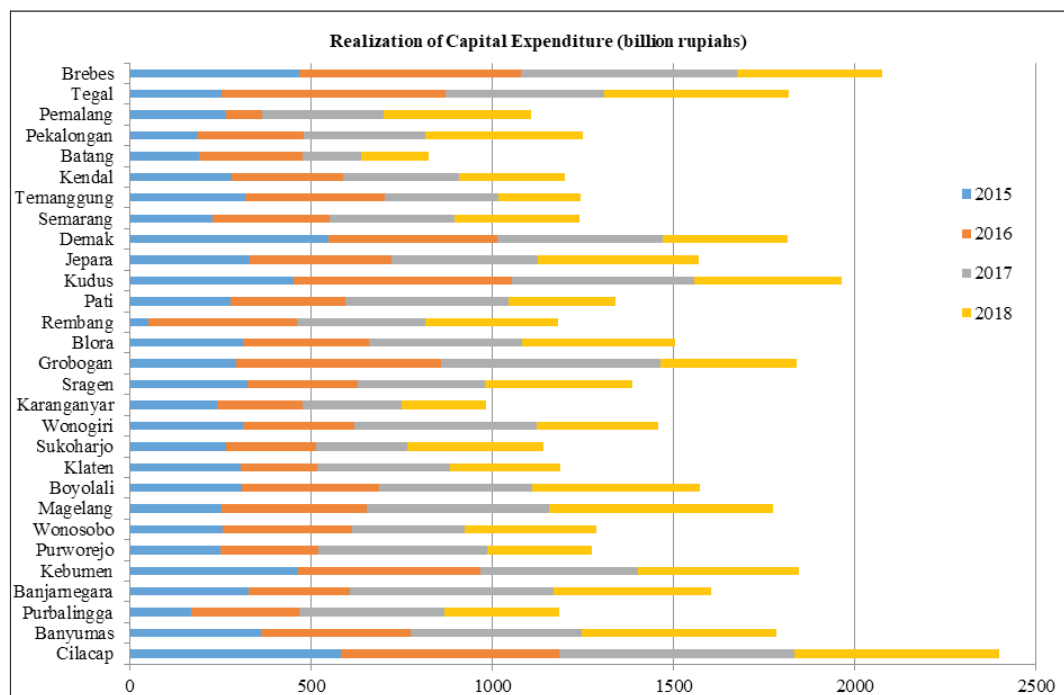
funds from 2015 to 2018 including Purbalingga, Magelang, and Klaten. Meanwhile, other districts experienced an increase until 2017 and then experienced a decline in 2018 such as Kebumen, Purworejo, and Wonosobo. Kudus is the district with the smallest village funds realization for four consecutive years with 132 villages. On the other hand, Kebumen has been the largest recipient of village funds until 2017 with 449 villages.

In 2015-2018, the capital expenditure of Central Java Province fluctuated up and down. The realization of capital expenditures at the district level shows that there are six districts that have continued to increase, such as Boyolali, Banyumas, Magelang, and Blora. Meanwhile, other districts have fluctuated up and down such as Tegal.



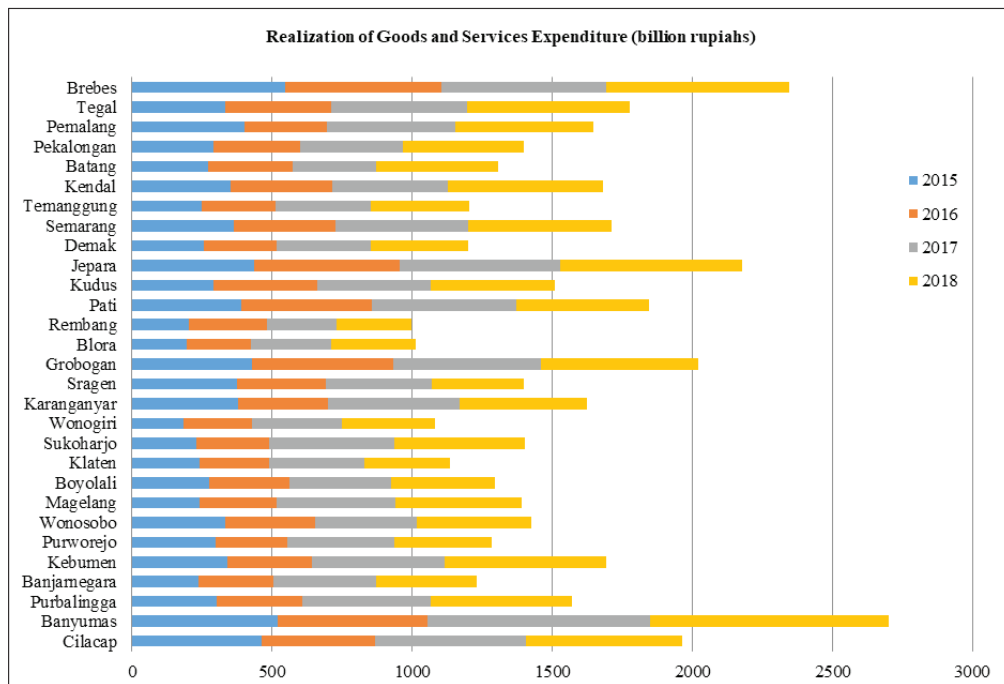
Source: Ministry of Finance

Figure 4. Average realization of village funds for 29 districts in Central Java Province 2015-2018 (billion rupiahs)



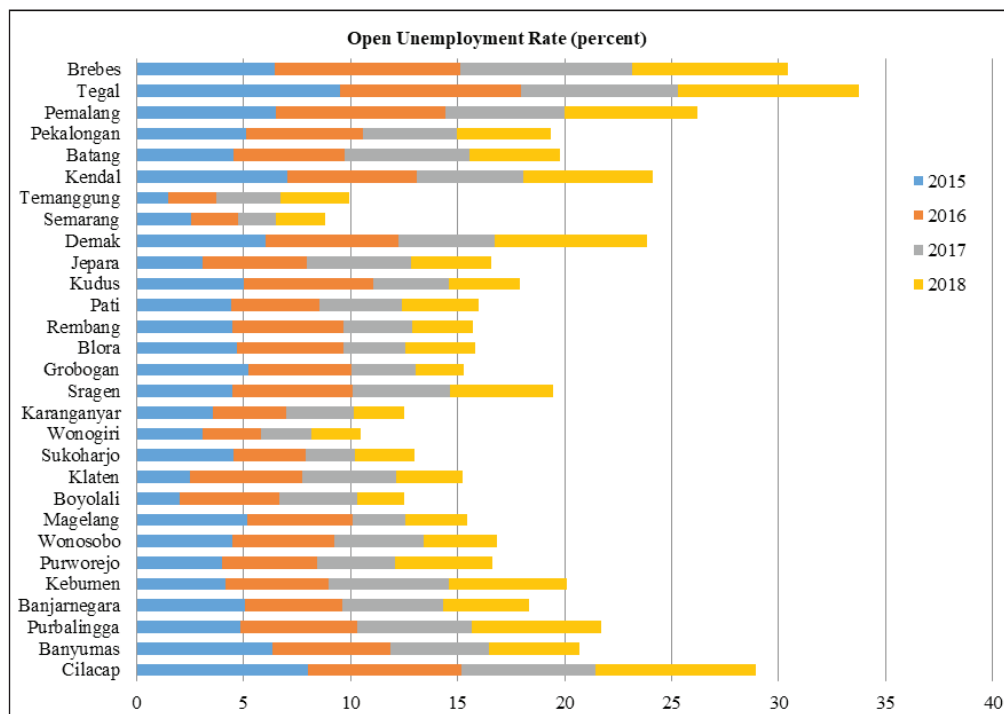
Source: Central Bureau of Statistics

Figure 5. Realization of capital expenditure for 29 districts in Central Java Province in 2015-2018 (billion rupiahs)



Source: Central Bureau of Statistics

Figure 6. Realization of goods and services expenditure in 29 districts in Central Java Province in 2018 (billion rupiahs)



Source: Central Bureau of Statistics

Figure 7. The open unemployment rate in 29 districts in Central Java Province 2015-2018 (percent)

The realization of goods and services expenditure in Central Java Province experienced a decline in 2016, then continued to increase in 2017 and 2018. At the district level, there are sixteen districts that continue to experience increased realization of goods and services expenditure such as Banyumas, Sukoharjo,

and Blora. Meanwhile, thirteen other districts experienced fluctuations up and down.

Based on the results of the National Labor Force Survey (Sakernas), the workforce in Central Java Province in 2018 reached 18.06 million with an open unemployment rate of 4.51 percent (figure 7). That year, Central Java was ranked 4th with the

highest unemployment rate on the island of Java, while in the national position it was ranked 16. The open unemployment rate at the district level varied. Figure 7 shows that there are four districts that have continued to experience a decline in the unemployment rate from 2015 to 2018, such as Grobogan and Wonogiri. Meanwhile, 25 other districts experienced fluctuations up and down. Tegal has a large enough open unemployment rate (TPT) compared to other districts. Head of the Tegal Regency BPS, Jamaludin, said that 8 out of 100 people who are active in the labor market are declared not absorbed by companies or are still unemployed.

Village Fund Budget Effectiveness

Every policy issued by the government is certainly expected to succeed and achieve policy goals and objectives, including the village fund budgeting policy. One of the indicators to measure the success of the budget is effectiveness.

The effectiveness of the village fund budget for each district in the first year the village fund

policy was implemented, namely 2015 was considered effective because it reached 100 percent. This can be interpreted if the village fund budget ceiling is equal to the realization of village funds received by the district. The following years, from 2016 to 2018, showed differences in the village fund budget ceilings and their realization in several districts, as evidenced by the percentage of effectiveness that did not reach 100 percent as happened in Kebumen, Kendal, and Kudus districts. This percentage shows that the realization of village funds is smaller than the village fund budget ceiling. Although the realization of the budget is not the same as the budget ceiling, the percentage is still considered effective.

In the 2015-2018 period (figure 8), the average of both the ceiling and realization of village funds continued to increase, and it was seen that the distribution of ceiling data and realization of village funds was spread only in two quadrants, namely quadrant I and quadrant III. Quadrant I shows the ceiling value and realization of village funds that are above the average value,

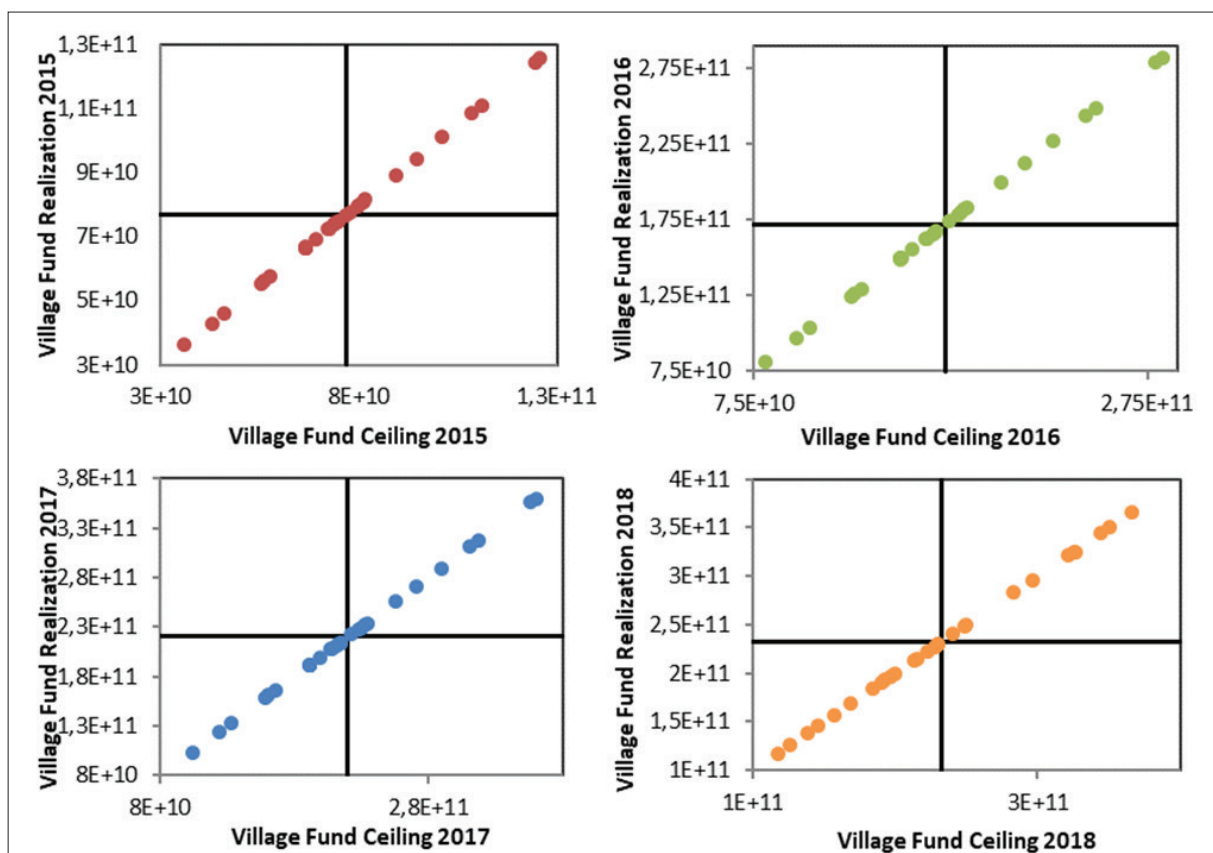


Figure 8. The quadrant ceiling chart and realization of village funds for 29 districts in Central Java Province in 2015-2018

while quadrant III shows the ceiling value and realization of village funds that are below the average value. There are 12 districts in quadrant I and 17 districts in quadrant III for the period 2015 to 2017. Meanwhile, in 2018, there were 11 districts in quadrant I and 18 districts in quadrant III. The distribution that meets quadrant I and quadrant III shows that the ceiling value of village funds is proportional to the value of realized village funds.

The village fund program that has been running has provided benefits both in supporting community economic activities and in improving the quality of life of the community. In terms of utilizing village funds in Central Java Province from 2015 to 2018 to support community economic activities, realized in the form of village road construction spanning 24549.66 kilometers, bridges along 52.76 kilometers, village markets totaling 1678 units, 26 units of boat moorings, irrigation. 22831 units, 159 reservoirs, 3463 sports

facilities, and 2350 village-owned enterprises. Meanwhile, in terms of improving the quality of life of the community, it is realized in the form of construction of 119351 units of land retaining, 7653 clean water units, 11251 units of toilets, 1317 units of Polindes-Poskesdes, 4045.46 meters of drainage, 2821 PAUD-TK-School activities, Posyandu as many as 2382 units and wells totaling 1019 units.

The Effect of Village Fund Realization and Other Variables on Economic Growth in Central Java Province 2015-2018

Panel data regression is used to see the effect of realization of village funds, realization of capital expenditure, realization of goods and services expenditure, and open unemployment rate on economic growth (GRDP) for the period 2015 to 2018 with a cross-section of 29 districts in Central Java Province.

Best Model Selection

Table 1. Estimates of the CEM, FEM and Chow Test Result

Variable	Const.	Ln RDD	Ln BM	Ln BBJ	TPT
CEM	4.914181*	-0.25931*	0.41362*	0.640798*	0.02531
FEM	8.889253*	0.089072*	-0.021518	0.127612*	-0.006912
Test		Statistic	Degree of freedom	P-value	
Chow (F_h)		754.468536	(28,83)	0.0000	

Note: * significant at 0.05

Table 2. Estimates of the FEM, REM and Hausman Test Results

Variable	Const.	Ln RDD	Ln BM	Ln BBJ	TPT
FEM	8.889253*	0.089072*	-0.021518	0.127612*	-0.006912
REM	8.848598*	0.086947*	-0.019884	0.133995*	-0.006037
Test		Statistic	Degree of freedom	P-value	
Hausman (hh)		21.859593	4	0.0002	

Note: * significant at 0.05

Table 3. Results of LM and λ_{LM} tests

Test	Statistic	Chi square degree of freedom	Chi square table
LM	57.0106	28	41.3371
Test	Statistic	Chi square degree of freedom	P-value
λ_{LM}	743.6997	406	0.0000

The Chow test results show that the Fixed Effect model is better than the Common Effect model. Then followed by the Hausman test shows that the Fixed Effect model is better than the Random Effect model, so the best model is the Fixed Effect Model. The tests are shown in table 3.

Testing the Residual Covariance Variance Matrix

After obtaining the Fixed Effect model, it is continued with testing the residual covariance variance matrix structure, namely the LM test to test homoscedasticity and the λ_{LM} test to test cross sectional correlation. From the test results in table 3 shows that the structure is heteroscedastic and there is a cross sectional correlation.

Based on table 3, the residual variance covariance matrix structure is heteroscedastic and there is a cross sectional correlation, so the obtained FEM model will be estimated using the FGLS Cross Section SUR method.

Regression Estimation Model

After selecting the best panel data regression model along with an examination of the residual covariance variance structure, a Fixed Effect model was obtained with FGLS Cross section SUR estimation. The results of the FEM FGLS Cross section SUR model estimation are shown in table 4.

The Influence of All Independent Variable on Economic Growth

The f test results from the above model estimation with an f statistic value of 1859.4 indicate that together all independent variables have a significant effect on economic growth. The adjusted R-square value of the model estimate is 0.998, meaning that 99.8 percent of the diversity of economic growth can be explained by the realization of village funds, capital

expenditure, goods and service expenditure, and open unemployment rate. While the other 0.2 percent is explained by other variables outside the model.

The Influence of Village Fund Realization on Economic Growth

The variable of realization of village funds has a positive and significant effect on economic growth. Every a hundred percent increase in the realization of village funds will increase the GRDP by 8.52 percent, assuming other variables are constant. The results show that village funds can be said to have achieved one of its objectives, namely improving the economy and development of rural communities. This is in line with Lin and Liu's (2000) research which states that fiscal decentralization can increase economic efficiency because local governments have an information advantage over the central government regarding the allocation of regional resources. Local governments are in a better position to provide the types of public goods and services that meet local needs and have more authority to invest and spend more on various productive sectors. This is what then drives economic growth.

The Influence of Realized Capital Expenditure on Economic Growth

The variable of capital expenditure realization has a negative and significant effect on economic growth. When the realization of capital expenditure increases by a hundred percent, the GRDP will decrease by 3.34 percent, assuming other variables are constant. These results are consistent with research by Harianto and Adi (2007) and research by Priambodo (2014) which states that capital expenditure has a negative effect on economic growth. The allocation of capital expenditures for the provision of facilities and infrastructure to support the economy has not been able to show a significant effect on the economic

Table 4. The results of the FEM FGLS SUR regression estimation Dependent Variable: Ln PDRB

Variable	Coeff.	Std. Error	t-Statistic	P-value
Const.	8.8568	0.1829	48.4160	0.0000*
Ln RDD	0.0852	0.0140	6.0762	0.0000*
Ln BM	-0.0334	0.0077	-4.3119	0.0000*
Ln BBJ	0.1481	0.0369	4.0181	0.0001*
TPT	-0.0069	0.0034	-2.0171	0.0469*

Note: *significant at 0.05

growth of 29 districts in Central Java Province, although at the same time economic growth has increased. The budget allocated for personnel expenditure is still much higher than the allocation for capital expenditure and is not in accordance with existing needs and conditions, so that the effect of capital expenditure on economic growth is still relatively small.

The Influence of Realized Goods and Services Expenditures on Economic Growth

Goods and services expenditure variables have a positive and significant effect on economic growth. When the realization of goods and services expenditure increases by a hundred percent, the GRDP will increase by 14.81 percent, assuming other variables are constant. This is in line with the statement of Sukirno (2002) which states that government expenditure (government expenditure) is part of fiscal policy, namely a government action to regulate the course of the economy by determining the amount of government revenue and expenditure each year which is reflected in the APBN document for the national and APBD for regions which aims to stabilize prices, output levels and job opportunities and spur economic growth (Rustiono, 2008).

The Influence of the Open Unemployment Rate on Economic Growth

The open unemployment rate variable has a negative and significant effect on economic growth. Every time there is an increase in the open unemployment rate by a hundred percent will reduce the GRDP by 0.69 percent, assuming other variables are constant. There is a negative effect of unemployment on economic growth in line with Okun's law. The large number of unemployed workers will make the economy sluggish because the unemployed do not produce goods and services. The unemployed have the potential to contribute to national income, but they do not. Nurmainah (2013) in her research said that a larger number of workers means an increase in the number of productive workers. When the employed labor force produces goods and services while the unemployed does not, an increase in the unemployment rate will reduce economic growth.

CONCLUSION AND RECOMMENDATION

The purposes of this study are to determine the effectiveness of the village fund budget and the effect of the realization of village funds, capital expenditure, goods and services expenditure, and the level of open unemployment on economic growth. Based on the results and discussion that has been presented, these are the conclusions of this study.

Economic growth at the district level shows that 17 out of 29 districts in Central Java Province have continued to increase since 2016, while the rest have fluctuated up and down. The value of GRDP and the realization of village funds in general has increased. Realization of capital expenditure shows that there are six districts that continue to experience an increase, while the realization of expenditure for goods and services shows that there are 16 districts that continue to increase. For the open unemployment rate of 29 districts, there are four districts that continue to experience decreasing unemployment rate.

Village funds can be said to be effective with the effectiveness value in each district in the range of 90-100 percent. The effectiveness is illustrated in the typology of clasens which produces data distribution in quadrant I and quadrant III. The selected panel data regression model is the Fixed Effect Model with the FGLS SUR estimation method. The results show that the variables of realization of village funds and realization of expenditures for goods and services have a significant positive effect, while the variables of realization of capital expenditures and the open unemployment rate have a significant negative effect on economic growth.

The suggestion that can be put forward is that the government should be able to provide encouragement in the leading economic sectors so that they are more active in order to accelerate economic growth. The government through the Ministry of Finance and Ministry of Village, Development of Disadvantaged Regions, and Transmigration needs to re-evaluate the use of village funds in the field through effective and efficient monitoring mechanisms so that they are more effective in accelerating economic

growth. In terms of expenditures in the form of capital expenditures, Ministry of Finance should limit the proportion of certain expenditures that are deemed less encouraging to economic growth, such as personnel expenditures so that they are not excessive so that the Regional Government allocates more for the development of infrastructure that supports the economy. Apart from that, the government also needs to encourage spending on goods and services, especially in the productive sector. Not to forget that the government through the Ministry of Manpower also needs to continue to carry out efforts to reduce unemployment, such as Job Training Center or in the form of policies for worker protection. Besides the government also stimulates the community to actively create jobs, for example by activating Micro Small and Medium Enterprises.

REFERENCES

- Badan Pusat Statistik. (2017). *Statistik Keuangan Pemerintah Kabupaten Kota 2015-2016 Buku I Sumatera, Jawa*. Jakarta: BPS.
- Rustiono, D. (2008). *Analisis Pengaruh Investasi, Tenaga Kerja, dan Pengeluaran Pemerintah terhadap Pertumbuhan Ekonomi di Propinsi Jawa Tengah* [Tesis]. Semarang: Universitas Diponegoro.
- Greene, W. H. (2012). *Econometric Analysis* (7th ed.). Essex: Prentice Hall.
- Gujarati, D. N., & Porter, D. C. (2008). *Basic Econometrics* (5th ed.). New York: McGraw-Hill Education.
- Harianto, D., & Adi, P. H. (2007). *Hubungan Antara Dana Alokasi Umum, Belanja Modal, Pendapatan Asli Daerah dan Pendapatan Per Kapita*. Simposium Nasional Akuntansi X Unhas Makassar 26-28 Juli 2007.
- Haryanto, J. T. (2015, 31 Agustus). *Desentralisasi Fiskal Seutuhnya*. Diakses pada 24 November 2019 melalui <https://www.kemenkeu.go.id/publikasi/desentralisasi-fiskal-seutuhnya>
- Lin, J. Y., & Liu, Z. (2000). Fiscal Decentralization and Economic Growth in China. *Economic Development and Cultural Change*, 49(1), 1-21.
- Ma'ruf, A., & Wihastuti, L. (2008). Pertumbuhan Ekonomi Indonesia: Determinan dan Prospeknya. *Jurnal Ekonomi dan Studi Pembangunan*, 9(1), 44-55.
- Mankiw, G. N. (2015). *Macroeconomics* (9th ed.). New York: Worth Publishers.
- Noor, Z. M., Nor, N. M., & Ghani, J. A. (2007). The Relationship between Output and Unemployment in Malaysia: Does Okun's Law exist? *Journal of Economics and Management*, 1(3), 337-344.
- Nurmainah, S. (2013). Analisis Pengaruh Belanja Modal Pemerintah Daerah, Tenaga Kerja Terserap, dan Indeks Pembangunan Manusia terhadap Pertumbuhan Ekonomi dan Kemiskinan. *Jurnal Bisnis dan Ekonomi (JBE)*, 20(2), 131-141.
- Pemerintah Republik Indonesia. (2014). Undang-Undang Republik Indonesia Nomor 6 Tahun 2014 tentang Desa.
- Priambodo, A. (2014). Analisis Pengaruh Pendapatan Asli Daerah (PAD), Belanja Modal, dan Tenaga Kerja terhadap Pertumbuhan Ekonomi Kabupaten/Kota di Provinsi Jawa Tengah Tahun 2008-2012. *Economics Development Analysis Journal*, 3(3), 427-435.
- Sukirno, S. (2004). *Makroekonomi Teori Pengantar* (3rd ed.). Jakarta: Raja Grafindo Persada.
- Todoaro, M. P., & Smith, S. C. (2014). *Economic Development* (12th ed.). Upper Saddle River: Pearson Education, Inc.