

CAUSAL NEXUS BETWEEN CAPITAL EXPENDITURE AND ECONOMIC GROWTH IN DAERAH ISTIMEWA YOGYAKARTA (2000-2012)

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ABSTRACT

This study has examined the effect of capital expenditure on economic in Daerah Istimewa Yogyakarta (DIY) for the periode 2000 – 2012. The tool of analysis was Augmented Dickey-Fuller Test and Granger Causality Test specified on perceived causal relationship between capital expenditure and economic growth. Time series data included in the model were those on gross regional domestic product (GRDP) and various components of government expenditure. Analysis was based on data extracted from the Statistical Bulletin of the Indonesia Bank and Biro Pusat Statistik (BPS). Results of the analysis showed that in three regencies and one city, there are only one relation between economic growth and capital expenditure. Economic growth causes capital expenditure in Kulon Progo, Gunung Kidul, Sleman regencies and Yogyakarta city. There is no evidence for the existence of the one or causal relation in Bantul regency.

Keywords: growth, capital expenditure, granger test.

INTRODUCTION

Background Research

Development is a series of processes of change towards a better condition in to improve the welfare of society. According to Samuelson and Nordhaus (2004), one of the macro indicators successful development of economic growth are showed the volume of goods and services produced. Another factors that can promote economic growth, among others, the availability of human resources, natural resources, capital formation, and technology.

The government's role is important in the development process of a country both in the protection and provision of public goods. The historical fact give firmness that no country can thrive without government interference. Without any government involvement, a variety of economic infrastructure can not fulfill adequately to the economy.

The importance of the role of government in the economy was initially proposed by John Maynard Keynes in the 1930s with concept of pump priming. The concept of pump priming stated about the increase in government spending to boost economic growth through the injection of purchasing power into the economy. Rahn curve analysis (Mitchell, 2005) showed a positive relationship between government spending with growth conditions. If the government does not intervene (government expenditure is zero) then economic activity would be so slow so that the economic growth that occurs is very low.

Some people argue that the role or function of the government, especially in the fiscal sector is to create economic stability, equitable distribution of income, and allocation of human resources. Especially for the stabilization and equalization functions, would be more effective if carried out by the central government, while the allocation function will be more effective if carried out by local governments. The main consideration is economically why allocation functions are better performed by the region is the efficiencies gained from the proximity of government as a provider of services to the community.

Local government efforts to boost economic growth through policies is including expenditures for purchases of goods and services that will drive the increasing demand in the economy. Some empirical studies for explaining the relationship between government spending on economic growth showed different results. This is shown in research Purbadharmaja (2006) and Sodik (2007) which concluded that government spending contributed to a real and positive impact on economic growth. On the other hand, research Barro & Alexiou (2009) and Ramayandi (2003) concluded their negative and significant correlation between government spending on economic growth.

Government spending in the form of capital expenditure for the provision of various facilities and infrastructure of public facilities that can be fixed assets area and has a value of more than one year benefit expected can support the implementation of various economic activities of the community. Research on Alexiou (2009) and Rahayu (2004) concluded that government spending on public investment yield significant positive impact on economic growth. How big government spending, income, and GRDP of DIY regions, counties and cities over the last 5 years? Table 1 below presents the amount of expenditure and budget DIY, district & city during 2009-2013

Table 1
Actual Expenditure, Revenue, GRDP - the budget DIY, Regency / City, 2009-2013 (millions of rupiah)

	2009	2010	2011	2012	2013
Local Expenditure (Belanja Daerah)	2.838.122	5.711.964	6.649.549	7.736.757	8.422.372
Local Revenue (Pendapatan Daerah)	3.307.265	5.734.034	6.813.165	8.215.691	9.574.065
GRDP (Gross Regional Domestic Product)	20.064.000	21.044.000	22.131.774	23.308.558	24.620.000

Source: Economic Report DIY, BI (2012, 2014)

Based on these data, the amount of regional spending budget has increased, especially in the period of 2010. The data of regional spending has increased highly . Percentage growth of public spending in the year 2009 - 2013 respectively were 101%, 16.41%, 16.35% and

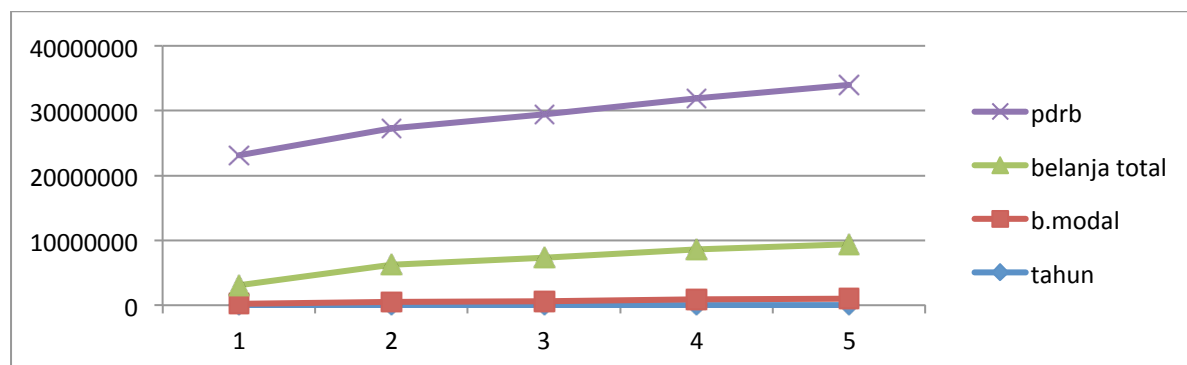
8.86%. The decrease in the growth of public spending in 2013 may be due to the amount of expenditure / direct expenditure is lower than the previous year, amounting to 4.49%. Indirect expenditures growth also decreased in 2013, amounting to 11.14%.

If data on regional spending shows the change / growth less stable, unlike the case with a growth rate of revenue in DIY Regional, county and city. Based on the data in the table above shows that revenue growth from time to time (year 2011-2013) increased respectively 21.95%, 24.53% and 26.98%. This contrasts with the relative magnitude Balance Fund grew less stable. During the period 2011 - 2013, changes Balance Fund are respectively 6.08%, 22.10%, 7.69%. The average revenue growth of DIY, Regency and City amounted to 33.21% while the average growth was 15.10% Balance Fund.

Increased spending figures / local government spending can influence the magnitude of the GDP the area every year. During the period of 2009 through 2013, GDP growth increased significantly ie respectively 4.88%, 5.17%, 5.32% and 5.63%. The increase in GDP growth is due to the growth in the non-tradeable sector with an average growth of 6.47%. While growth in tradable sectors (agriculture, mining and quarrying, manufacturing) experienced an average growth of 2.26%.

Here is presented Figure 1 which shows the relationship between the magnitude of the GDP to capital expenditures and government spending DIY total from 2009 to 2013.

Figure 1
Changes in the GDP, Total Government Expenditure, Capital Expenditure in DIY (2000-2013)



Source: Economic Report DIY, BI (2012, 2014)

The figure shows that changes in capital expenditure, the total expenditure has increased from year to year. However, the increase in capital expenditure is not as high as the rate of increase in total expenditure. Along with the positive growth of government spending data, the GDP figures also showed a significant increase.

The low capital expenditure budget spending policies for the provision of public facilities will have an impact on the level of availability of the necessary infrastructure for the improvement of economic activities. So that changes in the composition of spending the budget for capital expenditure in order to stimulate the local economy needs to be done. The higher expected capital expenditure, the higher results on regional economic growth.

Policy implications of the reciprocal relationship between the level of government spending and economic growth will be associated with the preparation of a projection or estimate of the annual development budget needs and economic growth targets. If these interrelationships happens then in the preparation of government expenditure projections should take into account the variables of economic growth and vice versa for the projected rate of economic growth, government spending variables have to be one of the determining factors.

Research Purposes

Causal relationship between the amount of government spending and economic growth theoretically very possible to happen. But in fact, often only a one-way relationship only. Therefore, this study has the objective to examine the relationship of causality between the GRDP (economic growth) with Capital Expenditure in Yogyakarta.

Research Contributon

The findings of the research will be the input for the counties/city and DIY Provincial Parliament in formulating policy development budget provincial.

LITERATURE STUDY AND DEVELOPMENT HYPOTHESIS

Literature Study

Fiscal decentralization policy is seen as one way to improve the effectiveness and economic efficiency of the public so that a positive results impact on economic growth. The rationale is the fiscal decentralization would improve economic efficiency, the use of budget funds more effective and efficient for district / city governments more aware of the condition of the needs and preferences of local area development.

Traditional theory of fiscal decentralization policy gives a show that fiscal decentralization can improve the functioning of the public sector, through the potential allocation of resources more effectively and efficiently in the public sector. Oates (2006) argues that spending on infrastructure and social sector that responds to regional differences and local may be more effective in enhancing economic development when compared with central policy can ignore these differences. This argument can be justified because the city / county to know the area better than any known by the central government. According to this view, the local government can be trusted to allocate funds to each sector of the economy more effectively and efficiently than the central government.

Decentralization of decisions, increase revenue through the transfer of funds, and the reduction of unexpected expenses is seen as one way to improve the efficiency of the public sector, reducing the budget deficit and promote economic growth. The argument that decentralization would improve economic efficiency, because local governments can be positioned better than the national government to provide public services according to the preferences and needs of the region, and the achievement of efficiencies will lead to regional economic growth and national well more quickly.

If the spending of local governments in the transfer of funds to allocate funds to strengthen the economic foundation of the region through local investment and reduces

unpredictable expenditures will have a positive impact on economic growth. But if the transfer of funds allocated for activities that are not productive, speculative and consumptive optimal it will have less impact on regional economic growth. This may be analogous to that amount of expenditures / recurrent expenditure had little impact on the strengthening of the local economy and lead to an increase in inflation. Meanwhile, construction spending tends to reduce spending was not unexpected, and have an impact on regional economic strengthening for investment in construction will have a greater multiplier effect on economic growth areas.

The theory that discusses the relationship of government spending and economic growth is described at length in The General Theory of Keynes. This theory outlines that the total income of the economy in the short run is determined by the desire of households, companies and the government to spend its earnings. In algebra, the multiplier is as follows:

$$\frac{\Delta Y}{\Delta G} = 1 + MPC + MPC_2 + MPC_3 + \dots$$

$$\frac{\Delta Y}{\Delta G} = \frac{1}{(1-MPC)}$$

According to Keynes to avoid the onset of stagnation in the economy, the government seeks to increase the number of expenditure (G) with a higher percentage than the increase in national income that can offset the propensity to consume in the economy (Dornbusch, 1987)

Wagner theory assumes that in an economy where per capita income increased, government spending will also increase. This happen because the government must regulate relations arising in society, law, recreation, culture and so on. Wagner's view of the starting point of Organic Theory of State namely the theory assumes that the government is free individual act, apart from other communities.

Theory Peacock & Wiseman had a view that the government is constantly trying to expand spending, while people are reluctant to pay more taxes to finance the government's expenditures. On the other hand, needs shopping / spending ever greater can be determined by the economic development so that taxation will be greater even if the tax rate unchanged. The increasing tax revenue, the government spending will be increased as well. Therefore, under normal circumstances, increase GNP can increase government revenue and it can stimulate government spending. These expenditures are mostly used for administrative needs of development and the rest is used for development activities in different types of major infrastructure.

The concept of economic growth is defined as the increase in GDP or GNP, regardless of whether the increase is larger or smaller than the population growth rate or whether there is a change of economic structure or not (Arsyad, 2004). Definition of Gross Regional Regional Income (GDP) is the sum of value added generated for the whole of the business in a particular region or the total value of final goods and services produced by the entire economic unit in an area (BPS, 2012).

According to the theory of economic growth Neo Classical Solow-Swan (Sukirno, 2006) some factors that play a role in stimulating economic growth that is labor, capital accumulation and the rate of technological progress. According to Mankiw (2007)

government expenditure for the purchase of goods and services for the fulfillment of public service is one component of GDP forming which will lead to the exchange of goods and services output in the economy. According to Tambunan (2011), government spending is part of a fiscal policy that aims to spur economic growth. But on the other side of the Ram (2006) found that greater government spending tends to reduce economic growth.

The program will increase capital expenditures directly related to the increase in heterogeneous infrastructures such as agricultural inputs, transport and other infrastructure that directly sustains the productivity and welfare. Results of research and Abdullah Halim (2006) shows that the allocation of capital expenditures related to the availability of funding from local revenue. While Sularso (2011) shows that capital expenditure has positive influence on economic growth so that the allocated budget can be a stimulus to the economy.

Empirical research on the relationship between capital expenditure (public investment) with economic growth at different conclusions. Based on the assessment of some theory or research results, as we said above, this research is to formulate the hypothesis that there is a bidirectional relationship between capital spending and economic growth. That is, the amount of capital expenditures effect on economic growth and on the contrary, economic growth could affect the amount of capital expenditures of local governments.

Hypothesis Development

Based on these explanatioan then compiled the research hypothesis as follows;

- H1: The relationship between Capital Expenditure and Economic Growth in Bantul district is reciprocal (two way)
- H2: The relationship between Capital Expenditure and Economic Growth in Gunung Kidul district is reciprocal (two way)
- H3: The relationship between Capital Expenditure and Economic Growth in Kulon Progo district is reciprocal (two way)
- H4: The relationship between Capital Expenditure and Economic Growth in Sleman district is reciprocal (two way)
- H5: The relationship between Capital Expenditure and Economic Growth in Yogyakarta city is reciprocal (two way)

RESEARCH METHODS

Research Design

The design of this research is explanatory, the research was designed through the stages of collecting the necessary data, the determination of the analytical tools used, and the analysis of the data used.

Data Collection Technique

All data used in this research is secondary data gathered from relevant agencies including the Ministry of Finance and the Central Statistic Agency {BPS} and Indonesia Bank.

Research Model

This study aimed to analyze the effect of two-way (two-way relationship) between capital spending and economic growth in DIY. Causality test aims to examine the causal relationship between the two variables.

Test the causality between the two variables do because investigators did not have confidence about the direction of the causal relationship of these variables (Ender, 2004). A variable can be any direct effect on the same period of the other variables, but can also affect through inaction (lag). So by doing this causality test we can find out whether an endogenous variable can be used as an exogenous variable in the model.

This research uses Granger Causality Test to test the causal relationships between variables observed. The general form of regression equation estimates show a causal relationship between the variables X and Y are as follows:

$$Y_t = \sum_{i=1}^n \alpha_i Y_{t-i} + \sum_{j=1}^n \beta_j X_{t-j} + \varepsilon_{1t}$$

$$X_t = \sum_{i=1}^m \gamma_i Y_{t-i} + \sum_{j=1}^m \delta_j X_{t-j} + \varepsilon_{2t}$$

The null hypothesis on the causality test using the Granger Causality Test stating that X does not cause Y and Y does not cause X. To test this hypothesis required test value F. F test value can be determined using the following formula:

$$F = \left(\frac{N-k}{q} \right) \left(\frac{SSE_{limited} - SSE_{full}}{SSE_{full}} \right)$$

SSE_{full} value can be determined from the results of the regression $Y_t = \sum \alpha_i Y_{t-1} + \sum \beta_i X_{t-1} + \varepsilon_t$, while limited SSE obtained from the regression $Y_t = \sum \alpha_i Y_{t-1} + \varepsilon_t$. Symbol N is the number of observations, k is the number of parameters in full regression, and q is the number of parameters in a limited regression. If the test results reject the null hypothesis that X does not cause Y, then, of the test can be concluded that X causes (effect on) Y.

Before the test causality test is conducted prior to stationarity research data. Test equipment used is the roots unit (unit roots test). The study, using time series data required information about stationary data to be valid .. unit root test in this study using Augmented Dickey-Fuller test (ADF Test). General formulation of ADF test is as follows

$$\Delta Y_t = \beta_1 + \beta_2 + \delta Y_{t-1} + \sum_{i=1}^m \alpha_i Y_{t-i} + \varepsilon_t$$

Symbols Y_t is the observed variables in period t, Y_{t-1} is the value of the variable Y in the previous period. Magnitude is a constant β_1 , β_2 is the coefficient of the trend, α_i is the coefficient of lag variable Y, m is the length (duration) lag, and ε_t is a white noise error terms. The null hypothesis states that $\delta = 0$. This means that Y_t has a unit roots. If the data is a variable have unit roots, it can be concluded that the data variable is not stationary.

The research data are expected to stationary on the level of a certain level. If this is the case, then the observed variables have a short-term equilibrium. However, the research data may not stationary at the level of a certain level. For data that are not stationary at the

level necessary to test the level of cointegration. Cointegration between two or more variables is a combination of linear relationships of the variables are nonstationary and all variables must be integrated on the same degree. The variables that have integrated the same stochastic trend and have the same direction of movement in the long term.

Cointegration test aims to determine the nature of residual regression models estimated in the study period, whether stationary or not stationary. Tests of cointegration between variables research conducted after the test results obtained on the nature of research data, which is stationary at the same rate or stationary at different degrees. However, if the research data is stationary at different degrees, then the value of the coefficient of residual (error correction term) in the error correction model (error correction model) can be used to determine the cointegration data. Because, cointegration test can be done with normality test the long-term estimation equation or the stationary test of long-term residual estimation equation (Enders, 2004).

Normality test the long-term estimation equation is done by testing the normality of the residuals of regression equation estimates the long-term. A regression equation that estimates have normally distributed residuals resulting statistical examination of the influence of the independent variables individually (t test) or simultaneously (F test) will be valid. Normality test residual long-term regression estimation using test Jarque-Bera (J-B test). Cointegration tests with a stationary test the long-term residual estimation equation is done in the same way as research data stationary test, which uses Augmented Dickey-Fuller Test.

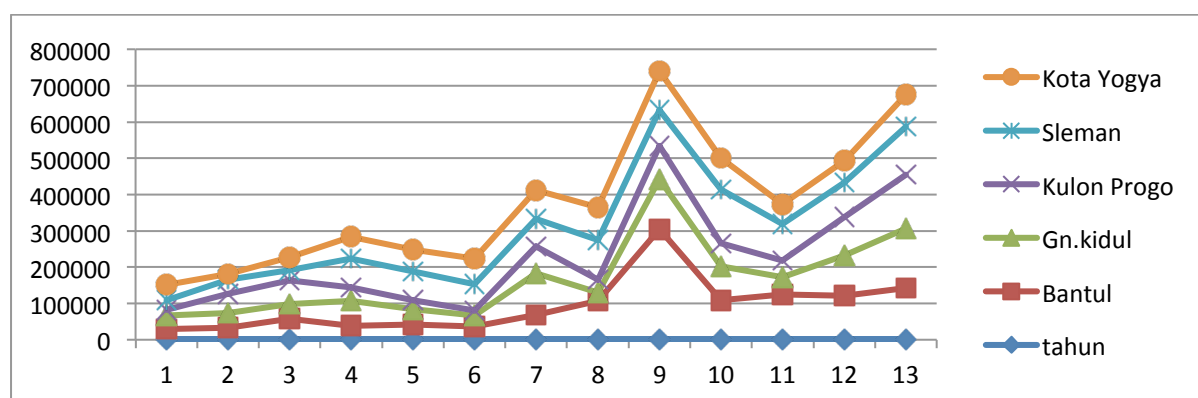
RESULTS AND DISCUSSION

In this chapter will discuss the results of data processing for descriptive analysis and the data processing for inferential analysis. The results of the study with a descriptive analysis of the GDP growth in the form of presentation graphics, Economic Growth and Development Capital Expenditures from time to time for each district / city in Yogyakarta. Based on the graph drawn up discussion about the direction of change in the GDP, Economic Growth and Development Capital Expenditures from time to time. While the test results with inferential analysis is done by testing hypotheses about the correlation between Economic Growth in each district / town DIY observed. Then proceed with the testing of the causality between the Economic Growth Capital Expenditures Development. magnitude.

Observation data by comparing the condition of capital expenditure across districts / cities in DIY essential. It can show the dominance per region in determining the amount of development spending in financing environmental infrastructure. Here is an illustration that shows the magnitude of capital expenditures for all districts / cities in DIY.

Figure 2

Capital Expenditure District / City DIY

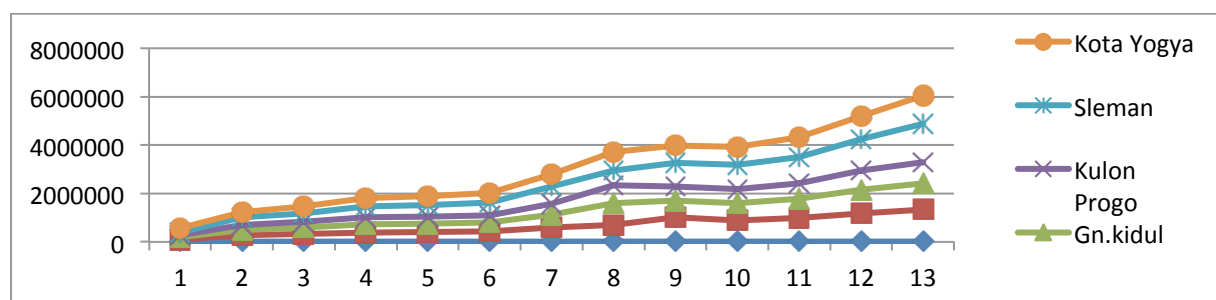


Based on the figure above, the city of Yogyakarta has a level of capital expenditure spending most large compared to other districts. This was followed by the districts of Sleman, Kulon Progo, Gunung Kidul and Bantul. The pattern of change in the amount of capital expenditure over the years for all districts / cities DIY unless Bantul are relatively the same. Fourth district / city experienced an increase in capital expenditures in 2006 and 2008 and declined in 2007 and 2010.

An illustration of the magnitude of change in the GDP districts / cities in the province in 2000 to 2012 is shown in the following figure.

Figure 3

The Magnitude of GRDP Changes

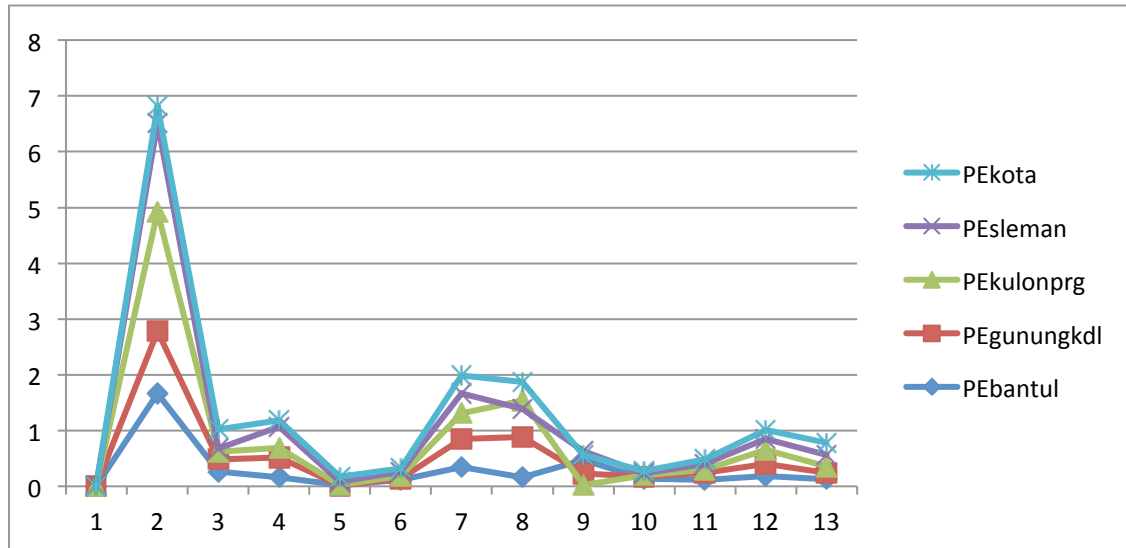


Source: Economic Report DIY, BI (2012, 2014)

Changes in the GDP figures from 2000 to 2012 for all districts / cities in the province, such as in the picture above, indicates that a change or an increase in the GDP in the city of Yogyakarta is more volatile than the other districts condition. As with the pattern of increase in the GDP in Gunung Kidul district or Bantul relatively stable. Furthermore, the percentage change in the GDP from year to year can be illustrated in the figure below. This is nothing but an economic growth rate of each district / city in the province.

Figure 4

The Percentage of GRDP Changes



Source: Economic Report DIY, BI (2012, 2014)

Statistical values for the correlation between Government Capital Expenditure by economic growth (GDP) DIY respective district / city as shown in the following table.

Table 2

Correlation Statistical Value

District/Cities (1)	Correlation Coefficient (2)	t statistical (3)	Probability Value (4)	Conclusion (5)
Bantul	0,725	3,4910	0,005	Significant 1%
Gunungkidul	0,586	2,3985	0,035	Significant 5%
Kulonprogo	0,702	3,2692	0,007	Significant 1%
Sleman	0,8	4,4222	0,001	Significant 1%
Yogyakarta	0,628	2,6764	0,021	Significant 5%

In the first column listed the name of county / city observed, namely Bantul, Gunung Kidul, Kulon Progo, Sleman and Yogyakarta. Column 2 shows the correlation coefficient between the Government Capital Expenditure by economic growth (GDP) of each district / city. The results of calculation of the correlation coefficient between the Government Capital Expenditure by economic growth (GDP) showed that the Sleman district has the highest correlation coefficient of 0.8, followed by the districts of Bantul in second place (at 0.725) and third in the Kulon Progo district which amounted to 0,702. The correlation coefficient is low owned by the district of Gunung Kidul.

The second phase inferential analysis in this study was to test stationary research data. Stationary test research data conducted for this study using time series data, where the data time series have a tendency not stationary. Meanwhile, the use of time series data in the study requires that data must be stationary. The following table shows the statistics necessary to analyze the stationary nature of the research data for each district / city in Yogyakarta (observed).

Table 3
Stationary Test Result

District/Cities	ADF Statistic	Probability	Result
Bantul	-3,153332	0,0998	Significant 10% (degree 1)
Gunung Kidul	-2,648901	0,0228	Significant 5% (level degree)
Kulon Progo	-3,688826	0,0098	Significant 1% (degree 2)
Sleman	-3,099926	0,0516	Significant 10% (degree 1)
Yogyakarta	-2,929761	0,0752	Significant 10% (degree 1)

The study of stationary data using the null hypothesis that the data have unit roots. Data that have unit roots indicate that the data held is not stationary. If the data in the test results indicate that data stationer Government Capital Expenditure and economic growth (GDP) derived from Bantul, Sleman and Yogyakarta are significant at the 10% alpha test or grade 1 (first difference). This is indicated by the number three districts ADF statistic is lower than 10% negligent. Testing ADF with a significance level of 1 per cent shown in the research data in Sleman district. This is shown by the statistic ADF figure is lower than 5% negligent or 2nd degree (second difference). The results of the ADF test with significance level of 5 percent provide results that are statistically significant value of ADF on the degree level. Based on research data stationary test results in each district / city gave the conclusion that all the data used is stationary.

The third stage in the inferential analysis of this study was to test the causality between the Government and the Capital Expenditure rate of economic growth (GDP) of the respective districts / cities in DIY. Test the causality between these two variables is done by using the Granger Causality Test. With this test, the effect of variable X to variable Y can be identified by comparing the probability value (Prob.) With a significance level used. If the probability value is lower than the significance level is used, it means that the variable X terhdapat influential variable Y or vice versa. The results of test calculations causality of the whole object of research is shown in the following table:

Table 4
Causality Test: Calculation Results

	BANTUL	GUNUNG KIDUL	KULON PROGO	SLEMAN	YOGYA
LAG 1					
PE not influence BM	3,01660 (0,11643)	13,3365*** (0,00530)	5,01737* (0,05185)	6,84864** (0,02795)	1,35486 (0,27436)
BM not influence PE	3,03476 (0,11548)	2,84707 (0,12581)	0,78613 (0,39835)	0,03235 (0,86124)	0,68220 (0,43018)
LAG 2					
PE not influence BM	0,83961 (0,47698)	18,6083*** (0,00268)	3,51306* (0,09773)	1,51488 (0,29338)	5,46077** (0,04458)
BM not influence PE	2,11285 (0,20201)	0,94745 (0,43895)	1,16408 (0,37394)	0,45597 (0,65412)	0,25823 (0,78058)

Remarks: *** significant 1%, 5% dan 10% , ** significant 5% dan 10% , *significant 10%

The table shows the calculation results of the statistical value of data BM (CapEx) with PE (Growth) in the district of Bantul using inaction factor 1 (lag 1) and inaction 2 (lag 2). At the level of inaction 1, the hypothesis that economic growth (PE) has no effect on (not cause) BM (Capital Expenditure) is acceptable, as indicated by the F-Statistic probability value of 0.1164, or 11.64 percent greater than the significance level of 10 percent, 5 percent or 1 percent. It can be concluded that in the district of Bantul, economic growth does not affect the

(not cause) Capital Expenditures Development. For the following analysis, the hypothesis that BM had no effect on (not cause) PE is received, either by using t-value significance of 10 percent, 5 percent and 1 percent. This is indicated by the F-Statistic probability value of 0.11548 or 11.548 percent greater than the significance level of 10 percent, 5 percent, or 1 percent. It can be concluded that in the district of Bantul, Cost of Capital Development does not affect (not cause) its Economic Growth.

At the level of slackness 2 (lag 2), the hypothesis that economic growth (PE) has no effect on (not cause) BM (Capital Expenditure) is acceptable. This is indicated by the F-Statistic probability value of 0.47698 or 47.698 percent greater than the significance level of 10 percent, 5 percent or 1 percent. It can be concluded that in the district of Bantul, economic growth does not affect the (not cause) Capital Expenditures Development. For the following analysis, the hypothesis that BM had no effect on (not cause) PE is acceptable. This is indicated by the F-Statistic probability value of 0.20201 or 20.201 percent greater than the significance level of 10 percent, 5 percent, or 1 percent. It can be concluded that in the district of Bantul, Capital Expenditure Development does not affect the (not cause) of its Economic Growth.

At the level of inaction 1, the hypothesis that economic growth (PE) has no effect on (not cause) BM (Capex) was rejected. This is indicated by the F-Statistic probability value of 0.0053 or 0.53% less than the significance level of 10 percent, 5 percent or 1 percent. It can be concluded that in the district of Gunung Kidul, Economic Growth affect the (lead) Capital Expenditures Development. For the following analysis, the hypothesis that BM had no effect on (not cause) PE is received, either by using a significance level of 10 percent, 5 percent and 1 percent. This is indicated by the F-Statistic probability value of 0.12581 or 12.581 percent greater than the significance level of 10 percent, 5 percent, or 1 percent. It can be concluded that in the district of Gunung Kidul, Capital Expenditure Development does not affect the (not cause) of its Economic Growth.

At the level of slackness 2 (lag 2), the hypothesis that economic growth (PE) has no effect on (not cause) BM (Capex) was rejected, both with a significance level of 10%, 5% and 1%. This is indicated by the F-Statistic probability value of 0.00268 or 0.268 percent smaller than the significance level of 10 percent, 5 percent or 1 percent. It can be concluded that in the district of Gunung Kidul, Economic Growth affect the (cause) Capital Expenditures Development. For the following analysis, the hypothesis that BM had no effect on (not cause) PE is received, either by using a significance level of 10 percent, 5 percent and 1 percent. This is indicated by the F-Statistic probability value of 0.43895 or 43.895 percent greater than the significance level of 10 percent, 5 percent, or 1 percent. It can be concluded that in the district of Gunung Kidul, Capital Expenditure Development does not affect the (not cause) of its Economic Growth.

For Kulon Progo Regency, at the level of inaction 1, the hypothesis that economic growth (PE) has no effect on (not cause) BM (Capex) was rejected. This is indicated by the F-Statistic probability value of 0.05185 or 5.185% smaller than the 10 percent significance level. It can be concluded that in Kulon Progo regency, Economic Growth affect the (cause) Capital Expenditures Development. For the following analysis, the hypothesis that BM had no effect on (not cause) PE is received, either by using a significance level of 10 percent, 5 percent and 1 percent. This is indicated by the F-Statistic probability value of 0.39835 or 39.835 percent greater than the significance level of 10 percent, 5 percent, or 1 percent. It can

be concluded that in the district of Mount Kulon Progo, Capital Expenditure Development does not affect the (not cause) of its Economic Growth.

The test results on the level of inaction 2 (lag 2), the hypothesis that economic growth (PE) has no effect on (not cause) BM (Capex) was rejected with a significance level of 10 percent. This is indicated by the F-Statistic probability value of 0.09773 or 9.773 percent smaller than the 10 percent significance level. It can be concluded that in Kulon Progo regency, Economic Growth affect the (cause) Capital Expenditures Development. For the following analysis, the hypothesis that BM had no effect on (not cause) PE is received, either by using a significance level of 10 percent, 5 percent and 1 percent. This is indicated by the F-Statistic probability value of 0.37394 or 37.394 percent greater than the significance level of 10 percent, 5 percent, or 1 percent. It can be concluded that in Kulon Progo regency, Capital Expenditure Development does not affect the (not cause) of its Economic Growth.

Furthermore, in the district of Sleman with inaction level 1, the hypothesis that economic growth (PE) has no effect on (not cause) BM (Capex) was rejected. This is indicated by the F-Statistic probability value of 0.02795 or 2.795 percent smaller than the significance level of 10 percent and 5 percent. It can be concluded that in the district of Sleman, Economic Growth affect the (cause) Capital Expenditures Development. For the following analysis, the hypothesis that BM had no effect on (not cause) PE is received, either by using a significance level of 10 percent, 5 percent and 1 percent. This is indicated by the F-Statistic probability value of 0.86124 or 86.124 percent greater than the significance level of 10 percent, 5 percent, or 1 percent. It can be concluded that in the district of Sleman, Cost of Capital Development does not affect the (not cause) of its Economic Growth.

Unlike the inaction level 2 (lag 2), the hypothesis that economic growth (PE) has no effect on (not cause) BM (Capital Expenditure) is received by using a significance level of 10 percent, 5 percent and 1 percent. This is indicated by the F-Statistic probability value of 0.29338 or 29.338 percent greater than the significance level of 10 percent, 5 percent and 1 percent. It can be concluded that in the district of Sleman, economic growth does not affect the (not cause) Capital Expenditures Development. For the following analysis, the hypothesis that BM had no effect on (not cause) PE is received, either by using a significance level of 10 percent, 5 percent and 1 percent. This is indicated by the F-Statistic probability value of 0.65412 or 65.412 percent greater than the significance level of 10 percent, 5 percent, or 1 percent. It can be concluded that in the district of Sleman, Capital Expenditure Development does not affect the (not cause) of its Economic Growth.

What about the city of Yogyakarta? At the level of inaction 1, the hypothesis that economic growth (PE) has no effect on (not cause) BM (Capital Expenditure) is acceptable. This is indicated by the F-Statistic probability value of 0.27436 or 27.436 percent greater than the significance level of 10 percent and 5 percent. It can be concluded that in the city of Yogyakarta, economic growth does not affect the (not cause) Capital Expenditures Development. For the following analysis, the hypothesis that BM had no effect on (not cause) PE is received, either by using a significance level of 10 percent, 5 percent and 1 percent. This is indicated by the F-Statistic probability value of 0.43018 or 43.018 percent greater than the significance level of 10 percent, 5 percent, or 1 percent. It can be concluded that in the city of Yogyakarta, Capital Expenditure Development does not affect the (not cause) of its Economic Growth.

Recently Reviewed inaction level 2 (lag 2), the hypothesis that economic growth (PE) has no effect on (not cause) BM (Capital Expenditure) is rejected, using a significance level of 10 percent and 5 percent. This is indicated by the F-Statistic probability value of 0.04458 or 4.458 percent smaller than the significance level of 10 percent and 5 percent. It can be concluded that in the city of Yogyakarta, Economic Growth affect the (cause) Cost of Capital Development. For the following analysis, the hypothesis that BM had no effect on (not cause) PE is received, either by using a significance level of 10 percent, 5 percent and 1 percent. This is indicated by the F-Statistic probability value of 0.78058 or 78.058 percent greater than the significance level of 10 percent, 5 percent, or 1 percent. It can be concluded that in the city of Yogyakarta, Capital Expenditure Development does not affect the (not cause) Economic Growth.

CONCLUSIONS & SUGGESTIONS

This study aims to examine the causality between the Capital Expenditure Development with Economic Growth. The object scope of the data used is limited to districts / cities in the Special Region of Yogyakarta (DIY), namely the districts of Bantul, Gunung Kidul district, Kulon Progo regency of Sleman and Yogyakarta. Inferential analysis in this study was conducted in three (3) stages, correlation, stationary test data, and test the causality between the Capital Expenditure Development and Economic Growth in each district / city observed. Based on the data and the results of the previous discussion, obtained some conclusions as follows:

1. Capital Expenditure (Capex) and Economic Growth has a positive correlation in each district / city of Yogyakarta. This means that when the level of Capex was high, economic growth each county / city are also likely to be high or vice versa.
2. Test Augmented Dickey Fuller (ADF) is used for the detection of stationary research data. ADF test results indicate that the research data from all districts / cities DIY observed is stationary.
3. Test the causality between the Capital Expenditure and Growth in Bantul to the conclusion that economic growth does not affect the Capital Expenditure Development. Likewise, on the contrary that the Capital Expenditure has no influence on the economic growth. These test results show that in the district of Bantul not happen causal relationship (the independent) between the Capital Expenditure Growth Bantul district.
4. Test the causality between the Capital Expenditure and Growth in Gunung Kidul district to the conclusion that economic growth had an influence on Capital Expenditure. However, Capital Expenditure had no effect on Economic Growth. These test results show that in the district of Gunung Kidul circuit occurs in one direction (unidirectional) between Capex level Economic Growth.
5. Test the causality between the Capital Expenditure Growth in Kulon Progo district to the conclusion that economic growth had an influence on Capital Expenditure. However, Capital Expenditure had no effect on Economic Growth. These test results show that in Kulon Progo district of a relationship in one direction (unidirectional) between Capex and Economic Growth.
6. Test the causality between the Capital Expenditure and Growth in Sleman district to the conclusion that economic growth had an influence on Capital Expenditure. However, Capital

Expenditure had no effect on Economic Growth. These test results show that in Sleman regency of a relationship in one direction (unidirectional) between Capex level Economic Growth.

7. Similar to the results of analysis previously described both in Bantul, Sleman and Gunung Kidul. Test the causality between the Capital Expenditure Growth in the city of Yogyakarta to the conclusion that economic growth had an influence on Capital Expenditure. However, Capital Expenditure had no effect on Economic Growth. The test results showed that in the city of Yogyakarta occurred relationship in one direction (unidirectional) between Capex and Economic Growth.

Based on the results of this study can be formulated some suggestions as follows:

1. Economic Growth Capital Expenditure effect on development in the district of Gunung Kidul, Kulon Progo, Sleman and Yogyakarta. If there is an increase in the economic growth of all four districts / cities can increase capital expenditures in the area of development. It is strongly advised to Local Government of each district / city to focus regional policies on efforts to increase economic growth. With increasing economic growth of each region, the amount of capital expenditure for the financing of the construction can be further improved.

2. Future research can be done to some areas or other provinces outside the district / city of Yogyakarta to obtain information about the relationship between Capex and economic growth as the comparative results of this study.

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