



How Government Spending on Public Sector Affect The Economic Growth?

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Abstract

Fiscal decentralization is an effort to reform governance so that it has a more effective and efficient structure so that it can improve services to the community. Efforts to achieve these goals are largely determined by the availability of human resources, natural resources, and other economic potential. The formation of New Autonomous Regions (NAR) grew rapidly, but on the other hand local governments were unable to fund development activities independently but were dependent on balance funds. The objective to be achieved is to analyze the effect of regional government spending on education, health, and infrastructure, as well as other variables namely labor on the economic growth of new autonomous regions in Indonesia. The analysis model used is panel data regression. The results of the study prove that local government spending in real per capita education, real health (lag-1) per capita, and real per capita infrastructure, and the number of workers have a positive and significant effect on economic growth. Economic growth that occurs in the district is not different from the city, so also in the base sector is mostly no different except the mining and quarrying sector.

Key words : Local Government Spending, Panel Data, Establishment of NAR

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INTRODUCTION

The role of government spending on economic growth is the subject of debate for researchers and academics. Studies on the role of government spending on economic growth have been carried out and the results are often not the same. Some researchers conclude that government spending has a positive effect on economic growth, and some conclude the opposite. In Indonesia the topic of the relationship between regional government spending and economic growth is interesting to study. This was driven by the incessant implementation of fiscal decentralization since 1999. Fiscal decentralization is an effort to reform governance so that it has a more effective and efficient structure so that it can improve services to the community. According to the United Nations Development Program (UNDP), local government public services include education, health, and infrastructure. The process of fiscal decentralization has impacted on local governments to expand districts/ cities or provinces with consideration of increasing population, vast territory, varied characteristics and economic potential.

Based on the Government Regulation of the Republic of Indonesia Number 129 of 2000 regarding the requirements for the formation and criteria for the expansion, elimination, and merger of regions in article 2 states that the purpose of expansion is to improve people's welfare through improving services to the community, accelerating the growth of democratic life, developing regional economy, managing regional potential, and increasing harmonious relations between the center and the regions. The experience of expansion conducted in several countries such as Slovakia and Hungary became an issue of debate between academics and politicians. Fox & Gurley

(2006) explain that each country has different considerations such as its background, goals and political motivation.

Expansion in Indonesia can be in the form of one province which is divided into two or more provinces. The same thing can be done at the district/ city level, namely the division of one district/ city into two or more districts/ cities. The success of NAR economic development can be measured by the achievement of Gross Regional Domestic Products (GRDP). Efforts to increase GRDP can be done by increasing economic sector development activities. Regional development activities are determined by the ability of the Regional Budget.

The impact of local government spending on economic growth in a region can be measured using GRDP. Basically, GRDP is the total amount of added value generated as a result of economic activity. GRDP can be used as a benchmark for the government and other parties to evaluate the success of economic development, and can be used to determine regional economic development as a whole or by sector. GRDP based on constant prices provides a real picture of regional economic growth, while GRDP based on current prices (at current price) provides a description of the contribution or share of each sector in the regional economic structure while simultaneously being used to develop development policy priorities.

The Indonesian ministry of development planning study in collaboration with UNDP in 2008 (Bappenas & UNDP, 2008) in the New Autonomous Region (NAR) formed in 2000-2005 generally concluded that development progress was relatively unfavorable compared to its parent region; the development of economic development is relatively smaller than the parent region; the level of welfare as measured by the GRDP per capita is still behind compared to the parent region. Meanwhile, in the aspect of public services, especially education shows

that NAR has not yet developed. This condition is seen from the availability of middle-level educators and supporting infrastructure. The same condition also occurs in the quality and quantity of health workers. Public services measured by the availability and quality of existing roads in new autonomous regions are lower than the parent regions.

The acceleration of NAR development is hampered because not all NARs have superior economic potential. Another limitation is that efforts to exploit this economic potential require adequate human resources both in quality and quantity. Another factor that is also important as a development facility is the availability of public infrastructure. The NAR government is not able to allocate most of the local government expenditure to disburse the facility.

The new autonomous region, which was formed in 1999, is now a decade old, but most NARs have relatively small regional revenues derived from Local Original Revenue (LOR). Its construction activities are mostly funded through central funds in the form of balance funds. The proportion of regional own-source revenue with the central balance fund on average shows that the proportion of the balancing fund is higher than the LOR in both districts and cities. In general, in the beginning the formation of regional revenue sources NAR was dominated by balance funds.

In this study using the theory of modern economic growth, which was preceded by classical economists, explains that the household world is optimizing continuously and indefinitely. Use the production function as a model of economic growth that has a small substitution level among the input variables, assuming a constant return to scale. This model

considers that economic growth is caused by a delay in consumption (savings), and is used for investment. In other words, saving (saving) and investment are important factors to accelerate the rate of economic growth.

Government expenditure also influences economic growth. Government expenditure is a form of government intervention that is designed to increase allocative efficiency through correcting market failures, distributing resources equitably, encouraging economic growth, and maintaining stability. According to the Keynesian school, government spending can spur economic growth. This view explains that the increase in government spending will encourage an increase in the demand for various goods and services produced in an economy in the aggregate so as to encourage economic growth.

Government expenditure is an exogenous force that is able to change aggregate output. This shows that economic growth is a function of government expenditure. In contrast, Wagner's Law states that the increased expansion of public activity emphasizes the function of economic growth as the main determinant of public sector growth. According to Lin & Liu (2000), decentralization has a very significant impact on the regional economy.

Nurudeen & Usman (2010) stated that the government must increase capital expenditure and routine expenditure, including spending on education, and ensure that funds intended for the development of these sectors are well managed. The government must increase its expenditure in the development of the health sector because it will increase labor productivity and economic growth. In line with Saad & Kalakech (2009) research explains in the long run, spending on education is found to be significantly positive and spending on defense shows a negative relationship with economic growth. However, spending on health and agriculture is insignificant. Short-term, the

results reveal a negative relationship between education and health spending. Meanwhile, expenditure on agriculture and defense is not statistically significant.

The importance of the right allocation and the right amount will contribute to the creation of economic growth. In accordance with Taiwo & Abayomi (2011), Loizides & Vamvoukas (2005), it concluded that the higher government expenditure, the higher the rate of economic growth (*ceteris paribus*) and the lower the government expenditure, the lower the country's economic growth rate. The recommendation given is that the government should increase efficiency in the allocation of development resources through an emphasis on participation in the private sector and commercialization.

In addition, the presence of competitiveness in NAR also affects economic growth. Regional competitiveness is a potential strategy to be implemented in NAR lagging behind in order to improve the welfare of the community. This strategy cannot stand alone because it is more supply-side. The demand side is not given enough attention, so proposals to develop through cooperation between regions can increase the competitiveness of lagging NARs. Efforts to create competitiveness can be done by choosing one of three strategies, namely the strategy of cost leadership, differentiation, and focus (generally, they are known as competitive strategies).

This study is a modification of another study idea on economic growth-relations of government expenditure. The importance of this research was carried out because in Indonesia since 2001 the DOB was intensively formed. This research is different from previous studies because it was conducted in a new autonomous region. As a new local government, it will certainly endeavor to use government spending efficiently and on target. Wu et al. (2010)

explains that low-income countries generally have bad institutions and corrupt governments, which cause government spending to be irrelevant or damage economic growth. The basic consideration is that government spending is the sector that drives economic growth. Sectors that are encouraged are the main sectors including education, health, infrastructure, and labor.

METHOD

The type of data used is the data panel (panel pooled data) which combines observational data across sectors (cross-section) and time series data (time series). The data cross section includes NAR consisting of districts/ cities that were divided in 1999. While the data time series used in the timeframe from 2001 to 2010. The data used are data relating to the economic development of the New Autonomous Region (NAR), government expenditure, population, labor, and other supporting data. The data in question is secondary data obtained from various sources and the latest data is up to date and as complete as possible. Secondary data sources will be obtained from the Directorate General of Regional Autonomy of the Ministry of Home Affairs, the Ministry of Finance, the Central Statistics Agency, the Directorate General of Regional Fiscal Balance, or others.

This study uses a panel data analysis model, to determine the model used. This study estimates panel data using: Significance of the model fixed effects test was carried out with the Chow test. This test is used to determine panel data regression techniques with Fixed Effect better than the regression model common effects. The hypothesis null (H_0) that is used is model of common a better effect, meaning that there is no difference between individuals.

Significance test Random Effect can be used test Langrange Multiplier (LM). This model is based on the residual value of the model common effects. The hypothesis null (Ho) uses the variance value of the individual specific effect α_1 equals zero, $\sigma_2\alpha = 0$ in other words there are no unobserved effects on the component error model random effects. This means that the model common effects is better than the random effects model.

The determination of the model is Fixed Effect or Random Effect based on the idea that the LSDV in the Fixed Effect and GLS methods is efficient while the method common effects is inefficient. Conversely the method is common effects efficient and but GLS is not efficient it needs to be done Hausman test. The results of the method Hausman test are that the difference in covariance from an efficient estimator to an inefficient estimator is zero, then following the Wald criteria, this Hausman test will follow the distribution chi-squares. Hausman test statistics follow the statistical distribution Chi Square with a degree of freedom of k where k is the number of independent variables. If the statistical value is greater than the critical value, then the right model is the model, Fixed Effect whereas vice versa, if the Hausman statistical value is smaller than the critical value, then the right model is the model Random Effect.

The model used to analyze the effect of government spending on economic growth in new autonomous regions is a regression analysis. This study will use these variables plus other variables such as population, labor, and dummy variables Regency/ city, and a solid base economy Sector encourages economic growth, and is formulated following the solow economic growth model as follows:

$$Y_t = F(K_t^\alpha, L_t^\beta) \quad (1)$$

Where: Y is output; K is capital; L is labor; and t is time.

Include other variables, namely population and variables dummy consisting of districts/ cities. The models estimated in this study are:

$$Y = f(PPEND, PKES, PINFRA, TK, Dkab/ kot) \quad (2)$$

From equation 1 and 2 obtained:

$$EG = f(PPEND^{\alpha_1} PKES^{\alpha_2} PINFRA^{\alpha_3} TK^{\alpha_4} district/city^\beta) \quad (3)$$

Using a linear empirical model, equation 3 is derived using ln (natural logarithm) so that the regression equation is obtained as follows:

$$E_{Git} = \alpha_0 + \alpha_1 \ln PPEND_{it} + \alpha_2 \ln PKES_{it} + \alpha_3 \ln PINFRA_{it} + \alpha_4 \ln TK_{it} + \beta DKab/kota_i + \varepsilon_t \quad (4)$$

Where: E_{Git} is economic growth (%); PPEN is education expenditures (real/ capita); PKES is health expenditure (real/ capita); PINFRA is infrastructure expenditures (real/ capita); TK is labor; DKab/ kota is 1 if regency and 0 if city; α_0 is intercept (constant); ε_t is error term.

RESULTS AND DISCUSSION

Panel data regression analysis to answer the fourth research objective and simultaneously test the research hypothesis. The research objective is to analyze the effect of government spending on education, health, infrastructure, labor, and variables dummy. The Variable dummy consists of districts/ cities, and base/ non-base sectors. Panel data regression analysis using the approach Common Effect Panel Least Squares (PLS), Fixed Effect Model (FEM), and Random Effect Model (REM). to choose a good or estimation model efficient between FEM, or REM, can use consideration if N (the amount of data cross-sectional) is greater than T (the amount of data time series), then it is recommended to use REM. This study has all

the characteristics to REM, is more appropriate to use. Test Lagrange Multiplier (LM) is still being done to ensure that the selected model is appropriate. If the LM is greater than chi-square $\alpha = 5\%$, then the right estimation model is the REM model.

This study uses the dependent variable of economic growth and the independent variable consisting of real/ capita education expenditure, real/ capita health expenditure, real/ capita infrastructure expenditure, labor, and variables dummy district/ city, as well as the base/ non-base sectors, with 32 cross-sections, and a span of 10 years, the results of panel data regression are presented in Table 1.

Table 1. Summary of Regression Results

Variables	Model	
	1	2
C	-0.2159 (-4.1655) *	-0.1571 (-2.7745) *
DKAB	-0.0045 (-0.8924)	-0.0009 (-0.1338)
LN_PPEND	0.0098 (4.6347) *	0.0082 (4.1662) *
LN_PKES	-0.0116 (-3.8221) *	-0.0075 (-2.6722) *
LN_PKES (-1)	0.0032 (1.6122)	0.0023 (1.3762)
LN_PINFRA	0.0095 (5.5892) *	0.0058 (3.2332) *
LN_TK	0.0061 (2.6449) *	0.0057 (1.8961) *
Adjusted R-squared	0.2523	0.1295
F-Statistic	7.9204	4.0521
Prob (F-Statistic)	0.0000	0.0000
DurbinWatson Stat	0.8590	1.1363

Source: Results of regression, processed

Note:

Figures in parentheses = t statistical

Model 1 = PLS ordinary SE

Model 2 = Random Effect EGLS ordinary SE

1. * significance at $\alpha = 5\%$; 2. $t(nk; \alpha) = t(306; 5) = 1.645$

The selection of the estimation model is carried out in order to obtain an efficient model or the best between the approaches common effect model or REM, then performed The LM test is. This test refers to the value of chi-square statistics were compared with value chi-square tables (df, α). LM test results obtained value chi-square statistical amounted to 159.0085 while the value of chi-square table(15,5)= 25. Thus the value of LM>chi-square table or (159.0085> 25), it is concluded that the REM test is more appropriate than the common effect model.

In addition to the regression test using REM with ordinary standard errors also, testing of classic assumptions such as the autocorrelation test is carried out, to determine the correlation between the interference variables of one observation with another. The autocorrelation test was performed using the Durbin-Watson (DW) test and the Breusch-Godfrey test. Based on the dw test obtained dw value statistical = 1.136, while the dw value (320, 0.05) obtained dl = 1.621 and du = 1.919. The test results indicate that the value of $0 < dw < dl$ or $1.136 < 1.621 < 1.919$ thus the value of dw is in the area of rejecting H_0 , and it is concluded that there are problems autocorrelation in the model. Breusch-Godfrey test obtained the value of R-square = 0.4057 at $n = 224$, then R-square multiplied by n obtained the value of BG = 90.8918, while the R-square table at $df = 2$ is 5.99 which means the model contains problems autocorrelation. A summary of the regression results using random effects (EGLS), white cross-section standard errors with three models is presented in Table 2.

Table 2. Summary of Results of Regression

Variable	Model	
	3	4
C	-0.1650 (-2.1624) *	-0.1636 (-2.1832) *
DKAB	0.0026 (0.5309)	-
LN_PPEND	0.0081 (5.7290) *	0.0082 (5.4987) *
LN_PKES	-0.0073 (-4.3476) *	-0.0074 (-4.1326) *
LN_PKES (-1)	0.0020 (2.1718) *	0.0021 (2.1813) *
LN_PINFRA	0.0058 (2.1171) *	0.0059 (2.0832) *
LN_TK	0.0063 (2.5479) *	0.0061 (2.4528) *
R-squared	0.1500	0.1500
Adjusted R-squared	0.1287	0.1318
F-Statistic	7.0589	8.2658
Prob (F-Statistic)	0.0000	0.0000
Durbin-WatsonStat	1.1295	1.1265

Source: Results of regression processed

Note:

Numbers in parentheses = t statistics

Model 3 & 4 = Random Effect EGLS white cross-section SE

1. * significance at $\alpha = 5\%$; 2. The value of $t(nk; \alpha) = t(306; 5) = 1.645$

Efforts to resolve the problem of autocorrelation were estimated using the Newey-Whitney and Kenneth are using cross-sections panel random with coefficient covariance method white cross-section. The estimation results have corrected the standard errors, so the value of the t statistic and F-statistic are valid for interpretation. Based on the results of regression using the

random effect EGLS and the white cross-section standard errors indicate that in general the estimation model used has standard errors consistent. Evaluation or interpretation of the results of that test statistical and F statistical becomes more valid and can be justified.

The following test heteroscedasticity describing the condition in which the variance (σ^2) of a disturbance or factors error term (disturbance term) is not the same for all observations or observations of independent variables. To find out the heteroscedasticity problem in the model, a test was performed white. Based on the results of analysis residual using E-Views software 6.0, the value is White 1.86 with a probability of 0.65. Thus, the value White is smaller than the chi square table value of 5.991; and supported by a probability value greater than the value of alpha 0.05. So it was concluded that the model used did not contain heteroscedasticity problems.

The multi-collinearity test was conducted to determine the existence of a linear relationship between independent variables, and to use the matrix approach to correlation between independent variables. All explanatory variables have smaller coefficients and no more than 0.8. It was concluded that there was no linear relationship between these independent variables and did not have multi-collinearity problems. Based on the stages of testing the estimation model and taking into account the classical assumption test, it is determined that the fifth model is estimation using REM with white cross-section standard errors with one variable, dummy base sector namely the mining and quarrying sector.

F test is Statistical used to determine the simultaneous effect of the independent variable on the dependent variable. F test results obtained F values statistical of 8.2658 with 0.00000 probability. When compared with $\alpha = 5\%$, the value of the probability obtained is smaller than alpha the set ($0.00000 < 0.05$). Thus,

it is concluded that statistically all independent variables consisting of expenditure in real/ capita education, expenditure in real/ capita health, expenditure in real/ capita infrastructure, workforce, and variables of dummy basic nine sectors simultaneously or jointly have a significant effect on NAR economic growth. T-test was conducted to determine the effect of independent variables with the dependent variable. The results of the t-test are as follows: The results of the regression results generally provide an illustration that all independent variables are statistically proven to have a significant influence on growth economic. t-test statistical One-way proves that the expenditure of education, health, and health spending in the previous year (lag-1), spending on infrastructure and labor have a positive and significant effect on economic growth at $\alpha = 5\%$. The Variable is dummy base sector only the mining and quarrying sector which is significant to growth economic.

The interpretation of the results of the estimated influence of government spending on economic growth is as follows: The results of the regression test show that government spending in real education per capita has a value statistical of 5.9725 with a probability of 0.0000. The value of t-statistics is compared with t-table $\alpha = 5\%$, namely $t(nk; \alpha) = t(306; 5) = 1.645$, the $t\text{-statistic} > t(nk; \alpha)$. Whereas if the probability value is compared with $\alpha = 5\%$ then the probability value $< \alpha = 5\%$; or $(0,000 < 0.05)$. The conclusion obtained is rejecting the hypothesis null (H_0) and accepting the hypothesis alternative (H_a), which means that spending on the real per capita education sector has a positive and significant impact on economic growth. The magnitude of this influence is reflected in the magnitude of the regression coefficient of 0.0082, with an elasticity of 0.129 which gives the meaning that if real per capita spending

in education rises 1 percent, then economic growth will increase by 0.129 percent and have the nature of relationships inelastic.

Government spending in real per capita education has a positive and significant impact on economic growth. This is consistent with the theory endogenous growth developed from the Solow-swan model, which explains that the source of economic growth is an increase in accumulation capital. The intended capital is not only physical but also non-physical in the form of science and technology. The development and mastery of technology will produce new innovations so as to increase productivity and ultimately increase growth economic. New innovations can arise from the process of learning by doing that can increase production efficiency, and increase productivity.

The results of the study are also in line with the results of research conducted by Colombier (2004) which proves that government spending in the sector public, especially the education sector, and the health sector is influential positive and significant impact on economic growth. Also in line with Bose et al. (2007) who conducted research on spending on investment, education, transportation, and communication, defense; concluded that capital expenditure, government investment in education had a positive and significant effect on economic growth. Several other studies that are in line include Jiranyakul (2013), Nurudeen & Usman (2010), and Loto (2011) concluding that government spending in education has a positive and significant effect on economic growth. This happens because the education sector is a form of public service that is fundamental for each country or region. Local government spending on health has a positive effect on regions the economic growth of new autonomous in Indonesia, indicating that spending The government on real health per capita has a value statistic of -4.1326. If that value is statistically compared with t-table at $\alpha = 5\%$, namely $t(nk; \alpha) = t(306; 5) = 1.645$, then the

value of t -statistics $> t(nk; \alpha)$. The conclusion obtained is rejecting the hypothesis null (H_0) and accepting the hypothesis alternative (H_a), which means that spending on the sector real health per capita has a negative and significant relationship to economic growth. The negative influence obtained from the estimation model does not give meaning that is beneficial for increasing economic growth, then an estimation is carried out by giving a time lag-1 on the balance of the real per capita health sector.

Government expenditure per capita in real health has an effect on economic growth in the following year or economic growth in the year is current influenced by expenditure in the real health per capita of the year previous. This is indicated by the results of the regression test that government spending on real health per capita in the previous year (lag-1) has a value of statistics of 2.1813 with a probability of 0.0300. If the value is statistically compared with t table at $\alpha = 5\%$, namely $t(nk; \alpha) = t(306; 5) = 1.645$, then the value of t -statistics $> t(nk; \alpha)$. Whereas if the probability value is compared with $\alpha = 5\%$ then the value probability $< \alpha = 5\%$; or (0.03 $<$ 0.05). The conclusion obtained is rejecting the hypothesis null (H_0) and accepting the hypothesis alternative (H_a), which means that the expenditure government on real health per capita in the previous year has a positive and significant impact on economic growth. The magnitude of this influence is reflected by the magnitude of the regression coefficient of 0.0021, with an elasticity of 0.033 which gives the meaning that if government spending in real health per capita rises 1 percent, then economic growth will increase by 0.033 percent and the relationship is inelastic.

The following regression results that government spending in the real health per capita of the previous year had a positive and

significant effect on economic growth. This is consistent with the theory of growth developed from the Solow model by incorporating elements of human capital, as an element that influences economic growth. Human capital is one of the important determinants in the process of development and economic growth. Human capital, including health, education and human capacity, can increase productivity, which leads to increased economic growth. Human capital is an important factor in the process of growth economic. With quality human capital based on levels education and health, economic performance will be better.

The results of this study are in line with the findings of Fasoranti (2012), which proves that government spending on health services, transportation and communication has a positive and significant effect on economic growth. The same conclusion was raised by several researchers previous such as Nurudeen & Usman (2010), De Mello (2000), Loto (2011) who concluded that government spending on health had a positive and significant effect on economic growth. Research differences occur in the use of time on the variable spending health using time lag-1. Regression test results for local government spending on infrastructure regions have a positive effect on the economic growth of new autonomous in Indonesia, indicating that government spending in infrastructure has a t -statistic of 2.0832 and a probability of 0.038. If the value is statistically compared with $t(nk; \alpha) = t(306; 1) = 1.645$, then the value statistical $> t(nk; \alpha)$. While the value Probability $< \alpha = 5\%$; or (0.038 $<$ 0.05). The conclusion is rejecting the hypothesis null (H_0) and accepting the hypothesis alternative (H_a), which means that government spending on real infrastructure per capita has a positive and significant impact on economic growth. The magnitude of this effect is reflected by the magnitude of the regression coefficient of 0.0059, with an elasticity of 0.093 which means if government spending in real

infrastructure per capita rises 1 percent, then economic growth will increase by 0.093 percent and have the nature of relationships inelastic.

Government spending on real per capita infrastructure has a positive and significant impact on economic growth. In accordance with theory Keynes's growth which explains that aggregate spending on consumption and investment determines the level of economic activity capable of creating national income. Solow's growth theory explains that the main factors driving economic growth are the availability of production inputs and technological progress. Production input can be in the form of production infrastructure and technology used in the production process. Procurement of production inputs is reflected by the amount of government spending on infrastructure.

The results of this study are also in line with the findings of Fasoranti, (2012) who conducted research by referring to the Barro model, which is a growth model that simple endogenous states that government spending on infrastructure or productive government spending has a positive and significant effect on economic growth. He further explained that increasing government spending on infrastructure means increasing public facilities so that people's welfare in the short term can be met. A similar study by Shrestha (2009) concluded that the composition of public spending, especially spending on physical infrastructure, has an effect on economic growth in Nepal.

Other supporting researchers are De Mello (2000), Nurudeen & Usman (2010) who conclude that government spending on infrastructure has a positive and significant effect on economic growth. Furthermore, Bose et al. (2007) explained that government capital expenditure in GDP is positively and

significantly correlated with the regional economy strategies. Regional expenditure allocation also determine the success of regional development in accordance with community needs.

Variable regression test results Workforce positive effect on economic growth NAR in Indonesia shows that labor has a value statistic of 2.4528 and probability of 0.0148. If the value is statistically compared with t-table at $\alpha = 5\%$, that is $t(306; 5) = 1.645$, then the value $t\text{-statistical} > t(nk; \alpha)$, further the probability value $< \alpha = 5\%$; or $(0.0148 < 0.05)$. The conclusion obtained is rejecting the hypothesis null (H_0) and accepting the hypothesis alternative (H_a), which means that labor has a positive and significant influence on economic growth. The magnitude of this influence is the amount of the regression coefficient of 0.0061 with an elasticity of 0.092 which means that if labor rises 1 percent, then economic growth will increase by 0.092 percent and have the nature of relationships inelastic.

Labor Variable has positive and significant effect on the economic growth of new autonomous regions in Indonesia. This is consistent with several theories growth such as the Solow model which explains that the production function is aggregate influenced by labor, Harrods Domar explains that by including the natural labor force growth rate, composition age and sex, and labor force participation affects economic growth.

More decisively research conducted by wu,s,y (2010) concludes that labor is an important aspect in the regional economy because regional competitiveness is increasingly dependent on the base local knowledge and the quality of workers.

Economic growth in new autonomous regions differs according to basic economic sectors. Most of the basic sectors of the nine economic sectors studied were not significant except the mining and quarrying sector. The value of t statistics obtained value of 2.808 or

greater than t_{table} at $\alpha = 5\%$, namely $t(nk; \alpha) = t(306; 1) = 1.645$. The magnitude of the sector difference is equal to 0.0059, with an elasticity of 0.092, which means that NAR which has a base sector mining and quarrying has a higher economic growth of 0.092 percent compared to NAR which has base sectors other.

CONCLUSION

This study concludes that government spending on real education per capita, health real per capita lag (-1), real infrastructure per capita, and labor variables together have positive and significant effects on NAR economic growth with the nature of relationships inelastic. Increased expenditure in the field of education or capital expenditure can increase the quality of human resources and improve the welfare of the community while reducing inequality between regions. Access to education for the community becomes wider so that the opportunity to obtain education, until higher education is more secure. Increasing the quality of education will encourage an increase in the quantity and quality of regional production. The NAR government needs to consider the results of research in determining development policies. Development policies must be able to encourage the improvement of the quality of human resources through increasing the allocation of education spending in amounts large and proportional. The quality of improved human resources will increase work productivity and will ultimately affect economic growth. The program of development activities in the education sector is packaged in a strategy to improve the quality of human resources through improving the quality of the budget.

While the government expenditure variable in the real health per capita of the previous year (lag- 1) has a positive and significant effect on economic growth, development policies should be able to encourage the improvement of the quality of human resources through increased government spending in the sector health. The allocation of health spending in the right amount will improve the quality of human resources. The increase in expenditure in the health sector can also improve the quality of labor, increasing labor productivity, and ultimately boost economic growth.

Local government spending on infrastructure has a positive effect on growth NAR economics in Indonesia. Development policies are packaged in order to encourage the quality of production through increased government spending in infrastructure. Provision of regional infrastructure is a crucial factor for the continuity of the development process of economic growth long-term. Economic development involves production activities in the economic sector. For the purposes of these activities, it is necessary to build regional infrastructure such as offices, factories, equipment production, and other infrastructure. Local governments should be able to prepare infrastructure public that provides mutual benefits through cooperation between regions. The infrastructure in question such as regional hospitals, employment education institutions, transportation facilities, or others. Cooperation can also take the form of exploration of natural resources or other.

In general, the findings in this study are in line with the results of research conducted by Mello (2000), Nurudin & Usman (2010), and Loto (2011) who concluded that spending government on education, health and infrastructure had a positive and significant effect on economic growth. However, this study

has limitations, namely only using variables public sector government expenditure.

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