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The Impact of Special Autonomy Fiscal Policy on Papua's Economic Development

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ABSTRACT

Economic development needs to be viewed as a process that is interrelated, and interconnected and mutually influences the factors that produce development itself. The movement of economic development in a region is indicated by regional economic growth in that region. It is believed that Papua's economic growth can be stimulated by the special autonomy fiscal policy implemented by the Papua government. This research aims to analyze the impact of fiscal policy through education spending from special autonomy funding sources together with other economic variables on Papua's economic growth by applying the Neoclassical Solow growth model and the growth model from Mankiw. This research was conducted using secondary data from nine districts/cities in Papua Province in the 2013-2021 period which used panel data regression and for analysis using the Feasible Generalized Least Square (FGLS) approach with either the Panel Corrected Standard Error (PCSE) model or the Seemingly Unrelated Regression (SUR) model. The research results show that education spending variables and other economic variables have a significant impact on spurring Papua's economic growth. This shows that the special autonomy fiscal policy can drive Papua's economic development.

Keywords: Economic Growth; Economic Development; Education Expenditure; Fiscal Policy; Special Autonomy

INTRODUCTION

Development is a process of change in society for the better (Rokhman, 2023). National development strives to achieve high economic growth, which can then strengthen and increase the level of life and harmony of the entire community (Faried & Sembiring, 2019). Economic development needs to be seen as a process that is interrelated, related, and mutually influencing between the factors that produce development itself. Economic development is a process, where a country can manage its various production resources so that it can increase its per capita product. Economic development in a country or region is inseparable from the economic growth of the country/region because one indicator of the success of economic development is the occurrence of economic growth, where economic growth describes an increase in people's income. Economic development encourages the economic growth of a country or region and conversely, economic growth accelerates its economic development (Febriaty et al., 2019). High and sustainable economic growth is a must or one of the main requirements for the sustainability of economic development and improving people's welfare (Rokhman, 2023). In the implementation of economic development, economic growth is a very important requirement and is one of the main objectives of various government policies (Kanayo, 2013; Akinboade & Kinfack, 2015; Sharipov, 2016).

One of the variables driving increased economic growth is government fiscal policy. In the context of development, fiscal policy functions as a macroeconomic stabilization tool and as an instrument to achieve growth and eradicate poverty (Brahmbhatt & Canuto, 2012). Any fiscal policy is designed to be able to increase national income and control inflation, which will encourage economic growth. Fiscal policy can be done through government spending. Government spending reflects the most effective government intervention in the economy (Pateda et al., 2017). Government fiscal policy to improve the economy of a region can be done through the regional revenue and expenditure budget, in the form of local government spending or spending, especially spending in the field of education.

Nowadays, education is essential for success. Without education, we can become an underdeveloped society. Education can advance the society of a region and even a country, including advancing Indonesia in the future (Febriaty et al., 2019). Education can produce quality human resources. Human resources are often considered a determining factor in a country's capacity to compete and grow economically (Murniati et al., 2023). Quality human resources are human capital for economic development. The importance of human capital can have an impact on economic growth (Murniati et al., 2023). The importance of human capital in long-term development has been shown by various studies on economic growth, where education appears as the main benchmark for human capital development to achieve long-term economic development goals (Murniati et al., 2023). In the early stages of sustainable economic development, new growth theories analyzed the effect of education-driven economic growth measured by school enrollment rates on employment levels and patterns (Adejumo et al., 2021). The focus on human capital in economic development can be reflected through government fiscal policy. For this reason, the focus on human capital in the economic development of a region can be reflected in the fiscal policy of the local government through the local revenue and expenditure budget, especially its education expenditure. Thus, fiscal policy in Papua Province can be carried out through local government spending in each district/city, especially education spending derived from income allocated for special autonomy.

Papua Province's Special Autonomy as under Law Number 21 of 2001 (Indonesia. The Audit Board, 2001) is a strategic policy to improve services, accelerate development, and empower everyone in the provincial region of Papua, especially native people of Papua. The special autonomy policy is expected to provide opportunities for native people of Papua to work in their land as subjects and objects of development, to mobilize and increase economic development in the Land of Papua. The special autonomy policy of Papua Province is followed by the authority to handle the special autonomy funding for the regency/city administrations and the local government of Papua Province through Special Regional Regulation (Perdasus) of Papua Province Number 25 of 2013 (Indonesia. The Audit Board, 2013). This Perdasus emphasizes the allocation of special autonomy funds, one of which is used for education financing (education expenditure). Spending money allocated for special autonomy for education expenditure reflects the fiscal policy of local governments in the education sector which will have an impact on the economic growth of districts/cities in Papua Province.

The increase in district/city economic growth in Papua Province can be driven by government fiscal policy through education spending sourced from special autonomy funds, and also spurred by physical capital investment and population growth. For this reason, this study aims to determine and analyze the impact of physical capital investment, the impact of human capital investment through education expenditure variables from special autonomy funds and average years of schooling, and the impact of population growth on district/city economic growth in Papua Province, concerning the Solow (1956) Neoclassical growth model and the endogenous growth model by Mankiw et al. (1992).

LITERATURE REVIEW

The impact of fiscal policy on economic growth can be viewed from three theoretical perspectives: Neoclassical theory, New Keynesian theory, and endogenous growth theory. The Keynesian school views that the best way to increase aggregate demand is to increase government spending and lower tax rates. They argue that when there is a recession or decline in economic activity, this approach should be used as an important instrument to lay the foundation for strong economic growth and achieve a steady state. Neoclassical growth theory views that fiscal policy affects economic growth only in the long run, where the economy develops at an exogenously determined pace of technological progress, and all countries converge (Solow, 1956). In contrast, endogenous growth theory states that the temporary impact of fiscal policy has become a permanent impact, which implies that fiscal policy has a long-run influence on economic growth (Romer, 1986; Jones et al., 1993). The magnitude of the fiscal policy impact is determined by physical investment and human capital investment (human capital variables) both through education spending and through the stock of human capital, labor availability, and technological progress (Mankiw et al., 1992; Easterly & Rebelo, 1993).

Research related to the impact of fiscal policy, especially government spending on economic growth, has been conducted previously by several researchers. Djelloul et al. (2014) analyzed the impact of fiscal policy on economic growth in MENA countries using the Generalized Method of Moments (GMM) method as a dynamic panel data analysis during the period 1980-2007. The results of dynamic Panel Data, especially GMM-Sys, show a long-term relationship between fiscal policy and economic growth, the correlation pattern between gross domestic product per capita and budget revenue shows a positive causality relationship between economic growth and fiscal revenue. Anggono (2020) analyzed the impact of fiscal policy in the form of balancing funds on regional economic

growth using data from 2011 to 2018 and a total of 4,007 observations with the 2SLS method, found that fiscal policy carried out by provincial local governments has a positive effect on economic growth in Indonesia. Aprianti et al. (2023) analyzed the effect of fiscal factors on Indonesia's economic expansion using panel data of 478 districts and cities throughout 2015 and 2020 estimated with GMM. The results showed that economic growth in the previous year and direct spending had a significant effect on economic growth. This suggests that fiscal expansion measures are still necessary for Indonesia's regional economic growth.

Research related to the impact of government spending on education on economic growth has also been conducted by several researchers. Musila and Belassi (2004) analyzed the relationship between government education expenditure per worker and economic growth in Uganda using an error correction model (ECM) with time series data for the period 1965-1999 and found that education expenditure per worker had a positive and significant impact on Uganda's economic growth both in the short and long run. Riasat et al. (2011) used the unrestricted error correction model (UECM) approach for investigating the relationship between education spending and Pakistan's economic expansion over the period 1972-2010 and found that funds for education had a positive and significant impact on Pakistan's economic growth in the long run. Mallick et al. (2016) analyzed government spending on education and economic growth in 14 major Asian countries using balanced panel data over the period 1973-2012. The results of the analysis using FMOLS, panel VECM, and Granger causality prove that the education sector is one of the important elements in the economic growth of 14 major countries in Asia, so the education sector should be prioritized by increasing education spending ranging from basic education to higher education and even technical education, to produce skilled workers to encourage long-term economic development.

RESEARCH METHOD

The theoretical model in this study refers to economic growth by Solow (1956) which was further developed by Mankiw et al. (1992). Solow (1956) developed a standard neoclassical production function assuming a decreasing rate of return on capital, where the savings rate and population growth are considered as exogenous factors but both determine the stability of a country's per capita income level. The Solow model was further developed by Mankiw et al. (1992) by adding human capital accumulation to the economic growth model just like physical capital because human capital accumulation can be correlated with the savings rate and population growth rate of a country, so if ignored, the estimation of both will be biased.

Based on the two models previously described, in general, the economic growth model in this study can be written following the aggregate production function (Musila & Belassi, 2004; Riasat et al., 2011) as follows.

$$Y_t = AK_t^{\alpha} L_t^{\beta} H_t^{\gamma} \quad (1)$$

Where Y_t is the actual income per capita (real GDP per capita), K_t is physical capital, L_t is the total number of workers, H_t is the total human capital, *A* is the technology parameter, *t* is the observation, while $\alpha, \beta, \text{and } \gamma$ are the parameters to be estimated.
Furthermore, human capital shows the average education level per worker (E_t) of the total number of workers (L_t), which is written as follows.

$$H_t = E_t L_t \quad (2)$$

This study assumes that the average education level per worker and the average expenditure on education per worker have a direct or directly proportional relationship. Furthermore, by substituting equation (2) into (1), it will be obtained as follows.

$$Y_t = AK_t^{\alpha} L_t^{\delta} E_t^{\gamma} \quad (3)$$

Where $\delta = \alpha + \gamma$. Equation (3) is the basis for developing the econometric equation that becomes the empirical equation in the next section of this research, to examine how government spending affects education from special autonomy funds on the economic growth of each district/city in Papua Province. Theoretically, a positive correlation is expected between economic growth on the one hand and increases in physical capital stock, employment, and worker education on the other, meaning that increases in physical capital stock, employment, and worker education can increase economic growth.

Regression analysis on panel data is used in this work with secondary data for 9 districts/cities in Papua Province originating from the Central Bureau of Statistics of Papua Province for a period of 9 years, namely 2013-2021. The study's variables consist of 1) Economic growth as the dependent variable (lnY_Kapita), namely the increase in real GDP per citizen of the population shown by the increase in the Gross Regional Domestic Product (GRDP) by economic sector according to Constant Prices in 2010; 2) Physical capital investment (lnI), which is the accumulation of physical capital proxied by real gross domestic fixed capital formation (PMTDB) in each district/city; 3) Human capital variables consisting of Education Expenditure (lnBOP) sourced from special autonomy funds in each district/city, and Average Years of Schooling (lnRLS) of the population aged 25 to 64 years in each district/city; and 4) Population Growth (lnN) which is the growth of the working age population (15-64 years) in each district/city. All these variables form an empirical research model as follows.

$$lnY\_Kapita = \beta_0 + \beta_1 lnI + \beta_2 lnBOP + \beta_3 lnRLS + \beta_4 lnN + \varepsilon \quad (4)$$

The empirical research model above is analyzed using panel data regression which is carried out by comparing three regression model approaches, namely the Common Effect Model (CEM) or Pooled Least Square (PLS) model, Fixed Effect Model (FEM), and Random Effect Model (REM) (Wardhana & Indawati, 2021). Furthermore, the estimation of regression coefficients for panel data attainable using the least square method which consists of the method called Ordinary Least Square (OLS) or the Least Squares Method, the Least Square Dummy Variable (LSDV) method, the Generalized Least Square (GLS) method, and the Feasible Generalized Least Square (FGLS) method. The four methods are applied by the assumptions given in the three-panel data regression model approaches. Furthermore, the best model selection will be carried out by conducting the Chow Test or F-Test Restricted, Lagrange Multiplier Test, and Hausman Test (Wardhana & Indawati, 2021). The selected model obtained will be tested with the Classical Assumption Test and Goodness of Fit Test. Classical Assumption Tests performed include multicollinearity test, autocorrelation test, and heteroscedasticity test. The Goodness of the fit test consists of a t-test, F-test, and coefficient of determination.

RESULTS

This section will show the results of panel data regression analysis with the Common Effect Model, Fixed Effect Model, and Random Effect Model approaches followed by selecting the best model by conducting the Chow Test or Restricted F-test, Lagrange Multiplier Test, and Hausman Test. Furthermore, the Classical Assumption Test and Goodness of Fit test will be carried out on the model.

Panel Data Regression with PLS, FEM, and REM Approaches

The estimation results of the Fixed Effect Model (FEM), Random Effect Model (REM), and Common Effect Model (CEM) or Pooled Least Square (PLS) can be seen in Table 1 below.

Table 1. Results of the Fixed Effect Model (FEM), Random Effect Model (REM), and Common Effect Model (CEM) or Pooled Least Square (PLS) Model

Dependent: LnY_Kapita			
Variable	Results of the Pooled Least Square (PLS) model	Results of the Fixed Effect Model (FEM)	Results of the Random Effect Model (REM)
lnI	.5023093**	.7502674**	.667652**
	(.0297716) [16.87]	(.0550149) [13.64]	(.0550697) [12.12]
lnBOP	.1142784**	.0119306	.0412019**
	(.0440371) [2.60]	(.0147685) [0.81]	(.0180939) [2.28]
lnRLS	.2798368**	.5383798**	.3829332**
	(.1071546) [2.61]	(.1392658) [3.87]	(.1483523) [2.58]
lnN	-.3767575**	-1.032789**	-.7014741**
	(.0357716) [-10.53]	(.0700282) [-14.75]	(.0648749) [-10.81]
Constant	4.559228**	6.818025**	5.078021**
	(1.148849) [3.97]	(1.24068) [5.50]	(1.189216) [4.27]
Observation	9	9	9
R-squared	0.8164	0.8294	0.6573
F-Test		82.67	
	0.0000	0.0000	

Note: *p<0.10; **p<0.05
The t-statistic for PLS and FEM, and the z-statistic for REM, are the numbers in square brackets, while the standard error of the regressor variable is represented by the number in brackets.
Source: Research Data processed, 2023

From the pooled least square model, it is known that the coefficient of physical capital investment, the coefficient of the human capital variable, both education expenditure from special autonomy funds, and the average length of schooling, all three are positive and significant with a t-test probability value smaller than alpha 0.05. This indicates that an increase in physical capital investment and human capital investment will encourage an increase in district/city economic growth in Papua Province. Meanwhile, the population growth coefficient is negative and significant with a t-test probability value smaller than alpha 0.05, indicating that an increase in population growth that is not accompanied by an increase in regional production in Papua will contract per capita income.

From the fixed effect model, the coefficient of physical capital investment and the coefficient of average number of years spent in school as one of the human capital variables are positive and significant with a t-test probability value of 0.0000. The coefficient of education expenditure from special autonomy funds, which also represents

the human capital variable, although positive, does not significantly affect economic growth, as indicated by the t-test probability value of 0.422. Meanwhile, the population growth coefficient is negative and significant with a probability value of 0.0000, which indicates that an increase in population growth must be followed by an increase in Papua's regional production so that the amount of per capita income is not stagnant or negative.

From the random effect model, the coefficient of physical capital investment, the coefficient of human capital variables, both education expenditure from special autonomy funds and average number of years spent in school, all three are positive and significant with a t-test probability value smaller than alpha 0.05. Meanwhile, the population growth coefficient is also negative and significant with a t-test probability value smaller than alpha 0.05, which indicates that an increase in population growth must be followed by an increase in Papua's regional production to increase the amount of per capita income.

PLS or FEM Model Selection

Model selection with the Chow Test or Restricted F-test (Restricted F-test) is done by comparing the probability value of the F-test with the alpha level in the Fixed Effect Model regression results. If the restricted F-test value of the test results (F-statistic) is greater than the F-table or the F-test probability value is smaller than the alpha level, then the Fixed Effect Model (Unrestricted) is applied because there is sufficient evidence to refute the null hypothesis. Results regarding the Chow Test can be seen in Table 2 below.

Table 2. Chow Test or Restricted F-test Results

F test that all u_i=0:	F test that all u_i=0:	F test that all u_i=0:

Source: Research Data processed, 2023

In the table above, "F test that all u i=0" means that the null hypothesis on all coefficients for the fixed effects model is zero. Because the probability value of the Chow test is 0.0000, which indicates that it is less than the alpha level of 0.05 (0.05>0.0000), as a result of H0 being rejected and Ha being accepted, the Fixed Effect Model should be used instead of the Pooled Least Square model.

PLS or REM Model Selection

Model selection by conducting the Lagrange Multiplier Test (LM test) initiated by Breusch and Pagan (1980). The Lagrange Multiplier Test (LM test) is carried out using the distribution value of Chi-Square Statistics (χ2), with the criteria: reject H0 if the calculated Chi-Square Statistics (χ2) value is greater than the Chi-Square Statistics (χ2) table, or if the probability value of Chi-Square Statistics (χ2) is smaller than the alpha level (Value α = 1 percent, 5 percent, or 10 percent). The LM test results are as follows.

Table 3. Lagrange Multiplier Test Results (LM test)

Breusch and Pagan Lagrangian Multiplier Test for Random Effects
chibar2 (01) = 198,14
Prob > chibar2 = 0,0000

Source: Research Data processed, 2023

In the table above, the probability value or p-value of the LM test is 0.0000, which means it is smaller than the alpha level of 0.05 (0.05>0.0000), so H0 is rejected so that in between the Random Effect Model and the Pooled Least Square Model which is more appropriate to use is the Random Effect Model.

FEM or REM Model Selection

Model selection is done using the Hausman Test. The Hausman Statistic value shows how much distance there is contrasting the Random Effect Model with the Fixed Effect Model regarding model consistency and efficiency. The farther or the greater the Hausman Statistic value, The model of Random Effects is inefficient. When the distance or Hausman Statistic value is large, rejecting the null hypothesis, which holds that there is no correlation between individual effects and regressors. The results of the Hausman test can be seen in the following table.

Table 4. Hausman Test Results

Hausman Test for Random Effects and Fixed Effect
chi2 (4) = 46959,02
Prob > chi2 = 0,0000

Source: Research Data processed, 2023

In this table, when viewed from the Chi-square value, the Random Effect Model is inefficient because of the large chi2 value of 46959.02 with a p-value of 0.000. Hausman test hypothesis testing is done by comparing the Prob>chi2 value with the alpha level. Because the P-Value is smaller than the alpha level where Prob>chi2 is less than alpha 0.05, It implies that the Random Effect Model should be avoided in favor of the Fixed Effect Model.

Multicollinearity Test

The classical assumption test is a requirement that must be met in multiple linear regression analysis based on OLS (Ordinary Least Square). The purpose of the classical assumption test is to observe the level of deviation based on classical assumptions in regression to determine whether the model can be categorized as a good model or estimation tool. A good model itself is a model that meets the BLUE (Best, Linear, Unbiased Estimator) category which is a parameter of a good model. In this study, the multicollinearity test used Pearson's Correlation. Pearson's Correlation coefficient value is between -1 and 1 (-1 < 0 < 1) where if the correlation coefficient value is closer to 1 or -1, the relationship between variables is getting stronger, while if the correlation coefficient value is closer to 0, the relationship between variables is getting weaker. A correlation coefficient value equal to -1 means that there is a perfect negative correlation, while 0 means there is no correlation, and a value of 1 indicates a perfect positive correlation. The results of the relationship test between variables can be seen in the following table.

Table 5. Multicollinearity Pearson's Correlation Test Results

	lnY_Kapita	lnI	lnBOP	lnRLS	lnN
lnY_Kapita	1,0000				
lnI	0,7108	1,0000			
lnBOP	0,1654	0,0096	1,0000		
lnRLS	0,3045	0,5914	-0,0452	1,0000	
lnN	0,2580	0,8046	-0,0324	0,7047	1,0000

Source: Research Data processed, 2023

Multicollinearity in the regression model can be detected by analyzing the correlation matrix of the independent variables. If there is a high correlation between independent variables (generally above 0.9), this indicates a multicollinearity problem (Ghozali, 2016). From the table above, the correlation between the independent variables is not greater than 0.9 so there is no multicollinearity problem in the model.

Autocorrelation Test

Autocorrelation in the research model occurs because of the relationship between residuals in a certain period and residuals in the next period. This causes a violation of classical assumptions where residuals between periods should not be interconnected. The existence of autocorrelation makes the residuals biased and the panel data model regression results become inefficient (Drukker, 2003). The autocorrelation test in this study uses the Wooldridge test, where if the test results show the Prob> F number is more than the 0.05 alpha value, then it cannot reject H0 which means that the research model used is free from autocorrelation problems. Conversely, if the test results show the Prob < F number is smaller than the alpha value of 0.05, then the model used contains autocorrelation. The results of testing autocorrelation using the Wooldridge test can be seen in the following table.

Table 6. Wooldridge Autocorrelation Test Results

Wooldridge Test for Autocorrelation in Panel Data
F (1, 8) = 11,288
Prob > F = 0,0099

Source: Research Data processed, 2023

In the table above, the Prob > F value is 0.0099 indicating that it is less than the alpha value ((Prob > F) > 0.05). Thus, the null hypothesis or H0 is rejected which means there is an autocorrelation problem in the model.

Heteroscedasticity Test

Heteroscedasticity testing on the research model is carried out to detect residual variations that are not constant. Heteroscedasticity problems occur in the model because the residual variance is not constant. Research models that indicate heteroscedasticity problems can cause the analysis of results to be inaccurate and invalid. The heteroscedasticity test in this study includes elements of cross-sectional units because the selected model is the Fixed Effect Model. This is because there may be differences in variance between units called groupwise heteroskedasticity. The heteroscedasticity test used is the Modified Wald Test for Groupwise Heteroskedasticity, where if the Chi-square probability value is smaller than the alpha level of 0.05 (Prob Chi-square > 0.05) then the research model is free from heteroscedasticity. The results of the heteroscedasticity test can be seen in the following table.

Table 7. Groupwise Heteroskedasticity Test Results

Modified Wald Test for Groupwise Heteroskedasticity
chi2 (9) = 394,30
Prob > chi2 = 0,0000

Source: Research Data processed, 2023

The test findings indicate a high chi2 value of 394.30 and a Prob> Chi2 value of 0.0000 which is smaller than the alpha level (0.05). This means that the null hypothesis is rejected and accepts H1 so there is a heteroscedasticity problem in the residual variance of the selected model.

Violation of the assumption that the residual distribution must be homoskedastic causes the estimation model to be unusable because it makes the estimation of the coefficients inconsistent. To perform the estimation, a regression model is needed that can accommodate the heteroscedasticity disturbance. Given this, the appropriate regression model to use is the Seemingly Unrelated Regression (SUR) regression model or the Panel Corrected Standard Error (PCSE) regression model.

Seemingly Unrelated Linear Regression (SUR) or Panel Corrected Standard Error (PCSE)

The most common and most frequently used forms when analyzing panel data regression models are the Fixed Effect Model and the Random Effect Model. Both models have assumptions that are based on the existence of unobservable individual effects in the model. Model of Fixed Effects assumes that the individual effect has a non-random relationship or has a non-random pattern, while the Random Effect Model assumption is based on the absence of a relationship between the individual effect and the regressor or has a random pattern. In this study, both models are considered inappropriate to use as a model because they experience heteroscedasticity and autocorrelation problems so other models are selected that are by the state of the observation data. This study analyzes observational data using the Seemingly Unrelated Regression (SUR) model or the Panel Corrected Standard Error (PCSE) regression model by including the assumption that the model has heteroscedasticity and autocorrelation problems. The SUR and PCSE model regression results can be seen in Table 8 below.

Table 8. Results of the Seemingly Unrelated Regression (SUR) Model and Linear Model Regression, Correlated Panel Corrected Standard Errors (PCSEs)

Dependent: LnY_Kapita		
Variable	Seemingly Unrelated Regression (SUR) Model	Linear Regression Model, Correlated Panel Corrected Standard Errors (PCSEs)
lnI	.5023093**	.5023093**
	(.0288381) [17.42]	(.0127098) [39.52]
lnBOP	.1142784**	.1142784**
	(.0426563) [2.68]	(.0417971) [2.73]
lnRLS	.2798368**	.2798368**
	(.1037947) [2.70]	(.0446844) [6.26]
lnN	-.3767575**	-.3767575**
	(.0346499) [-10.87]	(.010389) [-36.23]
Constant	4.559228**	4.559228**
	(1.112826) [4.10]	(.9654516) [4.72]
Observation	9	9
R-square	0.8164	0.8164

Note: *p<0.10; **p<0.05
The z-statistic for SUR and PCSEs is the number in square brackets, while the number in brackets is the standard error of the regressor variable.
Source: Research Data processed, 2023

From the table above, it is known that the independent variables in the SUR and PCSEs models produce the same coefficient value with the same coefficient of determination (R-square) value. The estimation results of the Seemingly Unrelated Regression (SUR) and Linear Regression, Correlated Panel Corrected Standard Errors (PCSEs) models can be modeled as follows:

$$LnY\_Kapita = 0{,}50lnI + 0{,}11lnBOP + 0{,}28lnRLS – 0{,}38lnN$$

The estimation of SUR and PCSEs models produces coefficients of independent variables following the theory with both positive and negative signs. It can be seen that the variables lnI, lnBOP, lnRLS are positive and significant at the alpha level of 0.05 (t-test probability <0.05). This means that an increase in the three independent variables

(lnI, lnBOP, lnRLS) will increase economic growth (lnY_Kapita) as the dependent variable. Meanwhile, the variable lnN has a negative sign by the theory and is significant at the alpha level of 0.05 (t-test probability <0.05), which means that population growth significantly affects economic growth (lnY_Kapita) as the dependent variable.

The coefficient of lnI is positive and significant at 0.50, indicating that a 1 percent increase in physical capital investment will spur an increase in district/city economic growth in Papua Province by 50 percent. The coefficient of lnBOP is positive and significant at 0.11, meaning that every 1 percent rise in the amount spent on education by the district/city government from the source of special autonomy funds will drive an increase in district/city economic growth in Papua Province by 11 percent. The coefficient of lnRLS is also positive and significant at 0.28, indicating that an increase in the average number of years of schooling by 1 percent will move the economy of districts/cities in Papua Province to grow by 28 percent. Conversely, however, the coefficient of lnN, which is negative and significant at 0.38 percent, illustrates that the economic growth of districts/cities in Papua Province will contract by 38 percent with a 1 percent increase in population. The coefficient of determination of the two models estimated at 0.82 means that 82 percent of the variation in changes in district/city economic growth in Papua Province is caused by physical capital investment, education spending from special autonomy funds, average years of schooling, and population growth. Meanwhile, 18 percent of the variation in change is brought on by other variables outside the research model.

DISCUSSION

Economic growth in a country or region is influenced by several variables including fiscal policy variables. Solow (1956) in Neoclassical theory states that economic growth is a function of capital, labor, and knowledge. Similarly, endogenous growth theory states the same thing by adding human capital investment to the Solow-Swan model, thus the endogenous economic growth model states that economic expansion is a function of physical capital, human capital, labor, and technology (Mankiw et al., 1992; Swan, 1956). Referring to the two models of economic growth, the results of this study found that expansionary fiscal policies carried out by district/city governments in Papua Province, especially an increase in education spending from special autonomy funds, can spur and at the same time increase economic growth. The increase in education expenditure from special autonomy funds proves that the district/city governments in Papua Province have a primary focus on investing in Papuan human capital as the object and subject of development. Thus, the granting of special autonomy as more authority to Papua Province, especially in the field of education, can be said to have succeeded in moving Papua's economic development in a better direction. This is also supported by an increase in the average number of years of schooling in Papua, where the increase in the RLS rate has encouraged the growth of the district/city economy in Papua Province to be better. In addition, the increasing physical investment in the form of regional gross fixed capital investment that has been carried out by the private sector in Papua can increase the economic growth rate of districts/cities in Papua Province and spur Papua's economic development to be better and more equitable. Although local government fiscal policy has a good impact on district/city economic development in Papua Province, the results of this study prove that increasing population growth can contract the value of per capita real income and economic growth in each district/city in Papua Province if not followed by an increase in regional income. For this reason, each district/city in Papua Province must be able to control the rate of population growth so as not to experience stagnant or even negative economic growth.

CONCLUSION

Based on the discussion of the research results obtained, it can be concluded that the fiscal policy of the district/city government through education spending from the source of special autonomy funds, followed by physical capital investment, and supported by a high average length of schooling has a significant impact on increasing district/city economic growth, which shows that there is a massive and increasingly qualified economic development movement in each district/city in Papua Province. Although fiscal policy has a good impact on district/city economic development in Papua Province, local governments need to pay attention to population growth, both from natural population and migration, because high and uncontrolled population growth which is not followed by an increase in regional income will hurt per capita income and economic growth in each district/city in Papua Province.

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DECLARATION OF CONFLICTING INTERESTS
The authors declared no potential conflicts of interest.

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