The Effect of Local Own-Source Revenue and Capital Expenditure on Economic Growth: An Empirical Evidence from Aceh Province, Indonesia

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Abstract

This study examines the effect of local own-source revenue (PAD) and capital expenditure on economic growth in Aceh province, Indonesia. The data analysis method used is the quantitative method by setting the local revenue and capital expenditure variables as independent variables and the economic growth variable as the dependent variable. The data used is secondary data taken from the Local Government Financial Report and Central Bureau of Statistics, Aceh for 2009 to 2018. This study uses multiple linear regression analysis techniques with the help of the E-views 8 program. The results show that partially the local revenue variable has a significant negative effect on economic growth. The capital expenditure variable has a significant positive effect on economic growth in Aceh province. Meanwhile, simultaneously local revenue and capital expenditure have a significant effect on economic growth in Aceh province, Indonesia.

Keywords:
Economic growth, local own-source revenue, and capital expenditure

1. Introduction

All regions positively expect high economic growth because economic growth reflects economic activities with positive and even negative values (Sukono et al., 2019). Economic activity in a certain period will increase if the economy has a growth if one period (Zulham et al., 2019; Sirojuzilam et al., 2020; Sukono et al., 2019). Vice versa, economic activity in a certain period will decline if the economy experiences negative growth in one period. Economic growth is one of the crucial goals of macroeconomic policies in a country or region. Economic growth is the development of an economic activity that prevails from time to time and causes real national income to grow. The economic growth rate showed an increase in real national income in a specific year compared to real national income in the previous year (Sukirno, 2012). Economic growth does not always increase even though local governments have local own-source revenue (PAD) and realise large capital expenditures. The management and realisation of government budgets are not effective, and the programs are not on target.

The effect of economic growth is not only in terms of revenue, as local own-source revenue (PAD), but also from the side of government spending through capital expenditures. Achieving the target for capital expenditure realisation can provide a positive impact on economic growth. According to Sulaeman A. S and Vivin Silvia (2019), fiscal decentralisation from the expenditure side requires local governments to allocate spending to encourage economic growth. The government policies related to state spending are set primarily to divert consumptive spending into productive spending in the context of accelerating economic growth and accelerating expenditure realisation. In the 2018 State Budget Draft Financial Note, to accelerate equitable economic growth, the government strengthens the quality of spending by increasing capital spending. Local governments' capital expenditure is to drive the economy in the regions to contribute to national economic growth. Table 1 describes the development of the realisation of local own-source revenue (PAD), capital expenditure and economic growth in Aceh province from 2009 to 2018:

Table 1. The Realisation of Local Own-source Revenue, Capital Expenditure and Economic Growth in Aceh

Year	PAD (IDR trillion)	Capital Expenditure (IDR trillion)	Economic growth (%)
2009	0,7	0,7	3,97
2010	0,8	3,268	5,91
2011	0,8	1,474	4,38
2012	0,9	0,815	4,95
2013	1,325	1,619	4,15
2014	1,731	2,407	4,02
2015	1,972	2,025	4,28
2016	2,06	2,285	4,26
2017	2,276	2,168	4,13
2018	2,359	2,504	4,49

Source: Central Bureau of Statistic, Aceh, (2019)

The given Table 1 depicts that the realisation of PAD in Aceh province has increased steadily, starting with 0.7 trillion rupiahs in 2009 and continues to increase up to 2.359 (2.4) trillion rupiah in 2018. Meanwhile, the realisation of capital expenditure shows a fluctuating trend. It stood at 0.7 trillion rupiahs at an early year then rose to 3.268 (3.3) trillion rupiahs in 2010, further fluctuated until the value remained under 3.3 trillion rupiah, namely 2.5 trillion rupiahs last year. Furthermore, the rate of economic growth in Aceh province also has a fluctuating trend, namely that in 2010 it had an increase of about 2 per cent greater than that of 2009. It fluctuated to be only slightly under 4.5% in 2018. Local own-source revenue and capital expenditure have a significant effect on economic growth, as revealed by Anwar et al. (2018), Chatira et al. (2020), and Priambodo (2013) that the variable of local own-source revenue had a positive and significant effect on economic growth. Meanwhile, capital expenditure has a negative and significant impact on economic growth. Therefore, this study aims to determine local own-source revenue and capital expenditure on economic growth in Aceh province, Indonesia.

2. Literature Review

2.1 Economic Growth

Gross Domestic Product (GDP) is a size often used to measure economic performance or the rate of economic growth (Sulaeman and Vivin (2019). The GDP summarises the economy's effectiveness in a particular value of money over a specific time (Sukono et al., 2019; Muhammad et al., 2019; Zulham et al., 2019). The calculation of GDP is divided into GDP at current prices and GDP at constant prices. In the analysis of economic growth, GDP uses the constant

prices that ignore the effect of inflation. In the regional concept, the Gross Domestic Product is called the Gross Regional Domestic Product. According to Sinaga et al. (2020), economic growth was the process of changing a country's economic conditions on an ongoing basis towards a better state during a certain period. The most critical measure in the economic concept is the Gross Domestic Product (GDP) that measures the total value of goods and services produced in a country or nationally.

2.2 Local Own-Source Revenue (PAD)

Local Own-Source Revenue was regional revenue obtained from sources within its territory collected based on provincial regulations following applicable laws and regulations (Sinaga et al., 2020). According to Ritan et al. (2020), local own-source revenue has obtained from regional income sources. It collected funds for the region's needs concerned in financing routine activities and its development, which consists of local taxes, regional levies, processing separated regional assets, and other legitimate local own-source revenues. Based on Law No. 33 in 2004 concerning Financial Balance between Central and Regional Government Article 1 point 18, local own-source revenue, starting now referred to as PAD, is revenue obtained by regions collected based on regional regulations following statutory regulations. The law also states that the source of regional income consists of local revenue, tax and non-tax revenue sharing. Local Own-Source Revenue consists of local taxes, regional levies, processing separated regional assets, and other legal PAD.

2.3 Capital Expenditure

The capital expenditure is close to investments made by the central government. Halim, 2008) stated that the investment could define in various ways depending on the point of view and context. In the macroeconomics context, the definition of investment differs from microeconomics and accounting. In term of accounting, in the context of the types of expenditure/investment costs, it looked at the difference between revenue expenditure and capital expenditure. Investment, including in the definition of capital expenditure, is capital expenditure, which is expenditure/expenses that provide benefits for multiyear. In the article 53 Permendagri No. 13 in 2006 concerning Regional Financial Management, the capital expenditure is used for expenditures made in purchasing / procuring or building tangible fixed assets that have a useful value of more than 12 months to use in government activities. In the form of land, equipment and machinery, buildings and structures, roads, irrigation and networks, and other fixed assets. The value of the purchase/procurement or construction of tangible fixed assets budgeted in capital expenditure is only the purchase price/building asset.

Wardhiah (2018) stated that although many revenue regional regulations issued will not provide a significant increase in income, this indicates that public services are still low. This shift in the composition of spending is also used to construct capital facilities required for economic growth. Research conducted by Wong (2004) showed that certain industrial sectors (in the service and retail sectors) positively contribute to tax increases. Lin and Liu (2000) stated that the government needed to increase capital investment to increase regional economic growth. They found a strong correlation between infrastructure spending and the level of decentralisation. The strategy of development budget allocation can encourage and accelerate national economic development and a tool to reduce regional disparities, Madjidi (1997) cited Adi (2006).

2.4 The Effect of Local Own Revenue on Economic Growth

An increase in PAD will trigger regional economic growth to be better than the previous regional economic growth. In Aceh Province, the indicator used to measure economic growth is Gross Regional Domestic Product (PDRB) at constant prices. Local own-source revenue significantly influenced economic growth in Central Java province districts/cities (Putri, 2015).

2.5 The Effect of Capital Expenditure on Economic Growth

The development of facilities and infrastructure by the government could positively affect economic growth (Kuncoro, 2004). Improving public sector services will persistently improve public facilities and infrastructure. Government investment also includes improvements to education, health and other supporting facilities. A fundamental requirement for economic development is a level of provision of development capital that is balanced with an increase in GDP / PDRB. The formation of capital might be broadly defined to include all expenditures that increased productivity (Ismerdekaningsih and Rahayu, 2002). In terms of allocating and increasing investment in the region, it is not separated from planning a region's capital expenditure. It will depend on a larger proportion of capital spending for development in productive sectors in the region. These productive sectors will provide benefits for the economic

cycle with multiplier effects for the community, which will increase the income per capita for the household cycle to increase the income per capita regionally. Based on the theory, the hypotheses or estimates of this study are:
H_o: Local own-source revenue and capital expenditure do not significantly affect economic growth in Aceh Province.
H_a: Local own-source revenue and capital expenditure have significantly affect economic growth in Aceh Province.

3. Methods

The data analysis method used in this research is the quantitative method, namely statistical data collection to facilitate the calculation using statistical data. Quantitative research uses numbers in data presentation and analysis using statistical tests (Saebani, 2008). For analysing the effect of local own-source revenue and capital expenditure on economic growth, we used multiple linear regression and assisted by Eviews 8 program. The formulation of the multiple linear regression model in this study is as follows:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e}$$

Where,
Y : Economic growth
β_0 : Constant
β_1 : Coefficient of variable regression
X_1 : Local own-source revenue
X_2 : Capital expenditure
e : error term

4. Results and Discussion

Normality test was carried out to identify whether the regression model for confounding or residual variables has a normal distribution or not (Ghozali, 2005). The result of normality testing, as seen in Figure 1 below:

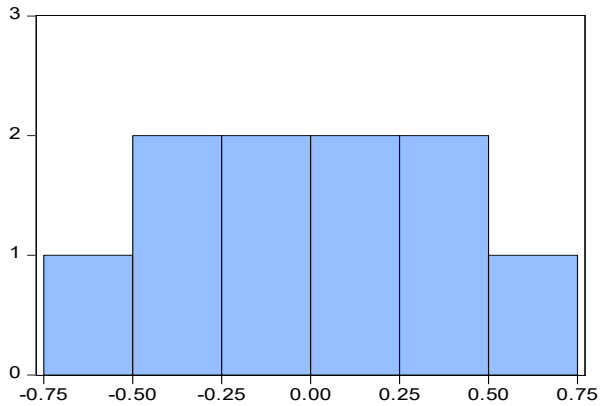

Figure 1. The result of normality testing

Figure 1 shows the results of the normality test. The significance used is $\alpha = 5\%$. If the statistical probability value JB> $\alpha = 5\%$, the data is normally distributed. Using JB, the p-value is $0.804200 > \alpha = 0.05$, it concluded that the data normally distributed. According to Sukmaraga (2011), to examine, whether there is an autocorrelation or not, one of which is known by performing the Breusch-Godfrey Test or Langrange Multiplier (LM) Test. From the LM test results, if the Obs * R-squared value is greater than the X^2 table value with a probability $X^2 <5\%$, it confirms that the model contains autocorrelation problems. Likewise, on the other hand, if the Obs* R-squared value is smaller than the X^2 table value with a probability $X^2> 5\%$, it confirms that the model has no autocorrelation problems. The results of autocorrelation testing with the LM, as seen in Table 2 below:

Table 2. The result of autocorrelation testing

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.589322	Prob. F(2,5)	0.5891
Obs*R-squared	1.907610	Prob. Chi-Square(2)	0.3853

Table 2 depicts that the Obs*R-squared value as much as 1.907610 is smaller than the X^2 table value of 16.91898 with a probability X^2> 5%. So, it concluded that the model in this study is free from autocorrelation problems. Ghozali (2005) stated that heteroscedasticity testing aims to determine whether there is an inequality of variants and residuals from one observation to another in the regression model. If the variance and residuals from one observation to another are constant, it is called homoscedasticity. Adhar (2012) stated that heteroscedasticity could assess by comparing the R-squared value and the Chi-Square table. The results of the heteroscedasticity test with the White Heteroskedasticity Test method using the assistance of the Eviews 8 program are:

Table 3. The result of heteroscedasticity testing

Heteroskedasticity Test: White			
F-statistic	0.782371	Prob. F(5,4)	0.6108
Obs*R-squared	4.944294	Prob. Chi-Square(5)	0.4227
Scaled explained SS	2.176217	Prob. Chi-Square(5)	0.8243

Table 3 describes that the Obs*R-squared value is as many as 4,944294 and the X^2 table value (Chi-Square Table) with a confidence degree of 5% and df n-1 of 16,91898. Because R-squared (4.944294) < X^2 table (16.91898), it concluded that the model passes the heteroscedasticity test. According to Ghozali (2005), "if the independent variables were correlated, this variable was not orthogonal". Orthogonal variables are independent variables whose correlation value between independent variables is equal to zero. Multicollinearity can determine with the tolerance value or variance inflation factor (VIF). These measures indicate which the other independent variables explain the independent variable. Tolerance value should low or equal to 0.10. For the multicollinearity test results in this study can be seen in Table 4 below:

Table 4. The result of multicollinearity (VIF)

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.164900	9.481691	N/A
Local_Own-Source_Revenue	0.055454	8.357083	1.256247
Capital Expenditure	0.039017	9.582621	1.256247

Table 4 shows that the Centered VIF value for the variable Local Own-source Revenue (X1) and Capital Expenditure (X2) is as many as 1.256247. Based on the results of the test, it highlights that the Centered VIF value is under 10. Therefore, this study is free from multicollinearity symptoms between the independent variables in the regression model. The variable of economic growth as the dependent variable is affected by local own-source revenue and capital expenditure as independent variables. It evidenced using multiple linear regression analysis to examine the effect of local own-source revenue (X1) and capital expenditure (X2) on economic growth (Y). Based on the estimation results using the Eviews 8 program assistance to the variables studied, the results found:

Table 5. The result of regression analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.332948	0.406079	10.67021	0.0000
Local_Own-Source_Revenue	-0.639820	0.235487	-2.717013	0.0299
Capital_Expenditure	0.558451	0.197527	2.827213	0.0255
R-squared	0.602240	Mean dependent var		4.454000
Adjusted R-squared	0.488595	S.D. dependent var		0.583156
S.E. of regression	0.417030	Akaike info criterion		1.332009
Sum squared resid	1.217399	Schwarz criterion		1.422784
Log likelihood	-3.660044	Hannan-Quinn criter.		1.232428
F-statistic	5.299283	Durbin-Watson stat		2.563282
Prob(F-statistic)	0.039689	t-table		2.36462
F-table	4.74	Chi-Square table		16.91898

The F test is performed to determine whether the independent variables simultaneously and statistically affect the dependent variable. If the F_{count} value is greater than the F_{table} value, the independent variables simultaneously have an effect on the dependent variable, and vice versa, if the F_{count} value is smaller than the F_{table} value, the independent

variables simultaneously have no effect on the dependent variable. The research results found that the F_{count} value is 5.299283 with a significance value of 0.039689 at the 95% confidence level. While the F_{table} at df1 = k-1 (3-1 = 2) and df2 = n-k (10-3 = 7) at 95% confidence degree or α = 0.05 is 4.74. Then $F_{count} > F_{table}$, which is 5.299283 <4.74 or a significance value <0.05, the decision is that the hypothesis accepts Ha and rejects Ho, meaning that simultaneously local own-source revenue and capital expenditure have a significant effect on economic growth in Aceh province.

To determine the effect of local own-source revenue and capital expenditure on economic growth in Aceh province, it can be seen in value (R^2). The result of this research found that the R^2 value is 0.488595 (0.489), which means that the effect of the variables local own-source revenue and capital expenditure on economic growth in Aceh province are as many as 0.489 or 48.9%, while the remaining of 51.1% is influenced by other variables not examined in this research model. The result of this research found that the variable of local own-source revenue has no significant positive effect on economic growth in Aceh province. This is evidenced by the t_{count} value of -2.717013 with a significance value of 0.0299 while the t_{table} value with (df) = n-k (10-3 = 7) at α = 0.05 is obtained a value of 2.36462. So $t_{count} < t_{table}$, which is -2.717013 <2.36462 with a significance value <0.05, the decision is that the hypothesis accepts H_0 and rejects Ha. This shows that the local own-source revenue has a significant effect on economic growth, however the regression coefficient value on the PAD variable proves that there is a negative effect of PAD on economic growth. Therefore, Ha is rejected and H_0 is accepted. This study's results mean that the higher the PAD received by Aceh Province, the economic growth in Aceh will decline. This study failed to prove that the research conducted by Ritan et al. (2020) and Chatira et al. (2020) found that PAD had a significant positive effect on economic growth. This means that the greater the amount of PAD received, the lower the rate of economic growth. This is probably because the absorption of PAD is still insignificant.

While the capital expenditure variable has a significant positive effect on economic growth in Aceh province as evidenced by the t_{count} value of 2.827213 with a significance value of 0.0255 while the t_{table} value with (df) = nk (10-3 = 7) at α = 0.05 is obtained a value of 2.36462 . So, $t_{count} > t_{table}$, which is 2.827213> 2.36462 with a significance value <0.05, the decision is that the hypothesis accepts Ha and rejects H_0. The results of this study are in line with the previous research conducted by Andriani (2018) entitled "Analysis of the Effect of Balancing Funds, Local Own Revenue, and Capital Expenditures on Regional Economic Growth; a case study of provincial governments throughout Indonesia for 2012-2016" where the research results found that capital expenditure has a significant effect on regional economic growth. Meanwhile simultaneously, the local own-source revenue and capital expenditure affect significantly to economic growth in Aceh province as evidenced by the F_{count} value of 5.299283 with a significance value of 0.039689 at the 95% confidence level. While the F_{table} at df1 = k-1 (3-1 = 2) and df2 = n-k (10-3 = 7) at 95% confidence degree or α = 0.05 is 4.74. So, $F_{count} > F_{table}$, or 5.299283 > 4.74 or a significance value <0.05, the decision is that the hypothesis accepts Ha and rejects Ho. The result of this study is in line with the previous research conducted by Andriani (2018) entitled "Analysis of the Effect of Balancing Funds, Local Own Revenue, and Capital Expenditures on Regional Economic Growth; case study of provincial governments throughout Indonesia for 2012-2016" with the results of the research showing that local revenue and capital expenditure have a significant effect on regional economic growth. Moreover, this study found a value of R^2 (R Square) as much as 0.488595 (0.489), which means that the effect of local own-source revenue and capital expenditure variables on economic growth in Aceh province is as many as 0.489 or 48.9%, while the remaining of 51.1% is influenced by other variables not examined in this research model.

5. Conclusion

The results show that partially the local revenue variable has a significant negative effect on economic growth. The capital expenditure variable has a significant positive effect on economic growth in Aceh province. Meanwhile, simultaneously local revenue and capital expenditure have a significant effect on economic growth in Aceh province.

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