Analysis Of The Influence Of PAD and DAU On Capital Expenditure In The Bireuen Regency Government

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ABSTRACT
This study aims to analyze the effect of Regional Original Revenue (PAD) and General Allocation Fund (DAU) on Capital Expenditures in the Government of Bireuen Regency. Capital Expenditures are an important indicator in supporting sustainable regional development. The research uses a quantitative method with a multiple linear regression approach. The data used are secondary data obtained from the regional government financial reports during the 2017–2023 period. The results of the F-test show that PAD and DAU simultaneously have a significant effect on Capital Expenditures, with an F-count value of 9.119 greater than the F-table value of 6.94 and a significance of 0.0032. However, the partial t-test results indicate that only PAD significantly affects Capital Expenditures, with a t-count of 4.185 and a significance of 0.014, while DAU does not show a significant effect, with a t-count of 1.184 and a significance of 0.302. The coefficient of determination (R^2) of 0.820 indicates that 82% of the variation in Capital Expenditures can be explained by PAD and DAU. These findings highlight the importance of strengthening local revenue capacity to enhance regional development through capital spending.

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1. Introduction

Since the enactment of regional autonomy, local governments have gained broad authority to regulate and manage their own financial resources to meet the needs of the community in accordance with applicable regulations. This decentralization policy provides opportunities for regions to increase fiscal independence and reduce dependence on the central government. One of the important implementations of regional autonomy is the authority to manage Regional Original Revenue (PAD) and use it to support development, especially through capital expenditure.

Regional Original Revenue (PAD) is the main indicator of regional independence. The higher the PAD obtained, the greater the ability of a region to finance development without having to rely on transfer funds from the center. PAD consists of regional taxes, levies, results of regional wealth management, and other legitimate income. However, many regions, including Bireuen Regency, still face challenges in the form of fluctuating low PAD revenues and taxpayer non-compliance, as well as weak bureaucracy in optimizing regional potential. This condition makes it difficult for regions to fully rely on PAD as the main source of development financing.

On the other hand, the General Allocation Fund (DAU) is present as an instrument of equity from the central government which aims to reduce fiscal inequality between regions. DAU is a block grant that is allocated based on the fiscal needs and fiscal capacity of a region. With the DAU, local governments have additional financial resources to finance public spending, including capital expenditure. However, DAU is often used more for routine spending than productive spending, so its contribution to infrastructure development and improving the quality of public services is not optimal.

Capital expenditure plays an important role in supporting regional economic growth. This expenditure is allocated for the construction and procurement of fixed assets such as roads, buildings, irrigation, educational facilities, and health. Adequate infrastructure will encourage economic activity, increase community productivity, and attract investors. Therefore, the increase in capital expenditure is expected to have implications for improving people's welfare in a sustainable manner.

Several previous studies have shown mixed results regarding the influence of PAD and DAU on capital expenditure. Suryani and Pariani (2018) found that PAD has no effect on capital expenditure, while DAU has a significant effect. On the other hand, other research shows that PAD has an important role in determining the amount of capital expenditure allocation, while DAU does not always have a significant effect. The difference in the results of the study shows that there is a research gap that is important to be studied further, especially in the context of regions that have special autonomy characteristics such as Aceh.

Bireuen Regency, as one of the regions in Aceh Province, has interesting regional financial dynamics to be researched. With the special autonomy characteristics of Aceh, the local government obtained additional authority and considerable transfer funds, but the challenge in increasing the PAD was still quite complex. Therefore, this study focuses on analyzing the influence of PAD and DAU on capital expenditure in Bireuen Regency in the 2017–2023 period.

The purpose of this study is to provide empirical evidence regarding the influence of PAD and DAU on capital expenditure. The results of the research are expected to make a theoretical contribution to the development of public sector accounting, as well as a practical contribution to local governments in formulating more effective financial management policies, especially in increasing the allocation of productive capital expenditures. Thus, this research is not only relevant for academics, but also for regional financial policy makers and practitioners.

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2. Research Methods

This study uses a quantitative approach with multiple linear regression analysis methods to determine the influence of independent variables on dependent variables.

The object of the research is the Bireuen Regency Government, with a focus on regional financial statements containing the realization of Regional Original Revenue (PAD), General Allocation Funds (DAU), and Capital Expenditure during the 2017–2023 period.

The type of data used is secondary data sourced from the Bireuen Regency Regional Revenue and Expenditure Budget (APBD) realization report published by the local government. The data collection technique is carried out with documentation through the collection of regional financial statements and relevant statistical data.

The research variables include, Independent variables: Regional Original Revenue (X1) and General Allocation Fund (X2). Dependent variable: Capital Expenditure (Y).

Data analysis was carried out in stages: Descriptive analysis to provide an overview of the development of PAD, DAU, and Cape, Classical assumption test which includes normality, multicollinearity, heteroscedasticity, and autocorrelation tests to ensure the validity of the regression model, Multiple linear regression analysis to test the influence of PAD and DAU on Capsipend, t-test (partial) to determine the influence of each independent variable on the dependent variable, the F Test (simultaneous) to determine the effect of PAD and DAU together on Capital Expenditure, and the Coefficient of Determination (R^2) to see the extent to which PAD and DAU are able to explain the variation in Capital Expenditure.

This research method was chosen because it is able to explain the causal relationship between the regional financial variables that are the focus of the research.

3. Result and Discussion

Descriptive Analysis

Descriptive analysis was used to provide an overview of the research variables, namely Capital Expenditure, General Allocation Funds (DAU), and Regional Original Revenue (PAD). The results of the descriptive statistical test are shown in Table 1.

Table 1. Descriptive Analysis Test

	N	Minimum	Maximum	Mean	Std. Deviation
BMDL	7	135210.00	538949.00	318855.4286	149928.69185
DAU	7	781884.00	829294.00	806785.4286	15435.61965
PAD	7	156528.00	194171.00	177048.7143	14273.15433

Source: Research Results, Data Processed, 2025

Based on the results of the analysis in Table 1, it is known that the minimum value of Capital Expenditure is 135,210.00, while the maximum value is 538,949.00. The average value (mean) was 318,855.42 with a standard deviation of 149,928.61. For the General Allocation Fund, the minimum value is 781,884.00 and the maximum is 929,494.00, with an average of 806,785.43 and a standard deviation of 15,435.62. Meanwhile, Regional Original Revenue has a minimum value of 156,528.00 and a maximum of 194,171.00, with an average of 177,048.71 and a standard deviation of 14,273.15.

Classic Assumption Test

Normality Test

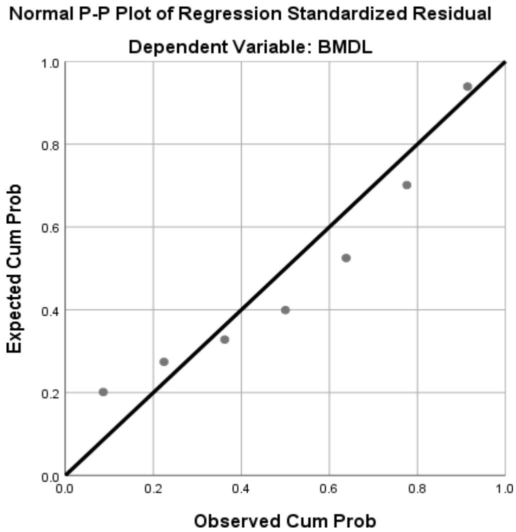

Figure 1. P-Plot Normality Chart

Based on the P-Plot image above, it can be concluded that the regression model meets the assumption of normality because in the normal P-Plot graph it is seen that the dots are close to the diagonal line and spread around the diagonal line and show very significant results.

Multicollinearity Test

Table 2. Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	DAU	.993	1.007
	PAD	.993	1.007

Source: Research Results, Data Processed, 2025

The multicollinearity test is used to evaluate whether there is a high correlation between independent variables in a multiple linear regression model. If there is a high correlation between independent variables, it can cause interference in the measurement of the influence of these variables on related variables. From the results of the test above, it is known that the magnitude of the Tolerance value in each independent variable of 0.993 and 0.993 is greater than 0.1. Meanwhile, the magnitude of the VIF value in each independent variable of 1,007 and 1,007 is approximately 10.00. Therefore, referring to the basis of decisionmaking in the multicollinearity test, it can be concluded that there are no symptoms of multicollinearity in the regression model.

Heteroskeativity Test

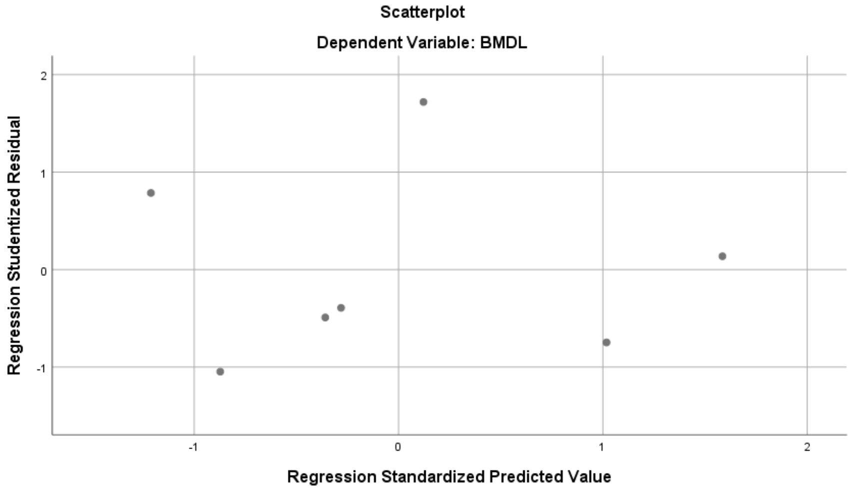

Figure 2. Heteroskeativity Test

Based on the output of the Scatterplots above, it is known that the dots are scattered in various directions, both above and below the number 0 on the Y axis and do not form a specific pattern. So it can be concluded that heteroscedasticity does not occur in the regression model.

Autocorrelation Test

Table 3. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.906a	.820	.730	77877.09378	2.230

Source: Research Results, Data Processed, 2025

From the results of the Durbin Watson test above, a DW value of 2,230 was obtained. With the number of samples (n) = 7 and the number of independent variables (k) = 2, and the significance nerve 0.05, the values dU = 1.8964 and dl = 0.4672 were obtained. If the value is compared, it is obtained. So based on the dU < dw < 4-dU, the result is 1.8964 < 2,230 < 2.1036. Thus, this shows that the model is a fairly good regression model because there is no autocorrelation.

Multiple Linear Regression Analysis

Table 4. Multiple Linear Regression Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	**(Constant)**	-3310314.707	1744503.165		-1.898	.131
	DAU	2.446	2.066	.252	1.184	.302

PAD	9.353	2.235	.890	4.185	.014

Source: Research Results, Data Processed, 2025

The results of multiple linear regression analysis show similarities:

Y= -3310314,707+2,446X1+9,353X2+e

The constant value of 0 or -3310314.707 which states that without the influence of PAD and DAU, the value of Capital Expenditure is 0 or -3310314.707 which means that without the variable Regional Original Revenue (PAD) and General Allocation Fund (DAU), then Capital Expenditure in the Bireuen Regency Government will decrease.

The Regional Original Revenue variable (X1) has a regression coefficient of 9.353, if the Regional Original Revenue increases by 1%, then the Capital Expenditure on the Bireuen Regency Government increases by 9.353 has a positive effect on the Capital Expenditure.

The variable of the General Allocation Fund (X2) has a regression coefficient of 2.446 if the General Allocation Fund increases by 1%, then the Capital Expenditure in the Bireuen Regency Government increases by 2.446 has no effect on the Capital Expenditure.

Partial Hypothesis Testing (t-test)

Table 5. Test Results t

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	**(Constant)**	-3310314.707	1744503.165		-1.898	.131
	DAU	2.446	2.066	.252	1.184	.302
	PAD	9.353	2.235	.890	4.185	.014

Source: Research Results, Data Processed, 2025

The significance test of the variable DAU (X1) on Capital Expenditure in the Bireuen Regency Government obtained the results ρvalue = 0.302 and > the standard value of 0.05. In addition, the magnitude of the t-count value = 1.184 while the t-table value = 2.776 (df= n-k-1= 7-2-1=4). Thus t-calculate < t-table or 1.184 < 2.776. From these results, it was obtained that the results of DAU did not have a significant effect on Capital Expenditure in the Bireuen Regency Government, so it received H0.

The significance test of the PAD variable (X2) on Capital Expenditure in the Bireuen Regency Government obtained the results ρvalue = 0.014 and < the standard value of 0.05. In addition, the magnitude of the t-calculated value = 4.185 while the value of the t-table = 2.776. Thus t-calculate > t-table or 4,185 > 2,776. From these results, the results of PAD have a significant effect on Capital Expenditure in the Bireuen Regency Government, so it rejects H0.

Simultaneous Hypothesis Testing (f-test)

Table 6. Test Results f

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	110612308902. 075	2	55306154451.038	9.119	.032b

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	Residual	24259366939.639	4	6064841734.910
	Total	134871675841. 714	6	

Source: Research Results, Data Processed, 2025

Based on the test results, an F-calculation value of 9.119 was obtained with a significant value of 0.032 smaller than 0.05. Meanwhile the magnitude of f-tables can be searched using a statistical table at a significant level of 0.05, k-2 (Df counter), and n-k-1 (Df denominator) or 7-2-1 = 4 (k is the sum of independent variables, n is the number of samples). An f-calculation value of 9.119 is obtained, which means that it is larger than the f-table, which is (6.94), so that it can be concluded that all independent variables have a significant effect on the dependent variables together.

The Influence of Regional Original Revenue (PAD) on Capital Expenditure

The results of the hypothesis test partially (t-test) showed that the significant test of the variable of Regional Original Revenue (X1) on Capital Expenditure in the Bireuen Regency Government obtained the result ρvalue = 0.014 and < the standard value of 0.05 while t-calculation = 4.185 and the value of the PAD coefficient = 9,353 from these results, the results of the Regional Original Revenue had a significant effect on Capital Expenditure in the Bireuen Regency Government, so accepting Ha rejected H0. Therefore, the higher the Regional Original Revenue obtained by the Bireuen Regency Government, the greater the ability of the Bireuen Regency region to finance physical development, such as the construction of roads, bridges, government buildings, and other infrastructures that are included in the capital expenditure category.

The results of this research are supported by Fahmi & Hairani, (2019) which states that the original regional income has a significant effect on capital expenditure. Contrary to opinion Suryani & Pariani, (2018) said that the region's original revenue does not have a significant effect on capital expenditure.

The Effect of General Allocation Funds (DAU) on Capital Expenditure

The results of the partial hypothesis test (t-test) show that the significant test of the variable of the General Allocation Fund (X2) on Capital Expenditure in the Bireuen Regency Government obtained the results ρvalue = 0.302 and > the standard value of 0.05 while t-calculation = 1.184 and the value of the PAD coefficient = 2.446 from these results, the results of the General Allocation Fund did not have a significant effect on the Capital Expenditure in the Bireuen Regency Government, so accepting Ho rejected Ha. This suggests that although the General Allocation Fund is an important component of regional funding, its use tends not to be directed directly to Capital Expenditure. Therefore, the Regions need to manage wisely and increase Regional Original Revenue to support development optimally.

The results of this study are contrary to the research Fahmi & Hairani, (2019) and Suryani & Pariani, (2018) which states that the General Allocation Fund has a significant effect on Capital Expenditure.

4. Conclusion and Suggestions

Conclusion

The results of this study show that Regional Original Revenue (PAD) has a significant effect on Capital Expenditure, while General Allocation Funds (DAU) do not have a significant influence. However, simultaneously PAD and DAU together have a significant effect on Capital Expenditure. This indicates that the role of PAD is more dominant in encouraging an increase in capital expenditure than DAU whose use tends to be directed towards routine spending. The value of the determination coefficient (R^2) of 0.820 corroborates the finding that most of the variation in Capital Expenditure can be explained by PAD and DAU, while the rest is influenced by other factors outside the research model. Thus, this study emphasizes the importance of strengthening PAD capacity in order to increase capital expenditure to support sustainable regional development.

Suggestion

Based on the results of the research, the Bireuen Regency government is advised to further optimize the potential of Regional Original Revenue through increasing taxpayer compliance, more productive management of regional assets, and fiscal policy innovations that encourage regional financial independence. In addition, even though the General Allocation Fund has not been proven to have a significant effect on capital expenditure, local governments still need to direct part of the DAU allocation to productive spending so that transfers from the central government not only finance routine expenditures, but also be able to have a long-term impact on infrastructure development and public services. For further research, it is recommended to add other variables such as the Special Allocation Fund (DAK) or the Special Autonomy Fund, so that it can provide a more comprehensive picture of the factors that affect capital expenditure in the regions.

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