The Interplay between the Otsus Fund, Capital Expenditure, and Regional Economic Performance in Aceh Province

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Abstract

This study aims to examine the impact of the Special Autonomy Fund on economic growth as measured by Gross Regional Domestic Product (GDRP) in the province of Nanggroe Aceh Darussalam. The research was conducted using the quantitative method of two-stage linear regression analysis. The independent variables used in this research model are General Allocation Funds, Revenue Sharing Funds, Special Allocation Funds, Special Autonomy Funds, and Regional Revenue, while the dependent variable is GDRP. Capital Expenditure is selected as an intervening variable. The data used in this study is panel data from 23 regencies/cities in NAD Province from 2015 to 2020. The research conclusion is that there is an indirect positive effect of the Otsus Fund on GDRP through Capital Expenditures. Therefore, the recommendation for policymakers from the research results is that the Otsus Fund should continue and extend where the Otsus Fund will end in 2028.

Keywords: general allocation funds, revenue sharing funds, special allocation funds, special autonomy fund, capital expenditure, economic growth

Introduction

The initiation of the fiscal decentralization policy dates back to 2001 when the Ministry of Finance implemented the transfer of the Balance Fund from the Central Government to the Regional Government (Brodjonegoro & Martinez-Vazquez, 2005). Referring to Law No. 33 of 2004, the Balance Fund, consisting of the General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the Revenue-Sharing Fund (DBH), is allocated by the Central Government to reduce fiscal gaps, both vertically between the central government and the regional government and horizontally between regional governments (Akita et al., 2021). Some provinces receive privileges from the Central Government through a more significant allocation of balance funds than other provinces in Indonesia, namely Aceh, Papua, West Papua, and Yogyakarta. Article 18B, paragraph 1 of the Indonesian Constitution of 1945, postulates that the state recognizes the legitimation of the regional government with unique characteristics (Nurcholis et al., 2019).

Meanwhile in the European region, to reduce disparities between regions in the European Union (EU) society. The EU issues regional policies to support economic growth, job creation, business competition effectiveness, sustainable development, and improve citizens' quality of life. The European Regional Development Fund (ERDF) and the Cohesion Fund (CF) are channelled to support these policies. The ERDF aims to assist less developed regions allocated to EU areas with GDP per capita below 75% of the EU average. In comparison, the CF assists EU countries with national income per capita below 90% of the EU average (Moreno, 2020). Likewise, Brazil has a regional development policy through regional development funds for the Northeast (FNE), North (FNO), and Central-West (FCO) in order to facilitate economic and social development in underdeveloped areas for small-scale farmers and small industrial companies. Regional development programs that have been carried out in the European Union and Brazil have increased GDP per capita (Cravo et al., 2014).

In Indonesia, the provision of special autonomy funds (the Otsus Fund) aims to accelerate the development of infrastructure such as roads, bridges, ports, transport facilities, rivers and seas, and to overcome the isolation and gaps in certain regions. The reasons for providing the Otsus Fund may vary from region to region. For example, in West Papua, the primary purpose of the Otsus Fund is to finance education and health and to improve the welfare of the people. In Papua, on the other hand, the Otsus is intended to support the acceleration of the implementation of special autonomy in order to achieve justice, law enforcement, respect for human rights, economic development, and the welfare and progress of the Papuan people in a context of equality and balance with the progress of other provinces in Indonesia. The provision of the Otsus Fund is expected to help address the root problems in certain regions, such as poverty, underdevelopment and social inequality (Way, 2021).

The Indonesian Central Government has distinguished Aceh province by recognizing the historical traits of Acehnese fighters' protracted battle for independence through various kinds of contention (Nurdin & Muhammad, 2020). The province has the attribute of unique authority under the provisions of Law Number 18 of 2001.

Aceh government has received an Autonomy Fund (Otsus Fund) with an allocation of 2% of the DAU for 15 years from 2008 to 2022 and then 1% of the DAU for the next five years from 2023 to 2027 since the implementation of Law Number 11 in 2006 (Hajad et al., 2022). The allocation ceiling for the Aceh Special Autonomy Fund has increased dramatically each year in keeping with the increase in the national DAU cap. The implementation of the Aceh Otsus Fund entered its 14th year in 2021, with the total amount of funds allocated by the Central Government reaching approximately IDR 89.56 trillion, a large number for a region among Indonesia's provincial governments (Shah, 2012).

Figure 1 shows the amount allocated for Aceh's Otsus Fund in 2008 amounted to 3.59 trillion, then experienced a significant increase until 2019 to Rp. 8.36 trillion. In 2020, the start of the COVID-19 pandemic, these funds again increased to IDR 8.37 trillion and then decreased to IDR 7.81 trillion in 2021. The disbursement of the Otsus Fund is, to a certain extent, related to the economic growth in Aceh. During the 2015-2020 timeframe, the development of regional gross domestic product (PDRB) in Aceh province increased yearly (Abrar, 2018). The value of Aceh's PDRB has risen, although it is still lower than the average provincial GDRP in Sumatra and Kalimantan (Hariyanti &

Utha, 2016). In light of these circumstances, receipt of the Otsus Fund from the Central Government has not considerably boosted economic growth in the Aceh region compared to other provinces in Indonesia that still need to receive the particular fund (Zulham et al., 2015).

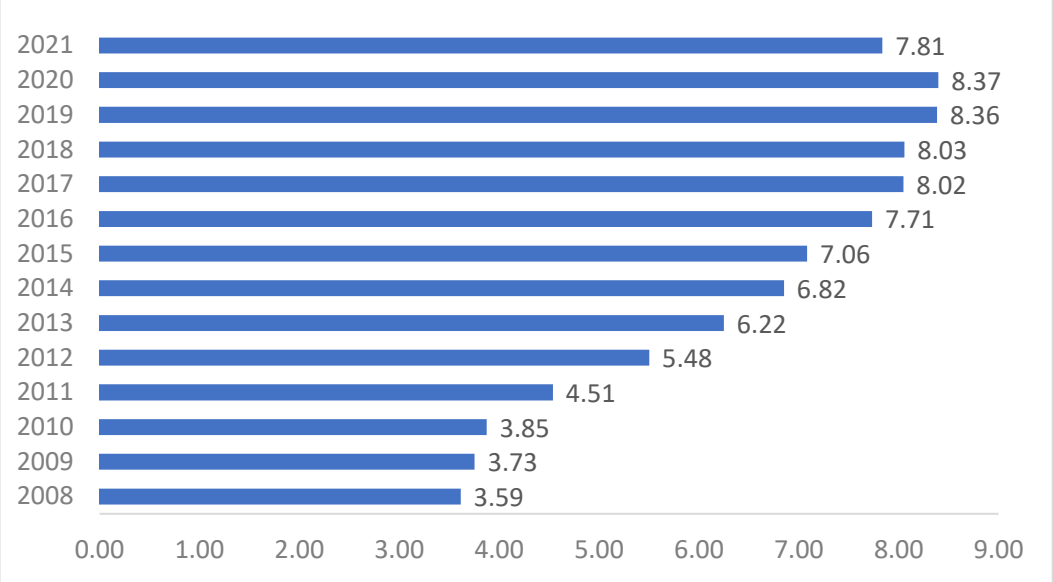

Figure 1. Aceh Autonomy Fund Allocation

Source: The Ministry of Finance of Indonesia (2022)

Several past studies have investigated the connection between the utilization of the Otsus Fund, capital expenditure, and the growth of the regional economy. Abrar (2018) conducted a study to investigate the effect that the Otsus Fund had on the rate of economic development performance in 23 districts and cities located within Aceh Province from 2000 to 2016. Based on his research, he concluded that the Special Autonomy Fund can support the activities of other funds such as DAK, DAU, and Regional Revenue (PAD) and that the more money that is distributed from the Otsus Fund, the more economic growth will take place (Abrar, 2018). In the meantime, (Nufus & Asmara, 2017) assessed the impact of PAD and Balancing Funds on Capital Expenditure CE) with the Otsus Fund as Moderation in twenty-three districts and cities in Aceh Province from 2014 to 2016. His analysis indicates that the Otsus Fund can significantly mitigate the interaction between PAD and Balancing Funds on CE.

Furthermore, the Special Autonomy Fund strengthens the relationship between the Balancing Fund and the PAD (Nufus & Asmara, 2017). This direct effect or positive causation between the Otsus Fund and regional economic growth is the only conclusion the researchers reached after analyzing their study's information. However, more is needed from past research about the indirect influence of the Otsus Fund on regional economic growth via capital expenditure. As inferred from Nufus & Asmara's (2017) study, the Otsus Fund can indirectly affect regional economic performance through capital expenditure (BM). Our study offers an empirical novelty by developing proxies to confirm this indirect relationship of the Otsus Fund on local financial performance through capital spending.

The relationship between the Otsus Fund, BM, and GDRP is an ideal instance of how stakeholder theory may be used to promote economic development while meeting the needs of many stakeholders (Ula et al., 2020). The theory emphasizes the significance of considering the interests of all stakeholders, including individuals, government agencies, corporations, and civil society organizations (Zulham et al., 2015). Stakeholders have distinct interests in the public sector, and the government must balance these interests and guarantee that all stakeholders benefit from public policies and programs (Iskandar, 2017). The Otsus Fund, in terms of stakeholder theory, can be viewed as a mechanism for balancing the interests of various stakeholders in Aceh province (Zulham et al., 2015). The Otsus Fund, for instance, has been used to finance projects that give local communities access to clean water and sanitation facilities, both of which benefit the communities (Abrar et al., 2020). Additionally, the fund has been utilized to facilitate the growth of renewable energy sources, benefiting the surrounding Aceh ecosystem (Setyowati, 2020).

Research on intergovernmental transfers is not only conducted in Indonesia. Churchill & Yew (2017), using 23 studies, conducted a meta-analysis of the impact of transfers on economic growth. Churchill & Yew (2017) found that government transfers harm economic growth in developed countries compared to less developed countries because transfers have a non-monotonic effect on economic growth. Nguyen & Anwar (2011) studied the impact of decentralization on provincial economic growth in Vietnam. The results of this study show different results; the measurement of decentralization with revenue has a positive effect, while decentralization with expenditure measurement harms economic growth. Yushkov (2015) found the same thing as the results of research (Nguyen & Anwar, 2011); in the local governments of Russia, excessive expenditure decentralization within the region, which is not accompanied by the respective level of revenue decentralization, is negatively related to economic growth.

Based on the theory of stakeholders, the aim of government program execution should bring maximum utility to local society. In this case, the Otsus Fund must be allocated to programs suitable for the Acehnese interests. Capital expenditure on infrastructure development is an example of benignant programs for boosting the economic growth in Aceh. Hartati (2016) investigated how receiving the Otsus Fund affected subsequent capital spending and how the fund influenced the Human Development Index (IPM). Her investigation led her to conclude that the Otsus Fund can positively affect both IPM and capital expenditure.

On the other hand, her research needed to be more adequate at demonstrating the mediating effect of capital expenditure on IPM. Abrar (2018) examined the impact that being granted access to the Special Autonomy Fund had on the distribution of capital expenditures before and after the fund existed. Based on his research findings, it can be deduced that regional earnings from DAK and DAU will raise the local government's expenditures on capital projects before the Otsus Fund was distributed. Furthermore, once the Otsus Fund had been spent, only the DAK had a beneficial impact on the amount spent on BM. As a result, we predict the first hypothesis regarding the direct effect of the Otsus Fund on BM, that the transfer of the Aceh Otsus Fund will increase the capital expenditures in each district/city of Aceh Province.

From the perspective of stakeholders' theory, the government program should accommodate the needs of the external community as the primary objective. In this case, the Otsus Fund should fund infrastructure projects that will trigger a positive trend in regional economic performance. Anwar, Abdullah, and Hadi (2018) investigated PAD, Otsus Fund, and Capital Expenditure's impact on GDRP in Papua Province's municipalities and districts. According to the findings of their study, PAD and the Otsus Fund had a substantial positive effect on PDRB in Papua Province. In contrast, BM had a significant negative impact on GDRP (Rosita Dwi Anwar et al., 2018). In the meantime, (Nufus et al., 2017) indicated that the Otsus Fund could significantly mitigate the interaction between capital expenditure and regional economic performance. Based on previous empirical literature, capital expenditure has the potential capacity to mediate the effect of the Otsus Fund on regional economic performance. As a corollary, we predict the second hypothesis regarding the indirect impact of the Otsus Fund on PDRB via CE that the transfer of Aceh's Otsus Fund will increase Aceh's Economic Performance via capital expenditures.

Based on the background mentioned earlier and hypotheses, our research is purported to fulfil two research objectives that have not been carried out in previous research, which are to predict and explain (1) the direct causation of the Otsus Fund on BM and (2) the indirect influence of the Otsus Fund on PDRB through BM. The conceptual framework of our research objectives is portrayed in Figure 2. Our investigation contributes to government accounting literature in the context of stakeholders' theory to explain the relationship between Otsus transfer, capital expenditure disbursement, and regional economic performance. From the practical viewpoint, our findings may be helpful for the central government, especially the Ministry of Finance, to evaluate the Otsus transfer policy and improve different mechanisms to enhance the inclusivity of the Otsus policy.

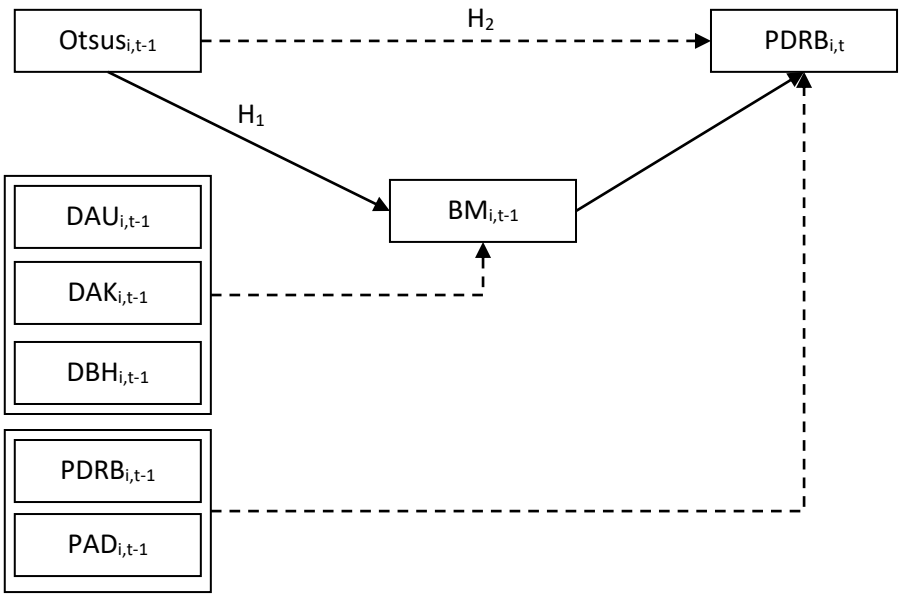

Figure 2. Research Conceptual Framework
Source: Processed Data, 2022

Research Method

We implemented the positivist paradigm as our worldview to satisfy our research objectives. We assumed that the truthfulness of this research could be achieved by applying the mindset of objectivity, which can be fulfilled by predicting and explaining the relationship between variables of interest (Potter & Levine-Donnerstein, 1999). We employed the quantitative research approach as our epistemology to apply the particular assumption to construct the epitome of veracity. To embrace the quantitative approach, we gathered secondary data from the financial statements of registered local governments in Aceh province. We used the administration of all districts and cities in Aceh province that received the Otsus Fund from the Ministry of Finance between 2015 and 2020 as our primary data. We found the related data from the Indonesian Ministry of Finance website (DJPK): https://djpk.kemenkeu.go.id/ and the Indonesian Statistic Agency website (BPS): https://www.bps.go.id/. As a result, we acquired 138 local government-year data samples after limiting the sample with missing data. Table 1 summarizes the sample selection process. We chose the 2015-2020 timeframe since the trend of Otsus Fund allocation began to increase in 2015, and there were no substantial increases in the Fund allotment in 2020-2021.

Table 1. Sample Selection Process

Selection Criteria	Total
Initial samples (all districts and cities in Aceh province that received the Otsus Fund) from 2015-2020	142
Excluded:	
Cities/Districts with missing data from 2015-2020	(4)
Final samples	138

Source: Processed Data, 2022

We utilized several variables of interest to foresee and rationalize the interplay between the Otsus Fund, capital expenditure, and regional economic performance in Aceh. For dependent variables, we drew on two indicators: *the lagged capital expenditure* ($BM_{i,t-1}$) disbursed by each city or district in Aceh province, as well as *the regional economic performance* ($PDRB_{i,t}$). We tested the direct effect of the Otsus Fund using capital expenditure as the primary dependent variable. Besides that, we functioned *the lagged capital expenditure* as the mediating variable to examine the indirect effect of the Otsus Fund on regional economic performance. To measure the lagged capital expenditure, we adopted Nufus & Asmara's (2017) technique by assessing the money spent by the Aceh district/city government on long-term investments during 2014-2019, such as infrastructure, buildings, equipment, and other capital assets. The Indonesian Ministry of Finance recapitulated the data. In the meantime, (Anwar et al., 2018) suggest using the gross regional domestic product as the proxy for calculating regional economic performance. Following their suggestion, we measured the second dependent variable value using the total gross added value for 2015-2020, which was generated from all economic sectors in the Aceh region published by the Indonesian Statistic Agency.

In this study, we exclusively employed one independent variable, *the lagged Otsus Fund* ($Otsus_{i,t-1}$). We determined the specific fund by estimating the financial assistance the Indonesian Ministry of Finance granted to the Aceh provincial

government from 2014 to 2019 as part of its Special Autonomy status under the 1945 Indonesian Constitution (Isra et al., 2019). The monies will be earmarked for various development projects and initiatives, including infrastructure, education, health care, and other public services (Abrar, 2018; Zulham et al., 2015). The funds are further utilized to finance local government operations, such as paying salaries and other administrative necessities (Abrar, 2018).

Table 2. Variables Measurement

Variable	Measurement	Source
Dependent:		
$BM_{i,t-1}$	The money spent by the Aceh district/city government on long-term investments, measured in natural logarithm	DJPK
$PDRB_{i,t}$	the total gross added value generated from all economic sectors in the Aceh region, measured in natural logarithm	BPS
Independent:		
$Otsus_{i,t-1}$	The financial support granted by the Indonesian Ministry of Finance to the Aceh provincial government as part of its Special Autonomy status under the 1945 Indonesian Constitution, measured in natural logarithm	DJPK
Mediating:		
$BM_{i,t-1}$	The money spent by the Aceh district/city government on long-term investments, measured in natural logarithm	DJPK
Control:		
$DAU_{i,t-1}$	The financial aid provided by the Indonesian Ministry of Finance to the Aceh provincial government to support its general budget is measured in natural logarithms.	DJPK
$DAK_{i,t-1}$	The additional funding for the Aceh local government to support specific programs or projects identified as priorities by the Indonesian Ministry of Finance, measured in natural logarithm	DJPK
$DBH_{i,t-1}$	The portion of the money made from the extraction of oil and gas in the province of Aceh, measured in natural logarithm	DJPK
$PDRB_{i,t-1}$	The funds spent on long-term investments in the Aceh province between 2014 and 2019 were measured in natural logarithms.	BPS
$PAD_{i,t-1}$	The revenue generated by the provincial government of Aceh from its sources, such as property taxes, vehicle taxes, hotel taxes, mining royalties, and other charges, is measured in natural logarithms.	DJPK

Source: Processed Data, 2022

We used several control variables to control the causality between dependent variables and their determinants. We divided the variables into two groups: BM and PDRB control variables. For Capital Expenditures (BM) groups, we utilized *the lagged general allocation fund* ($DAU_{i,t-1}$)*, the lagged special allocation fund* ($DAK_{i,t-1}$), and *the lagged revenue-sharing fund* ($DBH_{i,t-1}$) as the controls of capital expenditure. We computed the general allocation fund by appraising the financial support provided by

the central government to the Aceh provincial government to support their general budget needs based on a formula that takes into account various factors, such as the population, geographic size, and fiscal capacity of the local government during 2014-2019 (Brodjonegoro & Martinez-Vazquez, 2005). For the special allocation fund, we assessed it by evaluating additional funding for the Aceh provincial government to support specific programs or projects that have been identified as priorities by the Indonesian Ministry of Finance for the period of 2014-2019 (Abrar et al., 2020).

Moreover, we determined the size of the revenue-sharing fund by assigning a portion of the money made from the extraction of oil and gas in the province of Aceh during 2014-2019 (Brodjonegoro & Martinez-Vazquez, 2005). This allocation followed a specific formula that considered several factors, including the total amount of money rendered and the number of people living in the exploitation area (Brodjonegoro & Martinez-Vazquez, 2005). For the PDRB group, we employed *the lagged gross regional domestic product* ($PDRB_{i,t-1}$) and *the lagged local own-source revenue* ($PAD_{i,t-1}$) as the controls of regional economic performance. We calculated the lagged gross regional domestic product by identifying the funds spent on long-term investments in the Aceh province between 2014 and 2019. In addition, we computed the lagged local own-source revenue by estimating the revenue generated for the year 2014 to 2019 by the provincial government of Aceh from its sources, such as property taxes, vehicle taxes, hotel taxes, mining royalties, and other charges (Aspan et al., 2016). We transformed all variables into natural logarithms to acquire robust results. We resumed the variables operationalization in Table 2.

The use of lag data within the independent and control variables is predicated on the understanding that the impact of Aceh's Otsus Fund, as well as DAU, DBH, and DAK, on capital expenditure, then the effect of capital expenditure and its control variables on regional economic performance will not occur immediately in the same fiscal year, but rather in the following fiscal year (Abrar, 2018). We performed a series of linear regression algorithms to examine the collected data and ascertain whether the Otsus Fund's direct and indirect effects on the dependent variables are valid and significant. We were able to confirm our research aims with the use of the STATA 14 software. We employed a combination of techniques for predicting the parameters of panel data, including the Ordinary Least Square (OLS), Fixed Effect (FEM), and Random Effect (REM) models (Agustina & Pramana, 2019). We executed Chow, Lagrange-multiplier, and Hausman tests on the models to select the most appropriate one for hypothesis testing. Our basic models are defined as follows.

$$BM_{it-1} = \beta_0 + \beta_1 Otsus_{it-1} + \beta_2 DAU_{it-1} + \beta_3 DAK_{it-1} + \beta_4 DBH_{it-1} + \varepsilon_{it-1} \quad \text{..... (1)}$$

$$PDRB_{it} = \beta_5 + \beta_6 BM_{it-1} + \beta_7 PDRB_{it-1} + \beta_8 PAD_{it-1} + \varepsilon_{it} \quad \text{..... (2)}$$

We ran three-panel model selection tests for Models (1) and (2). Afterwards, we carried out the procedures proposed by Gauss-Markov to make sure that our models have the best linear unbiased estimators. We used the selected models, which conformed with the Gauss-Markov conditions, to test the Otsus Fund's direct effect on capital expenditure in Model (1) and its indirect effect through Model (2). To substantiate the direct effect, we expected the Otsus Fund coefficient, β_1, in Model (1) to be positive and significant. To verify the indirect effect, we conducted a further mechanism called the Sobel test to accentuate the significance of the mediating

variable's parameter. We presumed that the coefficient of the capital expenditure, β_6, in Model (2) is positive and significant so that we could operate the Sobel test to validate the indirect effect of the Otsus Fund on regional economic performance. The Sobel test formula to calculate the indirect effect's coefficient and T-statistic is as follows:

$$Coef_{Indirect\ Effect} = \beta_1 * \beta_6 \quad \text{..... (3)}$$

$$T - Stat_{Indirect\ Effect} = \beta_1 * \beta_6 \Big/ \sqrt{\left(\beta_1{}^2 * \mathrm{SE}\beta_6{}^2\right) + \left(\beta_6{}^2 * \mathrm{SE}\beta_1{}^2\right)} \quad \text{..... (4)}$$

Where, $\mathrm{SE}\beta_1$ is the standard error for the coefficient of the Otsus Fund, β_1, and $\mathrm{SE}\beta_6$ is the standard error for the coefficient of the capital expenditure, β_6.

Result and Discussion

Based on Table 3, it is possible to explain descriptive statistical data for all research variables from 2015-2020. The Otsus variable, one of the most important independent variables, has a value of 4.711 on average, with a range that can go as low as 2.126 and as high as 5.531, where the actual value of the Otsus variable is multiplied by 1 trillion rupiah. The PDRB and BM variables, both dependent variables, have an average value considerably different from the other. The PDRB variable has a value of 8.306 (min 6.816 and max 9.741), whereas the BM variable has a value of 5.466 (min 4.183 and max. 6.238).

Table 3. Summary of Descriptive Analysis Results

Description	Average Value	Std. Dev.	Minimum	Maximum
$Otsus_{it-1}$	4.711	0.440	2.126	5.531
DAU_{it-1}	6.267	0.269	5.677	6.800
DAK_{it-1}	5.150	0.418	4.115	6.120
DBH_{it-1}	3.155	0.673	2.427	5.883
PAD_{it-1}	4.577	0.581	3.494	5.961
BM_{it-1}	5.466	0.368	4.183	6.238
$PDRB_{it-1}$	8.306	0.761	6.816	9.741

Source: Processed Data, 2023

Based on Table 4, first of all, the Chow Test was used for model 1, which is to test the suitable model to be used between CEM and FEM (Widarjono, 2009). The result of the Chow test was 0.126, so it failed to reject Ho because the probability was > 5%. Therefore, it is continued with the Lagrangian Multiplier (LM) test. The LM test determines whether the data fits using CEM or REM (Richie, 2021). The result of the LM test was 0.235, which failed to reject H0 because the probability was > 5%, so the chosen model was the CEM. Therefore, the CEM is the most appropriate model 1 after the Chow and LM tests. Furthermore, for model 2, starting with the Chow test with a result of 0.000, reject H0 because the probability was <5%, so continue the Hausman test. The Hausman test, according to (Abrar et al., 2020), is used to decide whether to use FEM or REM. The result of the Hausman test is 0.000, so H0 is rejected, which means that the final model 2 chosen is FEM.

Table 4. Model Fit Test Results

Test	Description	Model 1		Model 2	
Chow	CEM vs. FEM	0.126	CEM	0.0000	FEM
Hausman	REM vs FEM	0.000	FEM	0.0000	FEM
Lagrange Multiplier	CEM vs REM	0.235	CEM	0.0000	REM
Conclusion			CEM		FEM

Source: Processed Data, 2023

Table 5 describes the classical assumption test, for the 1st model the result of the Multicollinearity Test showed no number greater than 0.8 so there is no multicollinearity problem. Furthermore, the result of the Homoscedasticity test was 0.0476 (reject H0 because the probability is <5%), resulting in a heteroscedasticity problem. To solve the problem of this assumption, an estimation of the CEM model is carried out using the GLS Weight. Meanwhile, the no auto-correlation test result was 0.3957 (failed to reject H0 because the probability was > 5%), meaning there was no autocorrelation problem. Lastly is the normality test with a result of 0.0114 (reject H0 because the probability is < 5%) so the normality assumption is not fulfilled. However, research with a sample size of more than 30 will follow a normal distribution (Ghozali, 2005) by the Central Limited Theorem (CLT).

In addition, for the 2nd model there is no multicollinearity problem. However, the homoscedasticity test result was 0.0000 (reject H0 because the probability was <5%), resulting in a heteroscedasticity problem so to overcome the problem of this assumption, an estimation of the FEM model with GLS weight is carried out. Furthermore, the results of the No Auto-correlation test were obtained at 0.0000 (reject H0 because the probability was <5%), resulting in an autocorrelation problem which can be overcome by estimating the FEM model using GLS Weight and Autoregressive or adding Lag Variables from the dependent. Meanwhile, the normality test result was 0.0328 (reject H0 because the probability was <5%), so the normality assumption is not met. Even though it is not fulfilled, according to the CLT, a large sample will follow a normal distribution.

Table 5. Gauss-Markov Test Results

Test	**Model 1**	**Treatment**	**Model 2**	**Treatment**
No Multicollinearity	√	-	√	-
Homoscedasticity	X	GLS Weight	X	GLS Weight
No Auto-correlation	√	-	X	GLS Weight
Normality	X	CLT	X	CLT

Source: Processed Data, 2023

In the first model based on Table 6, the variable of the General Allocation Fund (DAUit-1) has a coefficient of -0.3228, which means that for every 1% increase in DAUit-1, on average Capital Expenditures (BMit-1) will decrease by 0.3228 per cent. The DAUit-1 probability is 0.088 or less than 10%, so DAUit-1 partially has a significant negative effect on BMit-1; this is in line with research conducted by Mawarni & Abdullah (2013). However, this is not in line with Abrar (2018), Rahmah & Zein (2016), Ferdiansyah et al. (2018) and Badura et al. (2017), which state that the General Allocation Fund has a significant positive effect on Capital Expenditures. Meanwhile, the DBHit-1 variable has a coefficient of 0.1006, which means that for every 1% increase in DBHit-1, the average BMit-1 will increase by 0.1006%. The probability of DBHit-1 is 0.089 or less than 10%, so

DBHit-1 partially has a significant positive effect on BMit-1; this is in line with research conducted by Rahmah & Zein (2016) and Hartati et al. (2016). However, Ferdiansyah et al. (2018) in their research stated that the Profit-Sharing Fund partially did not affect Capital Expenditures. In addition, the variable Special Allocation Fund (DAKit-1) has a coefficient of 0.6081, which means that for every 1% increase in DAKit-1, on average, BMit-1 will increase by 0.6081%. Meanwhile, the probability of DAKit-1 is 0.000 or less than 1%, so DAKit-1 partially has a very significant positive effect on BMit-1. This is in line with Hairiyah's (2017), Ferdiansyah (2018), and Novianto & Hanafiah (2015). However, Wanma et al. (2020) state that the Special Allocation Fund partially does not affect Capital Expenditures. Furthermore, the Special Autonomy Fund variable (Otsusit-1) has a coefficient of 0.1841, which means that every 1% increase in Otsusit-1 means that, on average, BMit-1 will increase by 0.1841%. The probability of Otsusit-1 is 0.000 or less than 1%, so Otsusit-1 partially has a very significant positive effect on BMit-1. This is in line with research by Hartati et al. (2016), Wanma et al. (2020), Ferdiansyah (2018), Yana (2018), and Asmara (2017). Overall, the adj R^2 value for model 1 is 0.3376, which means that the independent variables consisting of General Allocation Funds, Revenue Sharing Funds, Special Allocation Funds and Special Autonomy Funds in the model can explain 33.76% of the variation in the dependent variable, namely Capital Expenditures, while the rest explained by other variables not included in the model.

Table 6. Partial T-Test Results

Variable	Model 1 (BM_{it-1})			Model 2 ($PDRB_{it}$)			Indirect Effect ($PDRB_{it}$)		
	Coef.	T-Stat		Coef.	T-Stat		Coef.	T-Stat	
BM_{it-1}				0.0128	7.2800	***			
$Otsus_{it-1}$	0.1840	2.8200	***				0.0023	2.6471	***
DAU_{it-1}	-	-	*						
	0.3228	1.7200							
DAK_{it-1}	0.0680	5.5800	***						
DBH_{it-1}	0.1005	1.7100	*						
PAD_{it-1}				0.0053	1.5100				
$PDRB_{it-1}$				0.9908	307.4900	***			
Cons	3.1121	3.8100	***	0.0156	1.1900				
Adj R^2		0.3372			0.3002				
Prob (F)		0.0000	***		0.0000	***			

Source: Processed Data, 2023

Furthermore, for the second variable model of the previous period, Capital Expenditures (BMit-1) has a coefficient of 0.0128, which means that for every 1% increase in BMit-1 in the previous period, the average Gross Regional Domestic Product (PDRBit) will increase by 0.0128%. The probability of BMit-1 is 0.000 or less than 1%, so BMit-1 partially has a very significant positive effect on PDRBit, this is in line with previous research conducted by Badjra et al. (2017), Waryanto (2017), Simanjuntak & Rahmadi (2016) and Daniar (2016), while research conducted by Anwar et al. (2018) showed a significant adverse effect. Furthermore, the respective GRDP in Lag 1 (PDRBit-1) partially has a very significant positive effect on GRDPit, which is in line with the chain volume index method where the natural growth of each current year (t) for each GRDP component uses the previous year's weight (t -1). Meanwhile, the original regional

income variable in the previous period (PADit-1) had a coefficient of 0.0053 with a probability of 0.132 or more than 10%, so PADit-1 partially had an insignificant positive effect on GRDPit; this was different from previous research by Rahmah & Zein (2016), Mawarni & Abdullah (2013) and Anwar et al. (2018) which shows a significant positive effect. Meanwhile, the study by Badjra et al. (2017) concluded that Regional Original Income does not affect GRDP.

In general, the value of adj R^2 is 0.999, which means that Capital Expenditure, Local Own Revenue and GRDP, respectively, in Lag 1 in the model can explain 99.91% of the variation in GRDP, and the rest is explained by other variables not included in the model. The high value of adj R^2 is influenced by the GRDP of the previous year.

Table 7 explains that the Special Autonomy Fund (Otsusit-1) directly affects Capital Expenditure in Lag 1 (BMit-1). Meanwhile, the Special Autonomy Fund (Otsusit-1) has an indirect effect on GRDP (PDRBit) through the influence of Capital Expenditure in Lag 1 (BMit-1) since the influence of the Special Autonomy Fund on Capital Expenditure and the influence of Capital Expenditure to GRDP each is positive.

Table 7. Hypotheses Test Results

Test	Conclusion
H_1: The Direct Effect of $Otsus_{it-1}$ on BM_{it-1}	Confirmed
H_2: The Indirect Effect of $Otsus_{it-1}$ on $PDRB_{it}$	Confirmed

Source: Processed Data, 2023

Based on Table 6 and Table 7, our prediction that the transfer of the Aceh Otsus Fund will directly positively influence the capital expenditures of each district/city in Aceh Province is statistically verified. The result means that the increase in the Otsus Fund allocation will trigger the increase in government capital expenditures in Aceh Province. The positive link between the Otsus Fund and capital expenditure is an outstanding example of how stakeholder theory may be utilized to deliver maximum usefulness to Aceh society to satisfy the requirements of many stakeholders. This example demonstrates how stakeholder theory may be applied ('Ula et al., 2020). According to Zulham et al. (2015), the theory strongly emphasizes the significance of considering the interests of all stakeholders, including private persons, public agencies, private businesses, and organizations that are part of civil society. Different stakeholders in the public sector have different interests, and it is the government's responsibility to balance these interests and ensure that all stakeholders benefit from public policies and programs (Iskandar, 2017). According to the stakeholder theory, the Otsus Fund is a mechanism that may be considered to balance the interests of the many stakeholders in Aceh province (Zulham et al., 2015). The local governments in Aceh will have a tremendous potential to increase their fiscal gap if they have access to more Otsus Fund money.

Additionally, our findings lend credence to several conclusions drawn from earlier studies. Hartati (2016) researched how obtaining the Otsus money influenced subsequent capital spending and how the funds influenced the Human Development Index (IPM). In addition, Hartati investigated how the fund influenced the Human Development Index. Her research led her to realize that the Otsus Fund can potentially have a favourable impact on Integrated Pest Management and capital expenditures (Hartati, 2016). In the meantime, Abrar (2018) investigated the impact of access to the Special Autonomy Fund on allocating capital expenditures before and after the fund was

established. The study looked at the period in which the fund was active. Based on the results of his research, it may be determined that regional revenues in the form of DAK and DAU will enhance the local government's expenditures on capital projects before the Otsus Fund was distributed. These conclusions come from Abrar's (2018) research.

One example of a government program designed to improve accessibility to more significant remote regions in Aceh is capital expenditure on infrastructure development (Chib et al., 2008). People living in outlying areas in Aceh province could sell their products to consumers in the province's major urban centres if infrastructure construction were to be accelerated, and *vice versa* (Tan & Amri, 2013). By increasing infrastructure building, the economic activities in Aceh can be exaggerated to make the province appear more alluring than it did in the past. With the assistance of the Otsus fund, it may be possible to realize the favourable outcomes that result from the enhancement of capital expenditures (Pentury, 2011). The Otsus fund has the potential to play a significant role in increasing capital expenditures in Aceh by supplying financial resources for the construction, maintenance, and enhancement of a wider variety of infrastructure projects than just roads and transportation infrastructure (Suryaningsih & Suseno, 2022). The Otsus fund can help develop Aceh's infrastructure in many different ways. The province of Aceh is situated in an advantageous position and offers substantial opportunities in commerce and tourism (Huda et al., 2021). The Otsus fund can be used to build new ports and airports and improve existing ones to accommodate more shipping and passenger traffic (Mude et al., 2021). As a result, Aceh's connectivity with other regions and countries would improve, and the province would be more likely to attract investment (Sjöholm, 2002).

In order to maintain proper hygiene and public health, adequate access to sources of clean water and sanitation is required. Both urban and rural parts of Aceh have access to the Otsus fund, which can be used to establish and maintain water delivery systems, wastewater treatment plants, and sanitation facilities (Bormasa & Nirahua, 2020). This establishment would result in better living circumstances, fewer diseases transmitted by water, and a healthier population overall. The Otsus fund may provide financial assistance for constructing energy-related infrastructure, including power plants, transmission lines, and projects that utilize renewable energy sources (Erdiwansyah et al., 2020). This scheme would increase the availability of electricity and its reliability, which would draw in industries and drive economic growth (Resosudarmo et al., 2014). In addition, investments in alternative forms of energy can help Aceh get closer to achieving its environmental sustainability goals (Swainson & Mahanty, 2018). It is possible to use money from the Otsus fund to create new educational institutions or improve existing ones, such as schools or centres for vocational training (Boinauw & Hussein, 2020). This educational plan will provide access to higher qualifications and improve human capital development in Aceh (Hasyyati & Sahara, 2020). Similarly, the cash may be put towards constructing and outfitting healthcare facilities, such as hospitals and clinics, thereby enhancing healthcare delivery and fostering improved health outcomes (Donabedian, 1989).

Aceh offers excellent untapped tourism potential because of its breathtaking scenery, rich cultural legacy, and fascinating historical sites (Jasafat et al., 2020). The Otsus fund is available for investment in building tourism-related infrastructure, including hotels, resorts, recreational facilities, and tourist attractions (Rindrasih, 2019).

This investment would increase the number of tourists and prospects for work (Rindrasih, 2019). It is necessary to have good planning, transparent governance, and accountability procedures to guarantee the efficient utilization of the Otsus fund for infrastructure construction (Way, 2021). In addition, carrying out feasibility studies and prioritizing projects according to the requirements and expectations of the local population is another way to guarantee that the investments will bring the most outstanding possible value to the people of Aceh (McCarthy, 2014).

Based on Table 6 and Table 7, our prediction that the transfer of the Aceh Otsus Fund will have a positive indirect influence, via the capital expenditure, on the regional economic performance of each district/city in Aceh Province is statistically verified. The finding means that the increase in the Otsus Fund allocation will trigger regional economic growth through the increase in government capital expenditures by the local governments in Aceh Province. The positive influence of the Otsus fund on regional economic development in Aceh is closely tied to the stakeholder theory. By recognizing and considering the interests of various stakeholders, the fund can prioritize infrastructure projects that generate economic benefits, foster sustainable development, and enhance the community's overall well-being (Birkeland, 2012). Engaging stakeholders in the decision-making process and promoting transparency and accountability in the utilization of the fund further strengthen the positive impact on regional economic growth (Mejía, 2013). From the perspective of stakeholders' theory, the government program should accommodate the needs of the external community as the primary objective (Jawahar & McLaughlin, 2001). In this case, the Otsus Fund should be aimed at funding infrastructure projects that will trigger a positive trend in regional economic performance (Setiawan, 2022).

The findings of several past studies are consistent with our results. Researchers Anwar et al., (2018) looked into how the Otsus Fund and Capital Expenditure affected the region's overall economic performance in Papua Province. According to their research findings, the Otsus Fund significantly impacted the regional economic performance in Papua. In contrast, capital spending significantly negatively affected regional economic performance (Anwar et al., 2018). In the meantime, Nufus & Asmara (2017) found that the Otsus Fund has the potential to attenuate significantly the relationship between capital expenditure and regional economic performance. The government of Aceh, as the primary authority responsible for implementing the Otsus fund, is crucial in ensuring equitable distribution and effective utilization of the fund (Hameiri & Scarpello, 2018). By adhering to the stakeholder theory, the government should consider the interests of all stakeholders, including local communities, businesses, and public institutions (Greenwood & Van Buren III, 2010). This compliance involves identifying and prioritizing infrastructure projects that cater to the needs and aspirations of these stakeholders, promoting economic growth, and enhancing overall development (Pilot & Could, 2011).

The Otsus fund aims to improve the welfare of the people in Aceh, particularly the local communities. Infrastructure development supported by the fund can create employment opportunities, stimulate local businesses, and enhance the quality of life (Abrar et al., 2020). For example, improved transportation infrastructure can facilitate the movement of goods and services, promoting trade and economic activities (Abrar et al., 2020). By considering the interests of the local communities, the Otsus fund can

contribute to their socio-economic development and uplift their living standards (Abrar et al., 2020). Infrastructure development supported by the Otsus fund can benefit businesses in Aceh. The Otsus fund can be allocated to improve the existing road networks and build new roads to connect remote areas and improve transportation access (Fau, 2016). This development can enhance connectivity within Aceh and facilitate the movement of goods, services, and people, promoting economic growth and regional integration (Fau, 2016).

Improved roads, ports, and airports can enhance logistical efficiency, reducing transportation costs and improving market access (Wiederer, 2018). This advancement can attract investment, promote entrepreneurship, and stimulate economic growth (Hausmann & Rodrik, 2003; Patrick, 1966). Moreover, businesses can benefit directly from infrastructure projects by participating in construction, maintenance, and operation (Gann & Salter, 2000). The stakeholder theory emphasizes the importance of involving businesses in decision-making and considering their interests as critical stakeholders (Reynolds et al., 2006). By viewing the needs and interests of companies in Aceh, the Otsus fund can contribute to their effectiveness and efficiency, thus supporting overall regional development (Kiram, 2020).

Conclusion

The Special Autonomy Fund indirectly affects GRDP through the influence of Capital Expenditure in Lag 1. This is indicated by the results of the parameter significance test for the first model, where the General Allocation Fund, the Special Allocation Fund, the Revenue-Sharing Fund, and the Special Autonomy Funds have a simultaneous influence on Capital Expenditure. Partially, the Special Allocation Fund and the Special Autonomy Fund significantly affect Capital Expenditure. In contrast, the General Allocation Fund and the Revenue-Sharing Fund have an insignificant effect on Capital Expenditure. Furthermore, the results of the parameter significance test for the second model, namely Regional Revenue, Capital Expenditure and GRDP, each of Lag 1 have a simultaneous effect on GRDP. Partially, Capital Expenditure and GRDP each have a very significant effect on GRDP, while Regional Revenue Lag 1 has no significant effect on GRDP.

The research results recommend that the Transfer of the Aceh Special Autonomy Fund should still be continued and extended where the Aceh Special Autonomy Fund will end in 2028. This is because the Special Autonomy Fund has an indirect influence on Economic Growth through the influence of Capital Expenditure in Lag 1. Furthermore, the Regional Government needs to increase the allocation of the capital expenditure budget, especially those originating from the special autonomy fund, so that the increase in economic growth can be more optimal, ultimately impacting people's welfare. Since there is a limitation in this research, it is recommended to add data with a longer period and more recent data for future research.

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