ECONOMOUS:
Journal of Regional Economic Development

ISSN 3090-3408
Vol.2, No. 2, October 2026

THE EFFECT OF REGIONAL ORIGINAL REVENUE, GENERAL ALLOCATION FUND, AND BUDGET FINANCING SURPLUS ON GROSS REGIONAL DOMESTIC PRODUCT IN ACEH PROVINCE 2019–2023

Muhammad Khalil Talakua[1], Noviami Trisniarti[2], Saharuddin[3], Umaruddin Usman[4].
[1,2,3,4] Development Economic, Universitas Malikussaleh, Indonesia.

Corresponding Author: noviamitrisniarti@unimal.ac.id

ARTICLE INFO

Received:
19-08-2026
Revised:
03-11-2026
Accepted:
03-11-2026
Published:
03-11-2026

Keywords:
Gross Regional Domestic Product, Regional Original Revenue, General Allocation Fund, Budget Financing Surplus, Panel Data.

JEL Codes: E62, H71, H72, H77, R11

DOI:
10.33830/economous.v2i2.15704

ABSTRACT

This study aims to analyze the influence of Regional Original Revenue (PAD), General Allocation Fund (DAU), and Budget Financing Surplus (SiLPA) on Gross Regional Domestic Product (GRDP) in Aceh Province. This research is motivated by the importance of utilyzing regional fiscal instruments to encourage economic growth at the regional level. This study uses a quantitative approach with regression analysis of Fixed Effects Model panel data on 23 regencies/cities in Aceh Province during the 2019–2023 period. The data used are secondary data obtained from the Central Statistics Agency and the Directorate General of Financial Balance. The results of the study show that partially, PAD has a negative coefficient and does not have a significant effect on GRDP, DAU has a negative coefficient and has a significant effect on GRDP, while SiLPA has a negative coefficient and does not have a significant effect on GRDP. These findings indicate that regional financial management, especially in optimizing spending and increasing fiscal effectiveness, needs to be strengthened to support more equitable and sustainable economic growth in Aceh Province.

Introduction

Regional economic development is one of the main goals of fiscal decentralization in Indonesia. One of the key indicators of a region's economic development is the Gross Regional Domestic Product (GRDP), which reflects the gross value added of all goods and services produced in the region in a given period (Badan Pusat Statistik, 2023b). Regional decentralization and autonomy in Indonesia are currently based on Law Number 23 of 2014 concerning Regional Government and Law Number 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments (Republik Indonesia, 2014, 2022). These two regulations give broad authority to regions to manage their own finances. Consequently, regional economic performance is increasingly determined by the way local governments gather, receive, and spend their fiscal resources.

Theoretically, the relationship between Regional Original Revenue (PAD), General Allocation Fund (DAU), and Budget Financing Surplus (SiLPA) to Gross Regional Domestic Product (GRDP) can be explained through the Theory of Endogenous Growth and the Theory of Fiscal Federalism. The Theory of Endogenous Growth put forward by Romer (1986) and Lucas (1988) explains that economic growth is not only influenced by external factors, but also by internal factors such as government investment, the quality of human resources, infrastructure, and public policies that are able to increase regional productivity in a sustainable manner. In this context, the ability of local governments to manage financial resources is a key factor to encourage an increase in economic activity, as reflected in GRDP.

Meanwhile, the Theory of Fiscal Federalism proposed by Oates (1972) explains that fiscal decentralization authorizes local governments to manage financial resources according to the needs and characteristics of their regions. PAD reflects the level of regional fiscal autonomy in financing development and public services. The larger the PAD collected, the greater the capacity of the regions to support economic activities that increase GRDP. DAU is a transfer instrument from the central government to reduce the gap in fiscal capacity between regions. The effective use of DAU for development and public services is expected to encourage regional economic activities.

The SiLPA is the difference between the realization of budget revenues and expenditures in one budget period. The SiLPA can be an indicator of the efficiency of regional financial management. However, a SiLPA that is too large can indicate that the budget absorption is less than optimal, namely funds that should support development are settling. Thus, PAD and DAU describe the fiscal capacity side, while the SiLPA describes the budget execution side. These two sides both determine how much fiscal resources actually work in the regional economy.

Aceh Province is one of the regions in Indonesia that has different financial characteristics from other regions. Since the enactment of special autonomy, Aceh has received a relatively large allocation of transfer funds from the central government, including the Special Autonomy Fund (DOK) and the Oil and Gas Revenue Sharing Fund. However, this high fiscal capacity has not been fully accompanied by adequate financial independence. Data from the Directorate General of Fiscal Balance (Direktorat Jenderal Perimbangan Keuangan, 2023) shows that PAD's contribution to total regional revenue in Aceh is still below 10 percent. Meanwhile, DAU and other transfer funds account for more than 60 percent. This condition shows that Aceh's fiscal autonomy is still low and its dependence on the central government remains very high. This raises questions about the effectiveness of transfer funds in encouraging productive economic activities.

As SiLPA has increased in various regencies/cities in Aceh over the past five years, it indicates inefficiencies in the implementation of local government spending. Funds that are not immediately channeled to development activities have the potential to hinder economic growth because they do not provide direct benefits to the community. This phenomenon highlights the gap between large fiscal capacity and economic development outcomes that have not reached their maximum potential. A number of studies have examined the influence of PAD and DAU on regional economic growth in Indonesia, but the findings or research results have not been consistent or show similar results.

Research conducted by Lestari and Wibowo (2020) shows that PAD has a positive and significant effect on GRDP in regencies/cities of East Java Province. Utami and Hidayat (2021) stated that increasing PAD makes a real contribution to GRDP growth, through financing infrastructure development and the development of leading economic sectors in the region. In contrast, Mafahir and Soelistyo (2017) found that PAD had a negative but insignificant effect on the GRDP of regencies/cities in West Nusa Tenggara Province, and Ridwan and Anis (2022) found a similar negative but insignificant effect of PAD on economic growth in North Sumatra Province. These results reinforce that in many regions, PAD has not been fully effective fiscal instrument to drive economic growth, especially if its contribution to total regional income is still small or used for less productive spending.

Research conducted by Suryani and Ramadhan (2021) shows that DAU has a positive effect on GRDP growth in several provinces in Indonesia, especially through capital expenditure and the public sector. A similar thing was stated by Putra and Anisa (2020) who found that effective DAU allocation is able to improve regional economic performance through increasing local government investment in the infrastructure and basic services sectors. The results of Noviasari and Suprapto's (2017) research show that the General Allocation Fund (DAU) has a negative relationship and affects the GRDP of regencies/cities in Central Java Province. This is due to the dominance of DAU in the regional revenue structure which has not been balanced with effectiveness in managing development spending, so that its contribution to economic growth is limited. A similar study was also conducted by Afifah and Nugroho (2019), who found that DAU that is allocated more for employee spending has a negative impact on the effectiveness of economic growth.

Studies that directly link SiLPA to GRDP or economic growth also show mixed results. Widyasari et al. (2023) found that SiLPA has a positive effect on the economic growth of

regencies/cities in Central Java. In contrast, Novandy et al. (2015) found that SiLPA did not significantly affect economic growth in regencies/cities of Central Sulawesi Province, which indicates that excess budgets do not always make a real contribution to increasing GRDP. This diversity is in line with the dual nature of SiLPA. On the one hand, SiLPA is a source of financing that increases the next year's spending capacity. On the other hand, a large SiLPA reflects funds that are not absorbed so that they are delayed in entering the economy.

Based on this background, this study aims to analyze the effect of PAD, DAU, and SiLPA on the GRDP of regencies/cities in Aceh Province during 2019–2023. In particular, it examines whether Aceh's low fiscal independence, high dependence on DAU, and rising SiLPA are reflected in its regional economic performance. This study makes contributions, first, it analyzes regional revenue (PAD and DAU) and budget spending (SiLPA) together in one model, which helps explain why large fiscal resources do not always increase regional output. Second, it tests fiscal federalism and endogenous growth theory in a region with special autonomy and high dependence on transfers, so the results are also useful for other special-autonomy regions, such as Papua, and for developing countries whose local governments depend on transfers.

Literature Review

Romer (1986) and Lucas (1988) show that long-run output depends on factors that can be accumulated within an economy, such as knowledge and human capital, rather than only on exogenous technological progress. Barro (1990) extends this framework by treating productive public spending, such as infrastructure, as an input in private production, so that government spending raises output when it is directed toward productive uses. In this view, regional fiscal resources affect output not through their size alone but through the extent to which they finance productive public capital and services.

The second is fiscal federalism. Oates (1972, 1999) argues that assigning spending responsibilities to local governments improves efficiency because local governments know local preferences and conditions better than the central government, and Tiebout (1956) shows that competition among jurisdictions encourages the efficient provision of local public goods. Intergovernmental transfers are needed to close the gap between local spending responsibilities and local revenue capacity. The effect of decentralization on growth is nevertheless theoretically ambiguous and empirically inconclusive, because it depends on institutional quality and on the design of the fiscal system (Martinez-Vazquez & McNab, 2003).

The third is the flypaper effect: unconditional transfers tend to raise local government spending by more than an equivalent increase in local private income, because grant money "sticks where it hits" (Hines & Thaler, 1995). When transfers are large relative to own-source revenue, they may expand routine spending and the local bureaucracy rather than productive investment. For Indonesian districts, Lewis (2017) shows that additional spending improves access to public services only up to a threshold, beyond which the effect turns negative, particularly where governance is weak. Finally, the neoclassical growth model of Solow (1956) and Swan (1956) emphasizes that output depends on capital accumulation, so fiscal resources that remain unspent delay the formation of the public capital on which output depends.

Gross Regional Domestic Product

Gross Regional Domestic Product (GRDP) measures the gross value added generated by all economic activities within a region over a given period. It can be expressed at current or constant prices; GRDP at constant prices removes the effect of price changes and therefore reflects the real size of the regional economy (Badan Pusat Statistik, 2023b). On the expenditure side, GRDP consists of household consumption, government consumption, gross fixed capital formation, changes in inventories, and net exports. Local government budgets therefore influence GRDP directly, through government consumption and investment, and indirectly, by supporting private activity. In this study, GRDP is used in levels as a measure of the size of the regional economy, not as a growth rate.

Regional Original Revenue and GRDP

Regional Original Revenue (PAD) is regional revenue derived from local taxes, local levies, proceeds from the management of separated regional assets, and other legitimate own-source revenue (Republik Indonesia, 2022). In fiscal federalism, PAD reflects the degree of fiscal autonomy: revenue raised locally strengthens the accountability of local governments to taxpayers and expands the fiscal

space for development spending (Mardiasmo, 2021; Oates, 1999). Following endogenous growth theory, when this fiscal space finances infrastructure and public services, PAD can raise regional output (Barro, 1990). Empirical studies support a positive relationship in regions with broader own-source revenue bases: Devi et al. (2024) and Nurlaili and Eka (2022) found that PAD had a positive and significant effect on GRDP and regional economic growth in East Java, and Widyasari et al. (2023) reported a positive effect for Central Java. Where PAD is small relative to the economy, the relationship weakens: Mafahir and Soelistyo (2017) and Ridwan and Anis (2022) found negative but insignificant effects in West Nusa Tenggara and North Sumatra, and Martkliana and Hariani (2024) found a negative and significant effect across 34 provinces. Based on theory and the predominant evidence, the first hypothesis is as follows.

H_1: Regional Original Revenue (PAD) has a positive effect on GRDP.

General Allocation Fund and GRDP

The General Allocation Fund (DAU) is an unconditional transfer from the central government intended to reduce disparities in fiscal capacity and public services across regions (Republik Indonesia, 2022). For most of the study period, DAU consisted of a basic allocation calculated from the regional civil-service wage bill and a fiscal-gap component (Republik Indonesia, 2004); since Law Number 1 of 2022, it has been allocated mainly on the basis of the gap between fiscal needs and fiscal capacity (Republik Indonesia, 2022). Fiscal federalism predicts that such transfers enable regions with weak revenue bases to provide public goods, which supports economic activity and raises output (Oates, 1999). Several studies support this prediction: Mafahir and Soelistyo (2017), Nurlaili and Eka (2022), and Devi et al. (2024) found that DAU had a positive and significant effect on GRDP or regional economic growth. The flypaper effect, however, implies that large unconditional transfers may be absorbed by routine spending, particularly personnel costs, rather than productive investment (Hines & Thaler, 1995), and Lewis (2017) shows that substantial fiscal resources can reduce the effectiveness of district spending in Indonesia. Consistent with this, Afferina et al. (2024) found that DAU had a negative and significant effect on GRDP in West Sumatra, which they attribute to the use of DAU for civil-service salaries. Following the main prediction of fiscal federalism, the second hypothesis is as follows.

H_2: The General Allocation Fund (DAU) has a positive effect on GRDP.

Budget Financing Surplus and GRDP

The Budget Financing Surplus (SiLPA) is the excess of realized budget receipts over realized budget disbursements during one budget period (Republik Indonesia, 2019). SiLPA has a dual nature. On the one hand, it becomes a financing receipt in the following year's budget, and Sanjaya and Helmy (2021) found that SiLPA increased the capital expenditure of Indonesian provincial governments. On the other hand, a large SiLPA shows that funds were not spent in the year for which they were budgeted, because of weak planning, delayed procurement, or late transfers from the central government (Lewis, 2005). In the framework of Solow (1956) and Swan (1956), such unspent funds delay the accumulation of public capital and the output it supports. The empirical evidence reflects this duality: Widyasari et al. (2023) found a positive effect of SiLPA on regional economic growth in Central Java, Rahmawati and Lathifah (2024) found a negative effect in East Java, and Novandy et al. (2015) and Martkliana and Hariani (2024) found no significant effect. Because a persistently large SiLPA mainly signals delayed budget absorption, the third hypothesis is as follows.

H_3: The Budget Financing Surplus (SiLPA) has a negative effect on GRDP.

Method

This study uses a quantitative approach with a balanced panel of secondary data covering all 23 regencies/cities in Aceh Province over 2019–2023, giving 115 observations (23 regencies/cities × 5 years). GRDP data were obtained from Statistics Indonesia (Badan Pusat Statistik, 2023a; Badan Pusat Statistik Provinsi Aceh, 2023, 2024), and PAD, DAU, and SiLPA data were obtained from the regional budget data published by the Directorate General of Fiscal Balance (Direktorat Jenderal Perimbangan Keuangan, 2023, 2024, 2025).

The dependent variable, GRDP, is measured at constant 2010 prices in billion rupiah. The independent variables are PAD, DAU, and SiLPA, defined as in the Literature Review and measured in nominal billion rupiah: PAD and SiLPA are taken from the regional budget realization data, and DAU from the DAU allocation data of each regency/city.

The relationship between the fiscal variables and GRDP is specified as the following fixed-effects panel regression model:

$$\mathrm{GRDP}_{it} = \alpha_i + \beta_1 \mathrm{PAD}_{it} + \beta_2 \mathrm{DAU}_{it} + \beta_3 \mathrm{SiLPA}_{it} + \varepsilon_{it} \quad (1)$$

where i = 1, …, 23 indexes regencies/cities and t = 2019, …, 2023 indexes years; GRDP_{it}, PAD_{it}, DAU_{it}, and SiLPA_{it} are the values of each variable for regency/city i in year t; α_i is the regency/city-specific intercept (fixed effect) that captures time-invariant characteristics such as economic structure and resource endowments; β_1, β_2, and β_3 are the slope coefficients; and ε_{it} is the error term. The regency/city fixed effects absorb time-invariant differences such as geography, natural resources, and economic structure, so β1, β2, and β3 are identified from variation within each regency/city over time.

The estimation proceeded in three steps. First, the panel estimator was selected by comparing the Common Effects Model (CEM, pooled OLS), the Fixed Effects Model (FEM), and the Random Effects Model (REM). The Chow test was used to choose between the CEM and the FEM, and the Hausman test to choose between the FEM and the REM; because both favored the FEM, the Lagrange Multiplier test (CEM versus REM) was not required. Second, the selected model was checked for multicollinearity using pairwise correlations among the independent variables, with coefficients above 0.80 indicating a potential problem (Gujarati & Porter, 2009), and for heteroskedasticity using the Glejser test. Third, each hypothesis was tested with a two-tailed t-test on the corresponding coefficient at the 5% significance level; a hypothesis is supported only if the coefficient has the expected sign and is statistically significant. The joint significance of the model was assessed with the F-test and its goodness of fit with the adjusted R^2. All estimations were performed in EViews 12.

Results and Discussion

Because the fixed-effects model is estimated by ordinary least squares, two diagnostic tests were conducted: multicollinearity and heteroskedasticity. Table 1 shows that all pairwise correlations among the independent variables are below the threshold of 0.80 (Gujarati & Porter, 2009); the highest is 0.718, between PAD and DAU. Multicollinearity is therefore not a serious concern, and each variable can be retained as an explanatory variable.

Table 1. Correlation Matrix of the Independent Variables

Variable	PAD	DAU	SiLPA
PAD	1.000	0.718	0.338
DAU	0.718	1.000	0.396
SiLPA	0.338	0.396	1.000

Source: Data processed (EViews 12).

Table 2 reports the Glejser test, in which the absolute residuals of the fixed-effects model are regressed on the independent variables. None of the coefficients is significant (all prob> 0.05), so there is no evidence of heteroskedasticity, and the model is estimated with conventional standard errors.

Table 2. Glejser Heteroskedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	271.719	439.951	0.618	0.538
PAD	−0.872	2.149	−0.406	0.686
DAU	0.237	0.798	0.297	0.767
SiLPA	1.490	1.956	0.762	0.448

Note: Dependent variable is the absolute residual of the fixed-effects model. Source: Data processed (EViews 12).

Table 3 reports the model selection tests. The Chow test rejects the Common Effects Model in favor of the Fixed Effects Model (cross-section F(22, 89) = 40.344; prob < 0.001), and the Hausman test rejects the Random Effects Model in favor of the Fixed Effects Model (χ^2(df:3) = 46.043; prob < 0.001). Because both tests favor the FEM, the Lagrange Multiplier test was not required, and the FEM is used as the final estimator. This indicates that persistent regency/city-specific characteristics, such as economic structure, infrastructure, and institutional quality, account for much of the variation in GRDP and are correlated with the fiscal variables.

Table 3. Panel Model Selection Tests

Test	Statistic	d.f.	Prob.	Decision
Chow test (cross-section F)	40.344	(22, 89)	0.000	FEM preferred over CEM
Chow test (cross-section χ^2)	275.473	22	0.000	FEM preferred over CEM
Hausman test (cross-section χ^2)	46.043	3	0.000	FEM preferred over REM

Source: Data processed (EViews 12).

Table 4 reports the fixed-effects estimates, which give the following estimated equation:

$$GRDP_{it} = 7{,}941.8100 - 0.029PAD_{it} - 3.207DAU_{it} - 2.875SILPA_{it}$$

The constant of IDR 7,941.810 billion is the average intercept across regencies/cities. Holding the other variables constant, an increase of IDR 1 billion in PAD within a regency/city is associated with a GRDP level IDR 0.229 billion lower, an increase of IDR 1 billion in DAU with a GRDP level IDR 3.207 billion lower, and an increase of IDR 1 billion in SiLPA with a GRDP level IDR 2.875 billion lower. Only the DAU coefficient is statistically significant.

Table 4. Fixed-Effects Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	7,941.810***	858.704	9.249	0.000
PAD	−0.229	4.194	−0.055	0.957
DAU	−3.207**	1.558	−2.059	0.042
SiLPA	−2.875	3.817	−0.753	0.453
Regency/city fixed effects	Yes			
Observations	115 (23 regencies/cities × 5 years)			
R^2	0.963			
Adjusted R^2	0.953			
F-statistic (25, 89)	92.904 (Prob. 0.000)			

*Note: *** $p < 0.01$; ** $p < 0.05$ (two-tailed). Conventional standard errors. All variables in billion rupiah; GRDP at constant 2010 prices. The F-statistic tests the joint significance of all regressors, including the regency/city fixed effects. Source: Data processed (EViews 12).*

Based on the results in Table 4, the coefficient for Regional Original Revenue (PAD) indicates a negative relationship and is not statistically significant, as the probability value is greater than the significance level (α) (0.957 > 0.05). The coefficient for the General Allocation Fund (DAU) indicates a negative relationship and is statistically significant, as the probability value is less than the significance level (α) (0.042 < 0.05). The coefficient for the Budget Financing Surplus (SiLPA) indicates a negative relationship and is not statistically significant, as the probability value is greater than the significance level (α) (0.453 > 0.05).

The F-statistic of 92.904 is greater than the critical F-value of 1.630 at the 5% significance level, with a p-value of less than 0.001. Therefore, the null hypothesis is rejected. This result indicates that Regional Original Revenue (PAD), General Allocation Fund (DAU), Budget Financing Surplus (SiLPA), and regency/city fixed effects are jointly statistically significant in explaining variations in Gross Regional Domestic Product (GRDP).

Furthermore, the coefficient of determination (R-squared) of 0.963 indicates that the model explains 96.3% of the variation in GRDP, while the remaining 3.7% is explained by factors outside the model. Meanwhile, the Adjusted R-squared of 0.953 indicates that, after accounting for the number of explanatory variables and degrees of freedom, the model still explains 95.3% of the variation in GRDP. The high explanatory power of the model is primarily attributable to the inclusion of regency/city fixed effects, which capture persistent differences in economic characteristics and economic size across regions.

Discussion

PAD has a negative but not significant coefficient, so this study found no evidence that PAD is related to GRDP in Aceh. These results do not support and differ from the fiscal capacity argument, which states that greater Regional Original Revenue (PAD) should strengthen a region's ability to finance development. These findings indicate that the increase in PAD has not been accompanied by productive budget use, so there is no measurable relationship with GRDP.

PAD is sourced from regional taxes and levies, the results of which depend on local economic conditions and the ability of local governments to manage sources of revenue; if this potential has

not been fully explored, its contribution to the economy will be limited. These results are in line with the findings of Mafahir and Soelistyo (2017) and Ridwan and Anis (2022), which show a negative but insignificant influence of PAD in West Nusa Tenggara and North Sumatra, as well as the findings of Martkliana and Hariani (2024) which show a negative influence in 34 provinces.

DAU has a negative and significant coefficient: within a regency/city, higher DAU is associated with lower GRDP levels. These results do not support and are not in line with the theory of fiscal decentralization, which states that transfers such as DAU should be able to reduce fiscal gaps and strengthen regional capacity to finance development (Mardiasmo, 2021; Oates, 1999). This indicates that transfers from the central government have not been optimally utilized to support regional economic activities.H_2

In the composition of expenditure in many regions, including Aceh, DAU is used to pay salaries for civil servants, finance office operations, and other administrative needs. This kind of expenditure does not directly create productive activities such as infrastructure development, support for the real sector, or the development of micro, small, and medium enterprises so that the funds revolve more in the government and only have a limited impact on the economy at large (Mardiasmo, 2021). Lewis (2017) also shows that large fiscal resources can reduce the effectiveness of local government spending in Indonesia. High dependence on DAU can weaken local government incentives to improve spending efficiency and develop local economic potential, which ultimately hinders fiscal independence in the long term.

These results are in line with the findings of Afferina et al. (2024), who found that there is a negative and significant influence of DAU on GRDP in West Sumatra by using a fixed-effect model and associating it with the use of DAU for the payment of civil servants' salaries. On the other hand, because DAU is allocated based on fiscal needs and fiscal capacity (Republik Indonesia, 2022), regencies/cities with weakened economic bases can actually receive relatively larger allocations.

SiLPA has a negative but insignificant coefficient. This negative sign is in line with the argument derived from Solow (1956) and Swan (1956), namely that unspent funds will hinder capital accumulation; thus, a well-managed budget should reflect a low SiLPA value and higher output. SiLPA accumulation indicates that regional spending has not been implemented optimally. This can be due to slow administrative processes, weak coordination between regional agencies, technical constraints in the field, or unrealistic budget planning so that planned spending cannot be fully realized. When planned spending is not realized, the economic impact is delayed or even lost. The insignificance of this coefficient is in line with the dual nature of SiLPA: some of the surplus is used to finance spending in the following year (Sanjaya & Helmy, 2021), while others reflect transfer delays from the central government, rather than simply inefficiencies at the local level (Lewis, 2005). These results are in line with the findings of Novandy et al. (2015) and Martkliana and Hariani (2024) who did not find a significant influence of SiLPA on economic growth. On the other hand, Rahmawati and Lathifah (2024) found a negative influence, while Widyasari et al. (2023) found a positive influence. Overall, these findings indicate that SiLPA makes only a small contribution to regional output, unless the budget is planned and implemented efficiently.

Conclusion

This study analyzed the effect of PAD, DAU, and SiLPA on the GRDP of 23 regencies/cities in Aceh Province during 2019–2023 using a fixed-effects panel model. There are three main findings. First, PAD has no significant effect on GRDP, so H1 is not supported. PAD is still too small and has not been used productively. Second, DAU has a significant negative relationship with GRDP, so H2 is not supported. DAU is mostly used for routine spending, such as salaries, rather than for productive activities. Third, SiLPA has no significant effect on GRDP, so H3 is not supported. Unspent funds are not used quickly enough for productive activities. These findings answer the question raised in the Introduction: Aceh's low fiscal independence, high dependence on DAU, and rising SiLPA are reflected in the absence of a positive relationship between fiscal resources and GRDP. In other words, larger fiscal resources have not increased regional output.

Based on these findings, regency/city governments in Aceh should do three things. First, they should increase PAD, especially in low-revenue regions such as Sabang, Aceh Singkil, and Gayo Lues, by digitalizing tax and levy systems, updating data on revenue potential, managing regional assets productively, and developing leading sectors such as tourism, fisheries, and agro-tourism.

Second, they should use a larger share of DAU for development spending and public investment. Third, they should reduce SiLPA by improving budget planning and carrying out programs efficiently and on time. The central government does not need to reduce DAU, but it should encourage regions to use it productively.

These findings are also relevant outside Aceh, especially for other special-autonomy regions and for developing countries whose local governments depend on transfers. In such regions, how transfers are spent matters more than how much is transferred. The limitations of this study include the short time frame which encompasses the COVID-19 pandemic and the use of Gross Regional Domestic Product (GRDP) levels rather than growth rates. Consequently, the findings indicate associations between variables rather than causal relationships. Future research should utilize growth rates, cover a longer period, account for time effects, and incorporate fiscal variables with time lags.

References

Afferina, D., Husein, R., Rahmah, M., & Murtala, M. (2024). Pengaruh dana alokasi umum, dana alokasi khusus, pajak daerah, dan belanja daerah terhadap PDRB di Provinsi Sumatera Barat. *Jurnal Ekonomi Regional Unimal, 7*(2), 9–22. https://doi.org/10.29103/jeru.v7i2.20876

Afifah, N. M., & Nugroho, A. B. (2019). Pengaruh belanja pemerintah daerah terhadap pertumbuhan ekonomi di Indonesia. *Jurnal Ekonomi Pembangunan, 17*(1), 1–10. https://doi.org/10.22219/jep.v17i1.8185.

Badan Pusat Statistik. (2023a). *Produk domestik regional bruto menurut pengeluaran provinsi/kabupaten/kota 2019–2023*. BPS RI.

Badan Pusat Statistik. (2023b). *Produk domestik regional bruto menurut provinsi di Indonesia 2018–2022*. Badan Pusat Statistik. https://www.bps.go.id/publication/2023/03/01/55655ab5e58a4e7cbb90598d/produk-domestik-regional-bruto-menurut-provinsi-di-indonesia-2018-2022.html.

Badan Pusat Statistik Provinsi Aceh. (2023). *Provinsi Aceh dalam angka 2023*. Badan Pusat Statistik Provinsi Aceh.

Badan Pusat Statistik Provinsi Aceh. (2024). *Produk domestik regional bruto menurut lapangan usaha kabupaten/kota di Provinsi Aceh 2019–2023*. Badan Pusat Statistik Provinsi Aceh. https://aceh.bps.go.id

Barro, R. J. (1990). Government spending in a simple model of endogenous growth. *Journal of Political Economy, 98*(5, Part 2), S103–S125. https://doi.org/10.1086/261726

Devi, L. E., Harmono, H., Sisharini, N., & Respati, H. (2024). Pengaruh pendapatan daerah terhadap Produk Domestik Regional Bruto di Jawa Timur. *Jurnal Riset Inspirasi Manajemen dan Kewirausahaan, 8*(2), 117–124. https://doi.org/10.35130/jrimk.v8i2.520.

Direktorat Jenderal Perimbangan Keuangan. (2023). *Portal data APBD: Realisasi Pendapatan Asli Daerah (PAD) kabupaten/kota Provinsi Aceh 2019–2023*. https://djpk.kemenkeu.go.id/portal/data/apbd

Direktorat Jenderal Perimbangan Keuangan. (2024). *Data alokasi Dana Alokasi Umum (DAU) kabupaten/kota tahun anggaran 2019–2023*. Kementerian Keuangan Republik Indonesia. https://www.djpk.kemenkeu.go.id

Direktorat Jenderal Perimbangan Keuangan. (2025). *Portal data APBD*. Retrieved July 27, 2025, from https://djpk.kemenkeu.go.id/portal/data/apbd

Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics* (5th ed.). McGraw-Hill/Irwin.

Hines, J. R., Jr., & Thaler, R. H. (1995). Anomalies: The flypaper effect. *Journal of Economic Perspectives, 9*(4), 217–226. https://doi.org/10.1257/jep.9.4.217

Lestari, R., & Wibowo, A. (2020). Pengaruh PAD dan dana perimbangan terhadap PDRB di Jawa Timur. *Jurnal Ekonomi Daerah, 15*(1), 45–53.

Lewis, B. D. (2005). Indonesian local government spending, taxing and saving: An explanation of pre- and post-decentralization fiscal outcomes. *Asian Economic Journal, 19*(3), 291–317. https://doi.org/10.1111/j.1467-8381.2005.00214.x

Lewis, B. D. (2017). Local government spending and service delivery in Indonesia: The perverse effects of substantial fiscal resources. *Regional Studies, 51*(11), 1695–1707. https://doi.org/10.1080/00343404.2016.1216957

Lucas, R. E., Jr. (1988). On the mechanics of economic development. *Journal of Monetary Economics, 22*(1), 3–42. https://doi.org/10.1016/0304-3932(88)90168-7

Mafahir, A., & Soelistyo, A. (2017). Analisis pengaruh PAD, DAU dan DAK terhadap PDRB kabupaten/kota di Provinsi Nusa Tenggara Barat. *Jurnal Ilmu Ekonomi (JIE), 1*(2), 143–152. https://doi.org/10.22219/jie.v1i2.6074

Mardiasmo. (2021). *Otonomi & manajemen keuangan daerah: Edisi terbaru*. Penerbit Andi.

Martinez-Vazquez, J., & McNab, R. M. (2003). Fiscal decentralization and economic growth. *World Development, 31*(9), 1597–1616. https://doi.org/10.1016/S0305-750X(03)00109-8

Martkliana, A. R., & Hariani, S. (2024). Evaluasi kontribusi pengaruh Pendapatan Asli Daerah (PAD), Sisa Lebih Pembiayaan Anggaran (SILPA), dan pengeluaran pemerintah terhadap pertumbuhan ekonomi di 34 provinsi Indonesia (2018–2022). *Jurnal Economia, 3*(9), 1048–1063.

Novandy, A., Palampanga, A. M., & Ridwan. (2015). Pengaruh belanja langsung dan Sisa Lebih Perhitungan Anggaran (SiLPA) terhadap pertumbuhan ekonomi (Survei pada pemerintah daerah kabupaten/kota di Provinsi Sulawesi Tengah). *e-Jurnal Katalogis, 3*(9), 147–158. http://jurnal.untad.ac.id/jurnal/index.php/Katalogis/article/view/6428

Noviasari, A. S. A., & Suprapto, E. (2017). *Analisis pengaruh Dana Alokasi Umum, Dana Alokasi Khusus, dan Pendapatan Asli Daerah terhadap PDRB kabupaten/kota di Provinsi Jawa Tengah tahun 2009–2012* [Skripsi sarjana]. Universitas Brawijaya.

Nurlaili, & Eka, M. Y. S. (2022). Analisis pengaruh desentralisasi fiskal terhadap pertumbuhan ekonomi di kabupaten/kota Provinsi Jawa Timur. *Jurnal Ilmu Ekonomi (JIE), 6*(2), 178–187. https://doi.org/10.22219/jie.v6i2.20457

Oates, W. E. (1972). *Fiscal federalism*. Harcourt Brace Jovanovich.

Oates, W. E. (1999). An essay on fiscal federalism. *Journal of Economic Literature, 37*(3), 1120–1149. https://doi.org/10.1257/jel.37.3.1120

Putra, I. G. N., & Anisa, R. (2020). Efektivitas Dana Alokasi Umum dalam meningkatkan pertumbuhan ekonomi daerah. *Jurnal Fiskal dan Kebijakan Publik, 8*(3), 101–110.

Rahmawati, A. N., & Lathifah, N. (2024). Pengaruh SiLPA, pajak daerah, dan DAK terhadap pertumbuhan ekonomi pada kabupaten/kota di Jawa Timur. *Isoquant: Jurnal Ekonomi, Manajemen dan Akuntansi, 8*(1), 79–94. https://doi.org/10.24269/iso.v8i1.2632

Republik Indonesia. (2004). *Undang-Undang Republik Indonesia Nomor 33 Tahun 2004 tentang Perimbangan Keuangan antara Pemerintah Pusat dan Pemerintahan Daerah*.

Republik Indonesia. (2014). *Undang-Undang Republik Indonesia Nomor 23 Tahun 2014 tentang Pemerintahan Daerah*.

Republik Indonesia. (2019). *Peraturan Pemerintah Republik Indonesia Nomor 12 Tahun 2019 tentang Pengelolaan Keuangan Daerah*.

Republik Indonesia. (2022). *Undang-Undang Republik Indonesia Nomor 1 Tahun 2022 tentang Hubungan Keuangan antara Pemerintah Pusat dan Pemerintahan Daerah*.

Ridwan, D., & Anis, A. (2022). Pengaruh Pendapatan Asli Daerah dan dana perimbangan terhadap pertumbuhan ekonomi di Provinsi Sumatera Utara. *Jurnal Kajian Ekonomi dan Pembangunan, 4*(1), 47–54. https://ejournal.unp.ac.id/students/index.php/epb/article/view/13358

Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy, 94*(5), 1002–1037. https://doi.org/10.1086/261420

Sanjaya, D., & Helmy, H. (2021). Pengaruh Pendapatan Asli Daerah (PAD), kekayaan daerah dan Sisa Lebih Pembiayaan Anggaran (SILPA) terhadap belanja modal dengan pertumbuhan ekonomi sebagai variabel moderasi pada pemerintah provinsi se-Indonesia periode 2015–2019. *Jurnal Eksplorasi Akuntansi, 3*(2), 450–469. http://jea.ppj.unp.ac.id/index.php/jea/article/view/369

Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics, 70*(1), 65–94. https://doi.org/10.2307/1884513

Suryani, D., & Ramadhan, A. (2021). Pengaruh Dana Alokasi Umum terhadap PDRB Provinsi di Indonesia. *Jurnal Ekonomi dan Pembangunan Daerah, 12*(1), 55–64.

Swan, T. W. (1956). Economic growth and capital accumulation. *Economic Record, 32*(2), 334–361. https://doi.org/10.1111/j.1475-4932.1956.tb00434.x

Tiebout, C. M. (1956). A pure theory of local expenditures. *Journal of Political Economy, 64*(5), 416–424. https://doi.org/10.1086/257839

Utami, D., & Hidayat, T. (2021). Kontribusi PAD terhadap PDRB di era otonomi daerah. *Jurnal Kebijakan Publik, 9*(2), 88–97.

Widyasari, K., Dirgantari, N., Wahyuni, S., & Wibowo, H. (2023). Faktor-faktor determinan pertumbuhan ekonomi regional pada masa pandemi di Jawa Tengah. *Owner: Riset dan Jurnal Akuntansi, 7*(2), 1584–1595. https://doi.org/10.33395/owner.v7i2.1322