

Examining the role of local revenue and fiscal transfers in financing capital expenditure: Evidence from East Kalimantan local governments

Ratna Wulaningrum^{1*}, Muhammad Kadafi¹, and Renita Tri Cahyani¹

¹ Politeknik Negeri Samarinda, Samarinda, Indonesia

*Corresponding author's email: ratna@polnes.ac.id

Abstract

Capital expenditure is an important instrument for regional development, as it finances infrastructure and public assets that support economic activities and service delivery. This study investigates how Local Own-Source Revenue (PAD), the General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the Revenue Sharing Fund (DBH) influence capital expenditure among local governments in East Kalimantan Province. The analysis is based on secondary data derived from APBD Realization Reports covering seven regencies and three municipalities over the 2019–2024 period. A quantitative research design was applied using descriptive statistics, classical assumption testing, multiple linear regression, and hypothesis testing procedures. The empirical results indicate that PAD, DAU, and DBH contribute positively and significantly to capital expenditure allocation, whereas DAK does not show a statistically significant contribution and exhibits a negative coefficient. Among the explanatory variables, DBH emerges as the most influential determinant of capital expenditure. Furthermore, the joint analysis confirms that PAD, DAU, DAK, and DBH collectively explain variations in capital expenditure. These findings emphasize the importance of strengthening local revenue generation and improving the effectiveness of fiscal transfer utilization to enhance regional development outcomes and public service provision.

Keywords

Capital expenditure, PAD, DAU, DAK, DBH, Fiscal decentralization

Introduction

Indonesia's governance system has shifted from centralization to decentralization to improve efficiency and effectiveness, and strengthen regional autonomy. This policy officially began with Law No. 22 of 1999 and was updated through Law No. 23 of 2014. This policy gives regional governments the authority to manage resources, including revenue and expenditure allocations through the Regional Revenue and Expenditure Budget (APBD), as stipulated in Home Affairs Ministerial Decree No. 33 of 2017. The APBD covers all regional revenue and expenditure, including Regional Original Revenue

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(PAD) and central transfers such as the General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH), which serve as the primary instrument for funding development programs and capital expenditures according to local needs and potential.

Capital expenditure represents a crucial category of regional government spending that plays an important role in supporting sustainable development. These expenditures are directed toward the acquisition, construction, and improvement of long-term assets, including public infrastructure, educational institutions, healthcare facilities, transportation networks, and other essential public amenities. Beyond expanding the stock of regional assets, capital expenditure contributes to enhancing service delivery, improving community welfare, and fostering regional economic development (Susanto and Berliani, 2024).

PAD is one source of financing for capital expenditures. PAD plays a significant role because it provides fiscal space without being tied to usage regulations, as is the case with central government transfer funds. Therefore, regions with high PAD tend to have a greater ability to allocate budgets to physical development sectors that meet local needs without over-reliance on the central government or other funding (Faisal et al., 2024). Research by Angelia (2022) explains that PAD has a crucial effect on Capital Expenditures. Meanwhile, research conducted by Hermawan et al. (2022) and Waskito et al. (2019) reported that PAD did not exhibit a positive and statistically significant influence on Capital Expenditures.

Apart from PAD, local governments also rely on fiscal transfers provided by the central government, which are collectively known as the Balancing Fund. This fund comprises three main components: the DAU, DAK, and DBH. The DAU is intended to reduce fiscal disparities among regions by supporting their financial capacity to fulfill local needs and implement decentralization policies (Anggraeni & Sapari, 2023). Several studies have found that the General Allocation Fund positively and significantly influences Capital Expenditures (Mutiarra & Astuti, 2020; Marwanto et al., 2022). However, Lutpikah & Mahendra (2020) reported that the DAU is negatively associated with Capital Expenditures and exerts a statistically significant effect.

The DAK is a transfer from the central government designated for specific purposes and targeted toward priority sectors, including education, health, family planning, transportation infrastructure, irrigation systems, drinking water and sanitation facilities, local government infrastructure, environmental management, forestry, rural development, trade, agriculture, fisheries, and maritime affairs. These sectors are generally associated with Capital Expenditures. Furthermore, local governments are required to provide matching funds equivalent to 10% of the physical DAK allocation received (Sianturi & Putri, 2018). Empirical findings regarding the impact of DAK on Capital Expenditures remain inconsistent. Marheni & Triyanto (2023) found that DAK exerts a positive and significant influence on Capital Expenditures, whereas Faisal et al.

(2024) concluded that DAK has a positive but statistically insignificant effect on Capital Expenditures.

This study addresses the following research questions: (1) Does PAD positively and significantly affect Regional Government Capital Expenditures in East Kalimantan Province during the 2019–2024 fiscal years? (2) Does DAU positively and significantly influence Regional Government Capital Expenditures during the same period? (3) Does DAK positively and significantly affect Regional Government Capital Expenditures? (4) Does DBH positively and significantly influence Regional Government Capital Expenditures? and (5) Do PAD, DAU, DAK, and DBH simultaneously have a positive and significant effect on Regional Government Capital Expenditures in East Kalimantan Province for the 2019–2024 period?

This study aims to examine the extent to which PAD, DAU, DAK, and DBH influence Capital Expenditures at the local government level. Specifically, the research evaluates both the individual and combined effects of these fiscal variables in determining the allocation of resources for capital investment and infrastructure development. Understanding these relationships is important because capital expenditure plays a strategic role in improving public services, expanding regional infrastructure, and supporting sustainable economic growth. To address these objectives, the study employs a quantitative research approach based on secondary data obtained from the APBD Realization Reports. The dataset covers seven regencies and three municipalities in East Kalimantan Province over the period under investigation. By utilizing financial data from all local governments in the province, the study provides a comprehensive assessment of how local revenue sources and intergovernmental fiscal transfers contribute to regional fiscal capacity and influence decisions regarding capital expenditure allocation.

Method

This research adopted a quantitative methodology utilizing secondary data derived from the APBD realization reports of regency and municipal governments across East Kalimantan Province for the 2019–2024 period. The use of quantitative analysis allows for a systematic examination of the relationships between fiscal variables and capital expenditure allocation. The dataset encompasses financial information reported by local governments, providing a comprehensive basis for assessing regional fiscal performance and expenditure patterns over time. The population consists of all 10 local governments in the province, comprising seven regencies and three municipalities. Since the entire population was included in the analysis, the study applied a saturated sampling technique (census), which falls under the non-probability sampling method.

The study relied on documentary data sourced from the Regional Revenue and Expenditure Budget (APBD) Realization Reports provided by the East Kalimantan Representative Office of BPK RI. To evaluate the proposed relationships among variables, the data were subjected to descriptive statistical procedures, diagnostic tests

of classical assumptions, multiple linear regression analysis, determination coefficient analysis, and inferential statistical tests, including t-tests and F-tests.

Results and discussion

Table 1 shows that PAD positively and significantly affects Capital Expenditure. This conclusion is supported by a t-statistic of 2.567 and a significance value of 0.013, which is lower than the 5% significance level. Therefore, the first hypothesis is supported. The finding indicates that an increase in PAD tends to strengthen the financial autonomy of local governments, enabling them to allocate larger portions of their budgets to long-term investments, including the development of public infrastructure and the acquisition of fixed assets. From a fiscal decentralization perspective, higher PAD reflects a stronger capacity of local governments to mobilize local economic resources and reduce dependence on intergovernmental transfers. These results corroborate the findings reported by [Angelia \(2022\)](#) and [Pramono \(2024\)](#), who also documented a crucial relationship between PAD and Capital Expenditure. Nevertheless, the present findings differ from those reported by [Eliana et al. \(2023\)](#), who identified a significant negative effect, and from [Hermawan et al. \(2022\)](#) as well as [Lutpikah & Mahendra \(2020\)](#), who concluded that PAD did not significantly affect Capital Expenditure.

Table 1. Partial test results

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	-656.501	205.524			-3.194	.002
PAD	.727	.283	.182		2.567	.013
DAU	1.726	.458	.226		3.765	.000
DAK	-1.172	.953	-.109		-1.229	.224
DBH	.512	.044	.832		11.506	.000

a. Dependent Variable: BM

As shown in Table 1, the estimated t-value of 3.765, coupled with a significance level of 0.000, provides strong statistical evidence supporting the second hypothesis. This result suggests that DAU serves as an important fiscal instrument for enhancing the financial capacity of local governments. By providing additional budgetary resources, DAU enables local administrations to finance infrastructure projects and other forms of capital investment that might otherwise be constrained by limited local revenue. The finding highlights the role of fiscal transfers in supporting regional development and reducing disparities in public service provision across regions. Similar conclusions were reached by [Marwanto et al. \(2022\)](#), [Marheni & Triyanto \(2023\)](#), and [Pramono \(2024\)](#), all of whom reported a vital contribution of DAU to Capital Expenditure. Conversely, [Lutpikah & Mahendra \(2020\)](#) found a significant negative association, whereas [Faisal et al. \(2024\)](#) observed a negative but statistically insignificant relationship.

Different results emerge for the Special Allocation Fund (DAK). Based on the regression output in Table 1, DAK has a t-value of -1.229 and a significance value of 0.224, exceeding the conventional threshold of 0.05. Accordingly, the third hypothesis is rejected.

Although the estimated coefficient indicates a negative direction, the effect is not statistically significant. One possible explanation is that DAK is earmarked for specific sectors and programs determined by the central government, limiting the flexibility of local governments in allocating these funds toward broader categories of capital expenditure. In some cases, DAK allocations may be concentrated in narrowly defined projects whose contribution to overall capital spending is relatively limited. The present finding is consistent with the studies conducted by [Lutpikah & Mahendra \(2020\)](#) and [Susanto & Berliani \(2024\)](#), both of which reported a negative and insignificant influence of DAK on Capital Expenditure. However, the result contradicts the evidence provided by [Angelia \(2022\)](#) and [Hermawan et al. \(2022\)](#), who found that DAK positively and significantly affected Capital Expenditure.

Among all explanatory variables included in the model, the DBH exhibits the strongest effect on Capital Expenditure. As reported in [Table 1](#), DBH records a t-statistic of 11.506 with a significance level of 0.000, indicating a highly significant positive relationship. Consequently, the fourth hypothesis is accepted. This finding implies that revenue-sharing transfers constitute a major source of fiscal capacity for local governments, particularly in regions with substantial natural resource revenues or tax-sharing arrangements. The availability of DBH funds allows local governments to expand investments in infrastructure and public facilities that support economic growth and community welfare. Furthermore, the magnitude of the coefficient suggests that DBH plays a more prominent role in determining Capital Expenditure than the other fiscal variables examined in this study. These results are in line with the findings of [Marwanto et al. \(2022\)](#), [Anggraeni & Sapari \(2023\)](#), and [Pramono \(2024\)](#), who likewise reported a positive and significant impact of DBH on Capital Expenditure. In contrast, [Faisal et al. \(2024\)](#) and [Lutpikah & Mahendra \(2020\)](#) found that DBH had a negative and statistically insignificant effect.

The simultaneous testing results reported in [Table 2](#) further demonstrate that PAD, DAU, DAK, and DBH collectively have a significant influence on Capital Expenditure. The F-statistic of 72.156 and the significance value of 0.000 indicate that the regression model is statistically valid and that the four fiscal variables jointly explain variations in Capital Expenditure across local governments in East Kalimantan Province. This finding confirms that both locally generated revenues and intergovernmental transfers are essential sources of fiscal capacity for financing infrastructure development and public investment. Together, these revenue streams provide the financial foundation required to support local communities.

Table 2. Simultaneous Test Results

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58450415.869	4	14612603.967	72.156	.000 ^b
	Residual	1138272.569	55	202514.047		
	Total	69588688.439	59			

a. Dependent Variable: BM

b. Predictors: (Constant), DBH, DAU, PAD, DAK

As shown in [Table 2](#), the results of the simultaneous significance test indicate that PAD, DAU, DAK, and DBH collectively have a significant effect on Capital Expenditure. The model produces an F-statistic of 72.156 with a probability value of 0.000, which is well below the 0.05 significance level. These findings confirm the acceptance of the fifth hypothesis, suggesting that the combined influence of locally generated revenue and intergovernmental transfer funds plays an important role in explaining variations in Capital Expenditure across local governments in East Kalimantan Province. In other words, the ability of local governments to finance capital investment is determined not only by their own-source revenue capacity but also by the support provided through fiscal transfers from the central government.

These findings imply that both locally generated revenues and intergovernmental transfer funds play a crucial role in reinforcing regional fiscal capacity. As fiscal resources increase, local governments are better positioned to finance capital-intensive development initiatives, including infrastructure expansion and the provision of public assets that support economic development and enhance the quality of public services. An increase in PAD reflects the ability of local governments to effectively mobilize and utilize local economic resources, thereby enhancing fiscal independence. At the same time, intergovernmental transfer funds, including DAU, DAK, and DBH, serve as important instruments of fiscal decentralization designed to reduce regional disparities and support public investment. Together, these revenue sources provide the financial foundation necessary for financing strategic development projects, such as the construction of roads, bridges, schools, healthcare facilities, and other public infrastructure, which are essential for promoting regional economic growth and improving community welfare.

Conclusion

Regional governments can continue to optimize regional revenue sources to increase fiscal capacity. By increasing a region's fiscal capacity, the government has greater budgetary space to allocate capital expenditures, particularly for financing infrastructure development, the provision of public facilities, and the procurement of fixed assets that support public services. Regional governments can increase their Regional Original Revenue (PAD) by improving the effectiveness of regional tax and levy collection and expanding the regional revenue base by exploring underutilized local economic potential. Regional governments can allocate the DAU and DBH more strategically to support sustainable infrastructure development and public services. Furthermore, regional governments need to ensure that the DAK is managed appropriately and according to its intended purpose to ensure long-term benefits, particularly in supporting physical development aligned with national priorities and regional needs.

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