

Analysis Of The Effect Of Local Original Revenue (PAD) And Capital Expenditure On Economic Growth In East Java Province 2015-2023

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Abstract

Regional economic growth is an important indicator of development performance in the era of fiscal decentralization. This study aims to analyze the effect of Local Own-Source Revenue (PAD) and capital expenditure on economic growth of in East Java Province during 2015–2023. This research employs a quantitative approach using multiple linear regression, with PAD and capital expenditure transformed into natural logarithms. The study uses secondary data obtained from the Central Statistics Agency and the Directorate General of Fiscal Balance. The results show that PAD does not have a significant partial effect on economic growth, while capital expenditure has a significant effect. However, simultaneously, PAD and capital expenditure significantly influence regional economic growth. These findings indicate that capital expenditure plays a more dominant role in promoting regional economic growth.

Keywords: Local Own-Source Revenue, Capital Expenditure, Economic Growth, East Java, Fiscal Decentralization

INTRODUCTION

Regional economic growth represents a primary indicator of development performance, particularly in the context of fiscal decentralization and regional autonomy in Indonesia. The delegation of broader fiscal authority to local governments is intended to enhance resource allocation efficiency and accelerate development based on local potential. Within this framework, Local Own-Source Revenue (Pendapatan Asli Daerah/PAD) and capital expenditure function as strategic fiscal instruments that

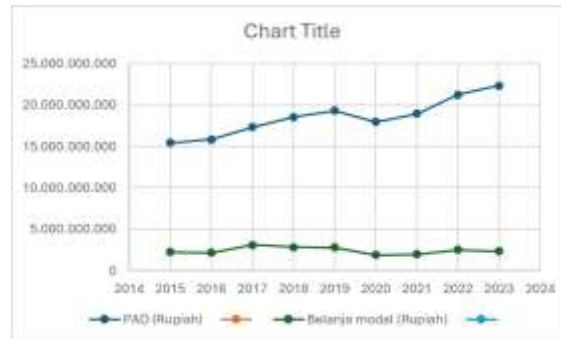
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support infrastructure provision, public service delivery, and regional economic activity (Paat et al., 2019; Saputri, 2023). East Java Province, as one of the largest contributors to Indonesia's national economy, exhibits relatively stable economic growth; however, significant disparities in fiscal capacity across its districts and municipalities remain evident.



Source: Badan Pusat Statistik Jawa Timur (BPS)

Although PAD in East Java has shown a consistent upward trend over time, economic growth has not always followed the same trajectory, particularly during external shocks such as the COVID-19 pandemic in 2020. At the same time, capital expenditure—which is theoretically expected to serve as a development catalyst through infrastructure investment—has demonstrated fluctuations and varying degrees of effectiveness across regions (Kurniawan et al., 2018; Ramadhani, 2019). Previous empirical findings remain inconclusive. Some studies report a positive relationship between PAD, capital expenditure, and economic growth, whereas others indicate that PAD does not significantly affect growth unless accompanied by efficient and productive spending allocation (Waryanto, 2017; Darmastuti et al., 2022).

Research gaps persist in both theoretical and empirical dimensions. Several prior studies have examined PAD and capital expenditure separately, without analyzing their simultaneous effects within a comprehensive fiscal decentralization framework. Moreover, many empirical analyses rely on pre-2020 datasets or focus on limited regional coverage, thus failing to capture post-pandemic fiscal and economic dynamics (Saraswati & Ramantha, 2018; Fauziyah & Ekaningtias, 2022; Fajar et al., 2023). Given the heterogeneity of fiscal characteristics across districts and municipalities in East Java, the differential impact of fiscal instruments on regional economic growth warrants further investigation using updated and comprehensive data.

The urgency of this study is not only academic but also practical. From a policy perspective, local governments are required to optimize PAD and allocate capital expenditure more productively to achieve sustainable and inclusive economic growth (Azizah & Asiyah, 2022; Arina et al., 2019). A deeper understanding of the effectiveness of PAD and capital expenditure is therefore essential for strengthening fiscal independence and reducing reliance on central government transfers.

Based on this background, this study aims to analyze the effects of Local Own-Source Revenue and capital expenditure on economic growth in East Java Province during the 2015–2023 period. This article contributes to the literature by providing updated empirical evidence on the role of regional fiscal instruments in promoting economic growth under fiscal decentralization. By examining all districts and municipalities in East Java, this study enriches the regional development economics literature and offers policy-relevant insights for designing more effective and sustainable local fiscal strategies.

LITERATURE REVIEW

The relationship between Local Own-Source Revenue (PAD), capital expenditure, and regional economic growth is fundamentally rooted in fiscal decentralization and public finance theory. Fiscal federalism theory, as articulated by Oates (1972; 1999), posits that local governments possess superior information regarding local preferences and conditions, enabling more efficient allocation of public resources when fiscal authority is decentralized. Within this framework, PAD serves as a primary indicator of fiscal autonomy and regional capacity to finance development. Musgrave (1959) further emphasizes that government revenue plays essential roles in allocation, distribution, and stabilization functions, implying that locally generated revenue can support productive public spending that stimulates economic activity.

From the perspective of economic growth theory, capital expenditure represents a form of public investment with long-term developmental implications. Musgrave's allocation theory (1959) argues that government spending is necessary to provide public goods that markets fail to supply efficiently. Wagner's Law (1958) suggests that economic expansion is typically accompanied by increased government spending, particularly on infrastructure and public facilities. In Keynesian theory (Keynes, 1936), public expenditure acts as a fiscal stimulus by increasing aggregate demand and generating multiplier effects. In the long run, endogenous growth theory highlights that high-quality public investment enhances productivity, human capital formation, and

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sustainable economic growth (Romer, 1990; Barro, 1990). Therefore, both PAD and capital expenditure are theoretically expected to influence regional economic performance, albeit through different mechanisms.

Empirical evidence on the relationship between PAD, capital expenditure, and regional economic growth remains mixed. Waryanto (2017), employing panel regression analysis on Indonesian districts and municipalities, finds that capital expenditure has a positive and significant effect on economic growth, whereas PAD tends to be statistically insignificant. Kurniawan et al. (2018) demonstrate that improvements in capital expenditure contribute to economic growth through infrastructure development, although the effectiveness of PAD largely depends on governance quality and spending efficiency. Ramadhani (2019) reports that PAD positively affects economic growth in regions with high fiscal capacity but becomes insignificant in regions with lower PAD levels, indicating heterogeneity in fiscal impact.

Further studies reinforce these nuanced findings. Arina, Koleangan, and Engka (2019), using multiple linear regression analysis, reveal that PAD significantly influences economic growth, yet its effect is conditioned by other fiscal variables such as intergovernmental transfers. Darmastuti et al. (2022) emphasize that while capital expenditure consistently shows a significant relationship with regional economic performance, increases in PAD do not necessarily translate into productive investment allocation. Similarly, Fauziyah and Ekaningtias (2022) identify inefficiencies in local budget management as a factor limiting the impact of regional financial components on growth. More recent research by Fajar, Muchtar, and Sihombing (2023) highlights the importance of incorporating post-pandemic data, as fiscal–growth dynamics have shifted following the COVID-19 shock.

Despite the growing body of literature, several research gaps remain. Theoretically, many studies examine PAD and capital expenditure separately, without integrating them into a simultaneous analytical framework grounded in fiscal decentralization theory. Empirically, a considerable number of studies rely on limited observation periods or pre-pandemic datasets, thus failing to capture the structural adjustments in regional fiscal management after 2020. Additionally, heterogeneity across districts and municipalities is often insufficiently addressed, resulting in conclusions that may not fully reflect the diverse fiscal capacities and development trajectories within a province (Saraswati & Ramantha, 2018; Darmastuti et al., 2022).

Drawing from these theoretical and empirical considerations, it can be inferred that PAD and capital expenditure play important roles in promoting regional economic



growth, yet their effectiveness is highly contingent upon allocation quality, governance capacity, and regional characteristics. This study contributes to the literature by providing a simultaneous analysis of PAD and capital expenditure using updated data from 2015–2023 covering all districts and municipalities in East Java Province. By doing so, it addresses temporal and regional limitations in prior research and offers a more comprehensive understanding of how fiscal instruments operate within a decentralized economic system.

METHODOLOGY

Research Design

This study employs a quantitative approach with an explanatory research design aimed at examining the causal relationship between Local Own-Source Revenue (PAD), capital expenditure, and regional economic growth. A quantitative framework is selected to enable objective hypothesis testing through statistical analysis and to provide empirical evidence on the effects of regional fiscal variables on economic performance. Multiple linear regression analysis is utilized to assess both partial and simultaneous effects of the independent variables on the dependent variable.

Study Area and Period

The research is conducted in East Java Province, Indonesia, covering all 38 districts and municipalities (29 regencies and 9 cities). The observation period spans from 2015 to 2023. This timeframe is intentionally chosen to capture fiscal and economic dynamics before and after the COVID-19 pandemic, thereby providing a more comprehensive understanding of structural changes in regional financial management and economic growth patterns.

Data and Variables

This study relies on secondary data obtained from official publications of Statistics Indonesia (BPS) and the Directorate General of Fiscal Balance. The dependent variable is regional economic growth, measured by the annual growth rate of Gross Regional Domestic Product (GRDP) at constant prices.

The independent variables include:

1. Local Own-Source Revenue (PAD), measured by the realized value of regional revenue generated locally;



2. Capital Expenditure, measured by the realized value of regional government spending allocated for capital formation and infrastructure development.

To reduce potential heteroskedasticity and scale differences across regions, PAD and capital expenditure variables are transformed into natural logarithmic form. The use of official government data ensures reliability and consistency, as these sources are standardized and periodically published.

Data Collection and Analytical Technique

Data are collected through documentation methods and literature review. The documentation method is used to compile quantitative data from regional financial reports and GRDP statistics, while the literature review supports the theoretical and empirical foundation of the study.

The analytical procedure begins with classical assumption tests, including normality, multicollinearity, heteroskedasticity, and autocorrelation tests, to ensure that the regression model satisfies the assumptions of the Best Linear Unbiased Estimator (BLUE). Subsequently, multiple linear regression analysis is performed to estimate the effects of PAD and capital expenditure on economic growth. Hypothesis testing is conducted using the t-test to assess partial effects, the F-test to evaluate simultaneous effects, and the coefficient of determination (R^2) to measure the explanatory power of the model. All statistical analyses are performed using SPSS software.

RESULT

To examine the effects of Local Own-Source Revenue (PAD) and capital expenditure on regional economic growth, multiple linear regression analysis was employed for the 2015–2023 period. The estimated model is formulated as follows:

$$EG = \alpha + \beta_1 \ln(PAD) + \beta_2 \ln(CE) + \varepsilon$$

where EG denotes economic growth, PAD represents Local Own-Source Revenue, and CE refers to capital expenditure.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-165.494	69.966		-2.365	.056
	PAD	-1.752	2.642	-.119	-.663	.532
	Belanja Modal	9.781	1.933	.909	5.061	.002

a. Dependent Variable: Pertumbuhan ekonomi



The regression estimation indicates that both PAD and capital expenditure have positive coefficients, suggesting a positive directional relationship with economic growth. However, their statistical significance differs.

The partial test (t-test) shows that PAD does not have a statistically significant effect on economic growth at the 5% significance level. Although the coefficient sign is positive—indicating that increases in PAD tend to be associated with higher economic growth—the probability value exceeds 0.05. This implies that PAD does not exert a sufficiently strong independent influence on regional economic performance during the observation period.

In contrast, capital expenditure demonstrates a positive and statistically significant effect on economic growth. The calculated t-value exceeds the critical threshold, and the significance level is below 0.05. This finding confirms that increases in capital expenditure contribute meaningfully to improvements in economic growth across districts and municipalities in East Java.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.030	2	10.515	12.808	.007 ^b
	Residual	4.926	6	.821		
	Total	25.956	8			

a. Dependent Variable: Pertumbuhan ekonomi
b. Predictors: (Constant), Belanja Modal, PAD

The simultaneous test (F-test) reveals that PAD and capital expenditure jointly have a significant effect on economic growth. The significance value of the F-statistic is below 0.05, indicating that the regression model is statistically valid in explaining variations in regional economic growth.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.900 ^a	.810	.747	.90606	2.039

a. Predictors: (Constant), Belanja Modal, PAD
b. Dependent Variable: Pertumbuhan ekonomi

Source: output SPSS

The coefficient of determination (R^2) indicates a moderate explanatory power of the model. PAD and capital expenditure together explain a portion of the variation in economic growth, while the remaining variation is influenced by other factors outside

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the model, such as private investment, human capital quality, and intergovernmental fiscal transfers.

DISCUSSION

The finding that PAD does not significantly affect economic growth suggests that fiscal revenue capacity alone is insufficient to stimulate regional economic expansion. According to fiscal decentralization theory (Oates, 1999; Musgrave, 1959), locally generated revenue is expected to enhance allocative efficiency and support development. However, the empirical results indicate that increases in PAD have not translated into measurable economic growth during the study period. This may reflect the allocation structure of PAD, which in many regions remains concentrated on routine expenditures rather than productive investment.

This result is consistent with Waryanto (2017) and Darmastuti et al. (2022), who report that PAD does not consistently demonstrate a significant impact on regional economic growth. Variations in fiscal management quality and disparities in local fiscal capacity across districts and municipalities in East Java may further weaken the aggregate effect of PAD on growth outcomes. Consequently, improving revenue collection alone may not be sufficient without parallel improvements in expenditure efficiency and allocation priorities.

Conversely, the significant positive impact of capital expenditure confirms its strategic role in promoting regional economic growth. This finding aligns with Keynesian theory (Keynes, 1936), which highlights the stimulative effect of government spending on aggregate demand. It also supports endogenous growth theory (Romer, 1990; Barro, 1990), which emphasizes the importance of public investment in infrastructure and capital formation for enhancing long-term productivity. Capital expenditure directed toward infrastructure and public facilities reduces economic bottlenecks, improves connectivity, and generates multiplier effects that stimulate broader economic activity.

Overall, the results underscore that the composition and quality of public expenditure are more critical for regional economic growth than revenue magnitude alone. The empirical evidence from East Java during 2015–2023 demonstrates that capital expenditure functions as a more effective fiscal instrument in driving growth compared to PAD. These findings provide important implications for regional fiscal policy, particularly the need to prioritize productive capital spending and enhance budget allocation efficiency to achieve sustainable economic development.



CONCLUSION AND RECOMMENDATIONS

This study concludes that Local Own-Source Revenue (PAD) and capital expenditure jointly have a significant effect on regional economic growth in East Java Province during the 2015–2023 period. However, when examined individually, PAD does not exhibit a statistically significant effect on economic growth, whereas capital expenditure demonstrates a positive and significant influence. These findings indicate that increasing local fiscal revenue alone does not automatically stimulate economic expansion unless it is accompanied by productive and growth-oriented expenditure allocation.

From a theoretical perspective, the results reinforce fiscal decentralization and public finance theories, which emphasize that the effectiveness of regional fiscal policy depends not merely on revenue generation but on the quality and composition of public spending. The insignificant effect of PAD suggests that fiscal autonomy must be supported by efficient budget management to produce tangible economic outcomes. Meanwhile, the significant role of capital expenditure confirms the importance of public investment in infrastructure and capital formation as drivers of regional economic performance.

The scientific contribution of this study lies in providing updated empirical evidence on the relationship between PAD, capital expenditure, and regional economic growth in the post-pandemic context. By analyzing all districts and municipalities in East Java over a nine-year period, this study offers a comprehensive perspective on how fiscal instruments operate within a decentralized system and highlights the relative effectiveness of capital expenditure compared to locally generated revenue.

In terms of policy implications, local governments should not focus solely on increasing PAD but must prioritize the allocation of capital expenditure toward productive sectors that generate multiplier effects. Strengthening budget efficiency, improving governance quality, and ensuring that fiscal resources are directed toward infrastructure and economic-supporting investments are essential for achieving sustainable regional growth.

Future research is recommended to incorporate additional explanatory variables beyond fiscal indicators, such as private investment, human capital quality, and intergovernmental transfers, to provide a more comprehensive understanding of regional economic growth determinants. Furthermore, the application of alternative econometric approaches, including panel data techniques or spatial analysis, may yield deeper insights into interregional interactions and fiscal policy effectiveness.



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