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Regional Fiscal Policy and Provincial Fiscal Performance in Indonesia: The Dual Moderating Role of Fiscal Decentralization

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Abstract

Fiscal decentralization has been widely implemented to improve regional fiscal efficiency and strengthen local fiscal capacity. However, empirical evidence regarding its effectiveness remains inconclusive, particularly in developing countries with diverse institutional capacities. This study examines the associations between regional fiscal policy instruments and provincial fiscal performance in Indonesia, proxied by the growth of Locally Generated Revenue (PAD), while investigating the moderating role of fiscal decentralization. Unlike previous studies that examine fiscal instruments separately or focus mainly on macroeconomic outcomes, this research develops an integrated framework that evaluates financing allocation, development expenditure, transfer funds, and other legitimate revenues within a moderated panel-data model. Using panel data from 33 provincial governments during 2017–2024, the study applies a fixed-effects regression model with interaction terms. The results show that development expenditure is positively and significantly associated with provincial fiscal performance, indicating that productive public spending strengthens regional fiscal capacity. In contrast, financing allocation and transfer funds show no significant direct associations with fiscal performance. Other legitimate revenues demonstrate a positive but limited association. Fiscal decentralization plays a dual moderating role by strengthening the association between transfer funds and fiscal performance while weakening the effects of development expenditure and other legitimate revenues. These findings suggest that the effectiveness of fiscal decentralization depends on fiscal instruments and local institutional capacity rather than producing uniform outcomes. This study contributes to the fiscal decentralization literature by providing an interaction-based empirical framework and practical evidence to support more effective decentralization policies and improve provincial fiscal performance in Indonesia.

KEYWORDS

fiscal decentralization; provincial fiscal performance; fiscal capacity; development expenditure; transfer funds.

Introduction

Fiscal decentralization has become one of the most widely implemented institutional reforms aimed at improving public sector efficiency, strengthening fiscal accountability, and enhancing regional development outcomes. From the perspective of public economics, decentralization enables local governments to allocate public resources more efficiently because they possess better information regarding local needs and regional priorities than the central government (Agrawal et al., 2024; Qi & Gong, 2025; Reddy et al., 2025). Through this mechanism, fiscal decentralization is expected to improve fiscal responsiveness, public service delivery, and regional fiscal sustainability. Previous empirical studies have shown that fiscal decentralization may improve public sector performance and fiscal accountability when supported by adequate institutional quality and governance capacity (Hasanah & Syah, 2025; Y. Wang et al., 2024; Wei et al., 2024).

In developing countries, fiscal decentralization is closely associated with strengthening the fiscal capacity of local governments in mobilizing revenues and allocating expenditures efficiently. The effectiveness of decentralization depends not only on the transfer of fiscal authority from central to local governments but also on the ability of local governments to independently manage regional fiscal resources (Bahl & Bird, 2018; Qi & Gong, 2025). In Indonesia, the implementation of regional autonomy has provided provincial governments with broader authority to manage fiscal resources in order to reduce regional disparities and promote sustainable regional development. Several recent studies indicate that stronger regional fiscal capacity is associated with improved expenditure efficiency and more sustainable regional fiscal outcomes (Y. Wang et al., 2024; Z. Wang et al., 2024).

Despite its theoretical advantages, empirical findings regarding the effectiveness of fiscal decentralization remain inconclusive. Some studies report that fiscal decentralization improves fiscal efficiency and regional development outcomes through more responsive public spending and stronger fiscal accountability (Diem & Hart, 2024; Song et al., 2022). However, other studies suggest that decentralization may produce weak or even adverse fiscal outcomes in regions characterized by limited institutional quality, weak governance, and low managerial capacity (Aritenang & Chandramidi, 2023; Mohammed et al., 2025). These inconsistencies indicate that the effectiveness of regional fiscal policy is highly conditional and influenced by institutional context, governance quality, and fiscal capacity differences across regions.

Another important issue in the literature concerns the fragmented treatment of regional fiscal policy instruments. Most previous studies examine fiscal instruments separately or focus primarily on macroeconomic indicators such as economic growth, inequality, or public expenditure efficiency. Limited attention has been given to the simultaneous influence of multiple fiscal policy instruments on provincial fiscal performance. In particular, prior studies rarely integrate financing allocation, development expenditure, transfer funds, and other legitimate revenues into a unified analytical framework. Furthermore, the moderating role of fiscal decentralization in shaping the effectiveness of these fiscal instruments remains relatively underexplored. Existing studies generally treat fiscal decentralization as a direct explanatory variable rather than as a conditional institutional factor that may strengthen or weaken fiscal policy effectiveness.

This study addresses these gaps by developing an interaction-based empirical framework that simultaneously examines multiple regional fiscal policy instruments and the moderating role of fiscal decentralization. The contribution of this study is threefold. First, this study integrates financing allocation, development expenditure, transfer funds, and other legitimate revenues into a single panel-data framework to explain provincial fiscal performance. Second, this study develops an interaction-based model that examines fiscal decentralization as a moderating variable rather than merely as a direct determinant. Third, this study highlights the dual moderating role of fiscal decentralization by demonstrating that decentralization may strengthen certain fiscal relationships while weakening others. Thus, this study contributes to the fiscal decentralization literature by emphasizing the conditional effectiveness of decentralization rather than assuming that decentralization uniformly improves fiscal outcomes.

PAD growth is employed because it reflects the ability of provincial governments to strengthen fiscal capacity and fiscal independence through the mobilization of regional economic potential (Ida, 2025; Putri & Handayani, 2022). In the context of fiscal decentralization, PAD growth is frequently used as an indicator of regional fiscal capacity because it reflects the extent to which local governments rely on internally generated revenues rather than central government transfers (Armawaddin et al., 2022; Putri & Handayani, 2022). Nevertheless, this study does not claim that PAD growth fully captures broader dimensions of government performance, such as public service quality, governance effectiveness, or social welfare outcomes. Instead, PAD growth is specifically interpreted as an indicator of provincial fiscal performance and fiscal capacity enhancement within the context of fiscal decentralization.

Based on these considerations, this study aims to analyze the influence of financing allocation, development expenditure, transfer funds, and other legitimate revenues on provincial fiscal performance in Indonesia while also examining the moderating role of fiscal decentralization. More specifically, this study seeks to explain whether fiscal decentralization strengthens or weakens the relationship between regional fiscal policy instruments and provincial fiscal performance. Through this approach, the study provides a more comprehensive understanding of the conditional effectiveness of fiscal decentralization within the Indonesian provincial fiscal context.

Literature Review

Research on provincial fiscal performance within the context of fiscal decentralization can be explained through several theoretical perspectives in public economics and public sector governance. One of the most relevant perspectives is agency theory, which explains the relationship between governments as agents and society as principals. Within this framework, local governments are expected to manage public resources efficiently, transparently, and accountably to achieve public objectives (Meckling & Jensen, 1976). Fiscal performance therefore becomes an important indicator reflecting the extent to which local governments are able to manage regional fiscal resources effectively and strengthen fiscal capacity.

In contrast to agency theory, stewardship theory views local governments not merely as self-interested agents but as institutions that are oriented toward collective welfare and public interest (Donaldson & Davis, 1991). From this perspective, regional fiscal policy is expected to support sustainable fiscal management through effective allocation of expenditures and optimal mobilization of regional revenues. Consequently, provincial fiscal performance depends not only on fiscal resources but also on the managerial commitment and institutional capability of local governments in managing those resources responsibly.

From the perspective of fiscal decentralization theory, granting fiscal authority to local governments is expected to improve allocative efficiency because local governments possess better information regarding local economic conditions and public needs (Oates, 2017). Fiscal decentralization allows regional governments to independently determine expenditure priorities, manage development programs, and strengthen local fiscal capacity. However, the effectiveness of fiscal decentralization is highly dependent on institutional quality and governance effectiveness. Several studies suggest that fiscal decentralization may improve fiscal efficiency and regional fiscal outcomes when supported by strong institutional capacity and effective governance systems (Fang et al., 2022; Nguyen & Anwar, 2022; Shu & Ju, 2026). Conversely, under weak governance conditions, decentralization may create inefficiencies, fiscal dependency, and fragmented fiscal management (Onofrei et al., 2022; Treisman, 2006).

Regional fiscal policy constitutes one of the main instruments through which local governments manage fiscal resources to strengthen fiscal performance. In the public finance literature, regional fiscal policy is commonly reflected through financing allocation, development expenditure, transfer funds, and regional revenue sources. Development expenditure, particularly expenditure directed toward productive sectors such as infrastructure, education, and public services, is widely regarded as an important mechanism for strengthening economic productivity and expanding regional fiscal capacity (Barro, 2019; Sasana, 2020). Productive public spending may stimulate regional economic activity, which in turn contributes to higher locally generated revenue (PAD). However, the effectiveness of development expenditure depends heavily on budget management quality, expenditure efficiency, and institutional capability at the regional level.

In addition to expenditure policy, regional revenue structure also plays an important role in determining provincial fiscal performance. Locally generated revenue reflects the fiscal independence of local governments and their ability to mobilize local economic potential. Previous studies indicate that stronger locally generated revenue contributes to improved fiscal sustainability and greater fiscal flexibility (Armawaddin et al., 2022; Putri & Handayani, 2022). Conversely, excessive dependence on transfer funds from the central government may reduce incentives for local governments to optimize their own-source revenues, thereby creating fiscal dependency (Bahl & Bird, 2018) . Consequently, transfer funds may either strengthen or weaken provincial fiscal performance depending on how effectively they are managed within decentralized fiscal systems.

Several recent studies also indicate that the relationship between regional fiscal policy and fiscal performance is not always linear because it is influenced by institutional and governance factors. In this regard, fiscal decentralization may function as a conditional institutional factor that shapes the effectiveness of fiscal policy instruments. Fiscal decentralization can strengthen the positive effect of fiscal policy when local governments possess adequate fiscal autonomy, governance quality, and managerial capability (Y. Wang et al., 2024). However, fiscal decentralization may also weaken fiscal policy effectiveness if increased fiscal autonomy is not accompanied by sufficient institutional capacity and accountability mechanisms (Digdowiseiso et al., 2020; Nguyen & Anwar, 2022).

Although the literature on fiscal decentralization has expanded considerably, several important research gaps remain. First, most previous studies examine fiscal instruments separately rather than simultaneously within a unified analytical framework. Second, prior studies predominantly focus on macroeconomic outcomes such as economic growth, inequality, or public expenditure efficiency, while limited attention has been given to provincial fiscal performance measured through fiscal capacity indicators. Third, the moderating role of fiscal decentralization remains relatively underexplored, particularly regarding its potential dual role in strengthening some fiscal relationships while weakening others. Therefore, this study develops an integrated empirical framework that combines multiple fiscal policy instruments and the moderating role of fiscal decentralization to provide a more comprehensive explanation of provincial fiscal performance in Indonesia.

Hypothesis Development

Regional fiscal policy represents the primary mechanism through which local governments allocate public resources and strengthen fiscal capacity. Within decentralized fiscal systems, the effectiveness of fiscal policy depends not only on the amount of fiscal resources available but also on the institutional capability of local governments in managing those resources efficiently. Therefore, understanding the relationship between regional fiscal policy instruments and provincial fiscal performance is important in explaining the effectiveness of fiscal decentralization.

Financing Allocation and Provincial Fiscal Performance

Financing allocation reflects the fiscal policy of local governments in managing financing sources to support development programs and fiscal sustainability. From the perspective of agency theory, effective financing allocation may improve fiscal efficiency and strengthen regional fiscal capacity because local governments are expected to utilize financing resources responsibly and productively. However, financing allocation may also be ineffective if financing instruments are primarily used for short-term fiscal adjustments rather than productive fiscal expansion. Previous empirical findings regarding financing allocation remain inconclusive, with several studies reporting insignificant effects on fiscal performance due to inefficient financing management and weak institutional capacity (Tifanny, 2025). Therefore, the following hypothesis is proposed:

H1: Financing allocation is significantly associated with provincial fiscal performance.

Development Expenditure and Provincial Fiscal Performance

Development expenditure represents government spending allocated to productive sectors such as infrastructure, education, health, and public services. In public finance theory, productive public expenditure is expected to stimulate regional economic activity and strengthen fiscal capacity through increased economic productivity (Barro, 2019; Sasana, 2020). Higher development expenditure may improve regional economic performance, thereby contributing to higher locally generated revenue (PAD). Empirical studies generally indicate that productive development expenditure positively contributes to fiscal performance and regional fiscal sustainability. Therefore, the following hypothesis is proposed:

H2: Development expenditure is positively associated with provincial fiscal performance.

Transfer Funds and Provincial Fiscal Performance

Transfer funds constitute one of the major fiscal resources transferred from the central government to local governments within decentralized fiscal systems. Theoretically, transfer funds may strengthen provincial fiscal performance because they increase regional fiscal capacity and support development financing. However, excessive dependence on transfer funds may also reduce incentives for local governments to optimize their own-source revenues and fiscal independence, thereby creating fiscal dependency (Bahl & Bird, 2018). Consequently, empirical findings regarding transfer funds remain inconsistent, with some studies reporting positive effects while others indicate insignificant or adverse effects due to fiscal dependency and inefficient allocation. Therefore, the direction of the relationship remains empirically uncertain and requires further examination.

H3: Transfer funds are significantly associated with provincial fiscal performance.

Other Legitimate Revenues and Provincial Fiscal Performance

Other legitimate revenues represent additional revenue sources outside locally generated revenue and transfer funds. Diversification of regional revenue sources may strengthen fiscal flexibility and improve the ability of local governments to finance development activities independently. Previous studies indicate that diversified regional revenue structures contribute to stronger fiscal sustainability and regional fiscal capacity

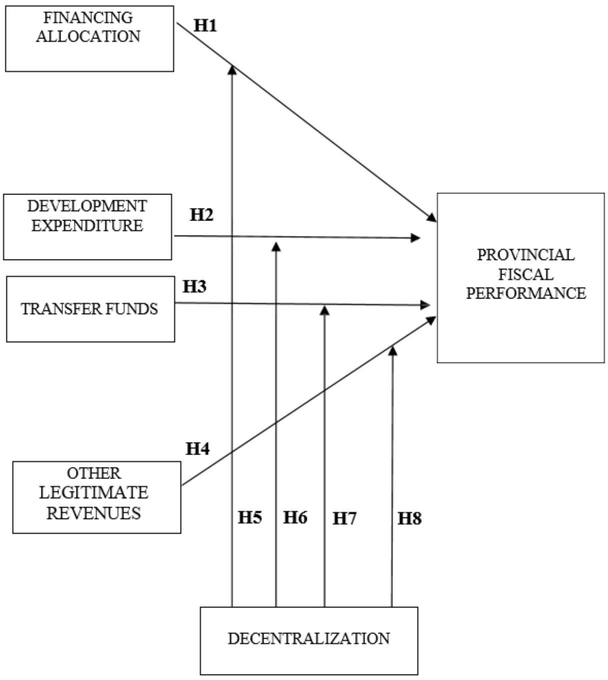

Figure 1. Conceptual Framework

(Putri & Handayani, 2022). Therefore, the following hypothesis is proposed:
H4: Other legitimate revenues are positively associated with provincial fiscal performance.

The Moderating Role of Fiscal Decentralization

Fiscal decentralization reflects the degree of fiscal autonomy possessed by local governments in managing regional revenues and expenditures. In fiscal decentralization theory, higher fiscal autonomy is expected to improve the effectiveness of fiscal policy because local governments possess greater flexibility in allocating fiscal resources according to local priorities (Oates, 2017). Regions with stronger fiscal decentralization may therefore manage financing allocation, development expenditure, transfer funds, and other revenues more effectively to strengthen fiscal capacity. However, the moderating role of fiscal decentralization is not necessarily uniform. Under conditions of weak governance, limited managerial capability, and inadequate institutional oversight, increased fiscal autonomy may reduce fiscal efficiency and weaken the effectiveness of fiscal policy instruments (Nguyen & Anwar, 2022). Thus, fiscal decentralization may either strengthen or weaken the relationship between fiscal policy instruments and provincial fiscal performance depending on institutional conditions and governance quality. Based on these arguments, the following moderation hypotheses are proposed:
H5: Fiscal decentralization moderates the relationship between financing allocation and provincial fiscal performance.
H6: Fiscal decentralization moderates the relationship between development expenditure and provincial fiscal performance.
H7: Fiscal decentralization moderates the relationship between transfer funds and provincial fiscal performance.
H8: Fiscal decentralization moderates the relationship between other legitimate revenues and provincial fiscal performance.

The overall conceptual framework, illustrating the direct effects (H1–H4) and moderating effects (H5–H8) of fiscal decentralization, is presented in Figure 1.

Methods

This study employs a quantitative research approach to examine the relationships between regional fiscal policy instruments and provincial fiscal performance and to analyze the moderating role of fiscal decentralization. A quantitative approach is considered appropriate because it enables the empirical examination of statistical relationships among variables through panel-data analysis (Creswell, 2018). The study utilizes secondary data obtained from provincial government budget realization reports, publications issued by the Central Statistics Agency (BPS), and audit reports published by the Supreme Audit Agency (BPK). The unit of analysis in this study consists of provincial governments in Indonesia during the 2017–2024 observation period. The study included all provincial governments with complete fiscal data during the 2017–2024 period, resulting in a balanced panel dataset consisting of 264 province-year observations. The use of provincial-level panel data allows the analysis to capture both cross-sectional variation across provinces and time-series variation over the observation period.

The dependent variable in this study is provincial fiscal performance, proxied by the growth of Locally Generated Revenue (PAD). PAD growth is employed because it reflects the ability of provincial governments to strengthen fiscal capacity and fiscal independence through the mobilization of regional economic potential (Purba, 2025; Dharmawati et al., 2024). In the fiscal decentralization literature, PAD growth is frequently used as an indicator of fiscal capacity because it reflects the extent to which local governments rely on internally generated revenues rather than central government transfers (Putri & Handayani, 2022). Nevertheless, this study acknowledges that PAD growth does not fully capture broader dimensions of government performance, such as governance effectiveness, public service quality, or social welfare outcomes. Therefore, the interpretation of the findings in this study is specifically limited to provincial fiscal performance rather than overall local government performance.

The independent variables consist of financing allocation, development expenditure, transfer funds, and other legitimate revenues. Financing allocation reflects provincial government policies in managing financing sources to support fiscal sustainability and development programs. Development expenditure represents provincial government spending allocated to productive sectors such as infrastructure, education, health, and public services. Transfer funds represent fiscal transfers received from the central government to support regional autonomy implementation, while other legitimate revenues reflect additional regional revenue sources outside the primary categories of locally generated revenue and transfer funds.

The moderating variable in this study is fiscal decentralization, proxied by the regional fiscal independence ratio. This ratio reflects the degree of fiscal autonomy possessed by provincial governments in financing their expenditures independently without excessive dependence on central government transfers. A higher fiscal independence ratio indicates stronger regional fiscal autonomy and greater fiscal decentralization capacity. The fiscal independence ratio is widely used in the fiscal decentralization literature because it reflects the ability of local governments to strengthen fiscal sustainability through internally generated fiscal resources.

Data processing and statistical analysis were conducted using STATA software. Since the data structure combines cross-sectional and time-series dimensions, this study employs panel data regression analysis to improve estimation efficiency and accommodate unobserved heterogeneity among provinces (Wooldridge, 2025). Prior to regression estimation, several diagnostic tests were conducted to evaluate model adequacy. The multicollinearity test using the Variance Inflation Factor

Table 1. Operational Variables and Measurement

Variable	Indicator	Measurement	Scale	Data Source
Dependent Variable				
Provincial Fiscal Performance (PAD Growth)	Growth of Locally Generated Revenue (PAD)	$\frac{PAD_t - PAD_{t-1}}{PAD_{t-1}} \times 100\%$	Ratio	Provincial Budget Realization Reports (APBD), 2017–2024
Independent Variables				
Financing Allocation	Net Financing Allocation	$NF_t - NF_{t-1}$	Ratio	Provincial Budget Realization Reports (APBD), 2017–2024
Development Expenditure	Capital Expenditure	CE_t	Ratio	Provincial Budget Realization Reports (APBD), 2017–2024
Transfer Funds	Transfer Funds Received from Central Government	$TF_t - TF_{t-1}$	Ratio	Provincial Budget Realization Reports (APBD), 2017–2024
Other Legitimate Revenues	Other Legitimate Regional Revenues	$OLR_t - OLR_{t-1}$	Ratio	Provincial Budget Realization Reports (APBD), 2017–2024
Moderating Variable				
Fiscal Decentralization	Degree of Fiscal Autonomy	$\frac{PAD}{Total\ Regional\ Re} \times 100\%$	Ratio	Provincial Budget Realization Reports (APBD), 2017–2024

Source: Tabulated by the author from various sources

(VIF) indicated that all variables had VIF values below the threshold of 10, suggesting that no serious multicollinearity problem existed in the model. In addition, heteroscedasticity and autocorrelation tests indicated potential violations of classical assumptions. Therefore, robust standard errors were applied to improve the reliability and consistency of the regression estimates. All hypotheses were evaluated using two-tailed significance tests at the 5% significance level. Accordingly, a hypothesis was considered statistically supported when the associated p-value was below 0.05 under the two-tailed testing criterion.

To determine the most appropriate panel regression model, this study employed the Hausman test to compare the fixed-effects model and the random-effects model. The Hausman test results indicated that the fixed-effects model was more appropriate because the probability value was statistically significant ($p < 0.05$), indicating the presence of unobserved heterogeneity across provinces. Consequently, the fixed-effects model was selected as the primary estimation model because it provides more consistent estimates and effectively controls for province-specific characteristics that cannot be directly observed.

To analyze the moderating role of fiscal decentralization, this study applies an interaction-term approach within the panel regression framework. The interaction terms are used to evaluate whether fiscal decentralization strengthens or weakens the relationship between regional fiscal policy instruments and provincial fiscal performance. Following the pure moderation approach, fiscal decentralization is modeled through interaction terms only, with the objective of examining its conditional moderating role rather than its direct effect on provincial fiscal performance. The empirical model is formulated as follows:

$$LGP_{it} = \beta_0 + \beta_1 FA_{it} + \beta_2 DE_{it} + \beta_3 TF_{it} + \beta_4 OLR_{it} + \beta_5 (FA \times D)_{it} + \beta_6 (DE \times D)_{it} + \beta_7 (TF \times D)_{it} + \beta_8 (OLR \times D)_{it} + \varepsilon_{it}$$

where:
LGPit = provincial fiscal performance proxied by PAD growth;
FAit = financing allocation;
DEit = development expenditure;
TFit = transfer funds;
OLRit = other legitimate revenues;
Dit = fiscal decentralization;
(FA × D)it = interaction between financing allocation and fiscal decentralization;
(DE × D)it = interaction between development expenditure and fiscal decentralization;
(TF × D)it = interaction between transfer funds and fiscal decentralization;
(OLR × D)it = interaction between other legitimate revenues and fiscal decentralization;
α = constant;
β0–β8 = regression coefficients;
εit = error term.

Following the pure moderation approach, fiscal decentralization is incorporated exclusively through interaction terms and is not included as an independent predictor in the regression model. Accordingly, the analysis focuses on the conditional moderating role of fiscal decentralization in shaping the relationships between regional fiscal policy instruments and provincial fiscal performance rather than examining its direct effect on provincial fiscal performance.

To strengthen the robustness of the empirical findings, this study also conducted additional estimations using an alternative random-effects model. The results produced relatively consistent coefficient directions, indicating that the findings are sufficiently robust across estimation approaches. In addition, robust standard errors were retained in the final estimation to minimize potential bias caused by heteroscedasticity and autocorrelation.

Fiscal decentralization is measured using the fiscal independence ratio, calculated as the proportion of locally generated revenue (PAD) relative to total regional revenue. A higher ratio indicates greater fiscal autonomy and a stronger capacity of provincial governments to finance their activities from internally generated revenues (see Table 1).

The independent variables are operationalized according to their fiscal characteristics. Financing allocation, transfer funds, and other legitimate revenues are measured as annual changes to capture year-to-year fiscal dynamics and variations in provincial fiscal resources. In contrast, development expenditure is measured using the annual realized level of capital expenditure because it directly represents productive government spending allocated to infrastructure and long-term development programs. This distinction reflects the different economic nature of fiscal revenue variables and expenditure realization variables.

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Result and Discussion

Descriptive Statistics

Descriptive statistics provide an overview of the characteristics and distribution of the variables used in this study. The dependent variable, provincial fiscal performance proxied by the growth of Locally Generated Revenue (PAD), has an average value of 19.973% with a standard deviation of 103.089%. The wide range between the minimum value of −92.71% and the maximum value of 1,661.62% indicates substantial variation in provincial fiscal capacity across regions. This finding suggests that provinces in Indonesia possess different abilities to strengthen internally generated fiscal resources.

The financing allocation variable has an average value of 12.085 billion rupiah with a standard deviation of 872.159 billion rupiah. The large variation between provinces indicates differences in financing policies and fiscal management strategies. Development expenditure has an average value of 1,114.155 billion rupiah and a standard deviation of 1,621.228 billion rupiah, reflecting disparities in development priorities and expenditure capacity across provinces.

Transfer funds exhibit an average value of 362.279 billion rupiah with a standard deviation of 1,286.079 billion rupiah. This substantial variation suggests differing levels of dependence on central government transfers among provinces. Meanwhile, other legitimate revenues have an average value of 65.051 billion rupiah and a standard deviation of 817.416 billion rupiah, indicating differences in the ability of provincial governments to diversify revenue sources.

The fiscal decentralization variable, proxied by the fiscal independence ratio, has an average value of 1.521 with a standard deviation of 0.285. This finding reflects differences in the degree of fiscal autonomy among provincial governments in Indonesia. Overall, the substantial variation across variables supports the use of panel-data estimation because it allows the model to capture both cross-sectional and time-series heterogeneity among provinces, as shown in Table 2.

Model Testing Results

Regression Analysis Results

The fixed-effects regression model is statistically significant, as indicated by an F-statistic value of 33.16 and a significance level of 0.000. The R-square value of 0.339 indicates that approximately 33.9% of the variation in provincial fiscal performance is explained by the independent variables included in the model, while the remaining variation is influenced by factors outside the model.

According to Table 3, regression results indicate that Financing allocation is not significantly associated with provincial fiscal performance. The coefficient value of −0.225 with a significance level of 0.918 suggests that financing allocation has not consistently contributed to strengthening PAD growth across provinces. This finding implies that financing allocation may primarily function as a short-term fiscal adjustment mechanism rather than as a productive fiscal instrument that directly enhances fiscal capacity. Transfer funds exhibit a negative but statistically insignificant relationship with provincial fiscal performance ($\beta = -4.801$; $p = 0.105$). Therefore, H3 is not supported. This finding suggests that transfer funds alone do not significantly contribute to PAD growth across provinces. One possible explanation is that transfer funds are primarily intended to support expenditure obligations and intergovernmental fiscal equalization rather than directly enhancing local revenue generation.

Development expenditure demonstrates a positive and statistically significant association with provincial fiscal performance. The coefficient value of 891.878 with a significance level of 0.000 indicates that productive public spending contributes positively to PAD growth. This result suggests that development expenditure directed toward infrastructure, education, health, and public services may strengthen regional economic activity and expand the provincial fiscal base.

Other legitimate revenues show a positive and statistically significant association with provincial fiscal performance. The coefficient value of 6.075 with a significance level of 0.045 suggests that diversified revenue sources contribute positively to fiscal capacity enhancement, although the magnitude of the contribution remains relatively limited. Since the p-value (0.045) is below the 5% significance threshold under the two-tailed testing criterion, H4 is supported.

Moderation Test Results

The interaction results indicate that fiscal decentralization does not significantly moderate the relationship between financing allocation and provincial fiscal performance. The interaction coefficient between financing allocation and fiscal decentralization is positive but statistically insignificant ($\beta = 0.254$; $p = 0.856$), suggesting that higher fiscal autonomy does not necessarily improve the effectiveness of financing allocation policies. Therefore, H5 is not supported.

In contrast, fiscal decentralization significantly moderates the relationship between development expenditure and provincial fiscal performance. The interaction coefficient between development expenditure and fiscal decentralization is negative and statistically significant ($\beta = -623.576$, $p < 0.001$). This result indicates that fiscal decentralization significantly moderates the relationship between development expenditure and provincial fiscal performance; however, the moderating effect occurs in the opposite direction to that predicted in the hypothesis. Therefore, although the interaction effect is statistically significant, H6 is not supported.

The interaction between transfer funds and fiscal decentralization is positive and statistically significant ($\beta = 3.026$; $p = 0.016$). This result suggests that fiscal decentralization strengthens the relationship between transfer funds and provincial fiscal performance. Provinces with stronger fiscal autonomy may therefore possess greater flexibility and institutional capability in managing transfer funds more effectively. Therefore, H7 is supported.

Finally, fiscal decentralization negatively moderates the relationship between other legitimate revenues and provincial fiscal performance. The interaction coefficient between other legitimate revenues and fiscal decentralization is negative and statistically significant ($\beta = -4.014$, $p = 0.043$). This finding indicates that fiscal decentralization significantly moderates the relationship between other legitimate revenues and provincial fiscal performance. However, because the moderating effect is opposite to the hypothesized positive direction, the interaction is considered statistically significant but inconsistent with the proposed hypothesis. Therefore, H8 is not supported.

Collectively, these findings support the existence of a dual moderating role of fiscal decentralization, whereby fiscal decentralization strengthens some fiscal relationships while weakening others.

The findings of this study indicate that the effectiveness of regional fiscal policy in improving provincial fiscal performance depends not only on the availability of fiscal resources but also on the institutional context in which those resources are managed. More importantly, the results demonstrate that fiscal decentralization operates conditionally rather than uniformly, strengthening some fiscal relationships while weakening others. This finding represents one of the primary contributions

Table 2. Descriptive Statistics of the Empirical Model

	N	Mean	Std Deviation	Minimum	Maximum
Dependent Variable:					
Provincial Fiscal Performance (LGP)	264	19.973	103.089	-92.71	1,661.62
Independent Variable:					
Financing Allocation (FA)	264	12.085	872.159	-3,583.63	10,444.1
Development Expenditure (DE)	264	1,114.155	1,621.228	19.12	11,279.08
Transfer Funds (TF)	264	362.279	1,286.079	-6,770.75	9,384.39
Other Legitimate Revenues (OLR)	264	65.051	817.416	-5,441.78	4,257.41
Moderating Variable:					
Fiscal Decentralization (D)	264	1.521	0.285	0.567	1.914

Table 3. Regression Testing on the Empirical Model

Description	Prediction	Coefficient	t-statistic	Significance	Decision
(Constant)		-11.090,25	-8,02	0,000	
Financing Allocation (FA_X1)	+	-0,225	-0,10	0,918	H1 Rejected
Development Expenditure (DE_X2)	+	891,878	7,39	0,000	H2 Accepted
Transfer Funds (TF_X3)	+	-4,801	-1,63	0,105	H3 Rejected
Other legitimate revenues (OLR_X4)	+	6,075	1,94	0,045	H4 Accepted
Interaction Variable:					
FA*D		0,254	0,18	0,856	H5 Rejected
DE*D		-623,576	-8,12	0,000	H6 Rejected
TF*D		3,026	1,62	0,016	H7 Accepted
OLR*D		-4,014	-2,04	0,043	H8 Rejected
R-square = 0,339 F-Count = 33,16 Significance: 0,000 *					

a. Dependent Variable: LGP_Y
Source: Data Processing Results from Stata
*Note: * Significance at the 5% level*

of this study to the fiscal decentralization literature.

The positive and significant association between development expenditure and provincial fiscal performance. This finding is consistent with public finance theory, which argues that government expenditure directed toward productive sectors such as infrastructure, education, health, and public services may stimulate economic productivity and expand the local fiscal base (Barro, 2019; Sasana, 2020). In the context of this study, development expenditure appears to support PAD growth through stronger regional economic activity and improved fiscal capacity.

However, the moderating effect of fiscal decentralization reveals a more complex relationship. Fiscal decentralization significantly weakens the positive association between development expenditure and provincial fiscal performance. Empirically, this finding suggests that greater fiscal autonomy does not automatically improve the effectiveness of development expenditure. Theoretically, this result may reflect differences in institutional quality, managerial capability, budget efficiency, and governance effectiveness across provinces. Under conditions of weak fiscal oversight and fragmented expenditure management, increased fiscal discretion may reduce expenditure efficiency and weaken the fiscal impact of development spending. Nevertheless, this interpretation should be understood as a theoretical and contextual explanation rather than as a direct causal claim fully established by the empirical model.

The results also indicate that financing allocation is not significantly associated with provincial fiscal performance. This finding suggests that financing allocation has not consistently contributed to improving PAD growth across provinces. Compared with previous studies, this result may indicate that financing instruments are frequently used to address short-term fiscal imbalances rather than to strengthen long-term fiscal capacity. Consequently, financing allocation may not directly contribute to sustainable fiscal performance improvement.

Similarly, transfer funds do not exhibit a significant direct effect on provincial fiscal performance. This finding supports the fiscal dependency argument in the decentralization literature, which suggests that excessive dependence on central government transfers may reduce incentives for local governments to optimize internally generated revenues (Bahl & Bird, 2018). However, the moderating effect of fiscal decentralization produces a different pattern. The positive interaction between transfer funds and fiscal decentralization indicates that transfer funds become more effective under higher levels of fiscal autonomy. This finding implies that provinces with stronger fiscal independence may possess greater institutional flexibility and managerial capability to allocate transfer funds more productively according to regional priorities.

Another important finding concerns other legitimate revenues, which are positively associated with provincial fiscal performance, although the effect remains relatively limited. This result suggests that revenue diversification contributes to strengthening fiscal capacity and reducing excessive dependence on central transfers. However, fiscal decentralization weakens this relationship, indicating that greater fiscal autonomy does not necessarily improve the effectiveness of additional revenue management. Differences in administrative capability, institutional coordination, and fiscal governance across provinces may partially explain this weakening effect.

Overall, the findings of this study demonstrate that fiscal decentralization should not be interpreted as uniformly beneficial or detrimental. Instead, the effectiveness of fiscal decentralization is conditional upon governance quality, institutional capability, and the type of fiscal instrument involved. Therefore, this study contributes to the fiscal decentralization literature by emphasizing the conditional effectiveness of decentralization through an interaction-based framework that captures the dual moderating role of fiscal decentralization in shaping provincial fiscal performance in Indonesia.

Conclusion

This study examines the relationships between regional fiscal policy instruments and provincial fiscal performance using a fixed-effects panel-data model covering 33 Indonesian provinces during 2017–2024. The results indicate that development expenditure is positively and significantly associated with provincial fiscal performance, while financing allocation and transfer funds are not significantly associated with PAD growth. Other legitimate revenues exhibit a positive and statistically significant association, although their contribution remains relatively limited. Accordingly, H2 and H4 are supported, whereas H1 and H3 are not supported.

In contrast, financing allocation and transfer funds are not significantly associated with provincial fiscal performance. These findings suggest that the availability of fiscal resources alone is not necessarily associated with higher PAD growth across provinces. Meanwhile, other legitimate revenues show a positive but relatively limited association with provincial fiscal performance, indicating that revenue diversification may be associated with stronger fiscal capacity enhancement, although its effect remains modest.

More importantly, this study finds that fiscal decentralization performs a dual moderating role. Fiscal decentralization strengthens the association between transfer funds and provincial fiscal performance, but weakens the associations involving development expenditure and other legitimate revenues. These findings demonstrate that the effectiveness of fiscal decentralization is conditional rather than uniformly positive. Higher levels of fiscal autonomy are associated with different moderating patterns across fiscal policy instruments, indicating that the relationship between fiscal decentralization and provincial fiscal performance is conditional rather than uniform. These findings should be interpreted as statistical associations identified within a fixed-effects panel-data framework rather than as definitive causal effects.

Theoretical Contribution Statement

This study contributes to the fiscal decentralization literature in several ways. First, the study develops an integrated empirical framework that simultaneously examines multiple regional fiscal policy instruments, including financing allocation, development expenditure, transfer funds, and other legitimate revenues within a single panel-data model. Second, this study extends prior research by positioning fiscal decentralization as a moderating institutional factor rather than merely as a direct explanatory variable. Third, the findings highlight the dual moderating role of fiscal decentralization by demonstrating that decentralization may strengthen certain fiscal relationships while weakening others. Therefore, this study contributes to the literature by emphasizing the conditional effectiveness of fiscal decentralization rather than assuming that decentralization uniformly improves fiscal outcomes.

Practical And Policy Implications

From a practical perspective, the findings suggest that improving provincial fiscal performance requires not only increasing fiscal resources but also strengthening institutional quality, expenditure governance, and fiscal management capability at the provincial level. Productive development expenditure should remain a priority because it consistently contributes to stronger fiscal capacity. At the same time, regional governments should reduce excessive dependence on transfer funds and strengthen internally generated revenue sources to improve fiscal sustainability. The findings also imply that fiscal decentralization policies should be accompanied by stronger institutional oversight, managerial capability development, and improved fiscal governance mechanisms. Without adequate institutional support, greater fiscal autonomy may reduce expenditure efficiency and weaken fiscal policy effectiveness.

Limitations And Future Research

This study has several limitations that should be acknowledged. First, provincial fiscal performance is measured solely through PAD growth, which primarily reflects fiscal capacity enhancement and fiscal independence. Although PAD growth is widely used in the fiscal decentralization literature as an indicator of fiscal capacity, it does not fully capture broader dimensions of government performance such as public service quality, governance effectiveness, administrative efficiency, or social welfare outcomes. Therefore, the interpretation of the findings in this study is specifically limited to provincial fiscal performance rather than overall local government performance.

Second, this study does not explicitly incorporate institutional quality variables such as governance effectiveness, bureaucratic capability, transparency, or accountability mechanisms, which may further explain the conditional effectiveness of fiscal decentralization. The moderating effects identified in this study therefore should be interpreted within the limitations of the empirical model.

Third, the study focuses exclusively on provincial governments in Indonesia, which may limit the broader generalizability of the findings to other administrative levels or institutional contexts. Differences in governance structure, fiscal systems, and decentralization arrangements across countries may produce different fiscal outcomes. Based on these limitations, future research is encouraged to employ broader multidimensional performance indicators, incorporate institutional quality and governance variables, and compare decentralization outcomes across different regional or international contexts. Such approaches may provide a more comprehensive understanding of how fiscal decentralization shapes fiscal performance under varying institutional conditions.

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