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Improving Local Financial Performance for Sustainable Regional Economic Development in the Regencies and Municipalities of Jambi Province

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Abstract: This study aims to identify the dominant factors influencing local government financial performance and to formulate improvement strategies. Nine regencies and cities in Jambi Province were selected as a sample using a quantitative explanatory approach through panel data regression and Dapel Indept analysis. Given that the implementation of regional autonomy requires regencies and cities to finance development independently, with a minimum target of 30% of Local Own-Source Revenue (PAD). However, during the 2017–2022 period, the average Fiscal Decentralisation Degree (DDF) across all regencies and cities in Jambi Province was only 9.46% (classified as very low). The Fixed Effects Model was identified as the most appropriate model. The results indicate three significant variables: Special Allocation Funds (prob. 0.0496), regional economic growth (prob. 0.0189), and the performance of regional enterprises (prob. 0.0300). Consequently, improving regional financial performance requires an integrated strategy focused on strengthening economic growth, optimising regional enterprises, and maximising the utilisation of the Special Allocation Fund.

Keyword: Local Government Financial Performance, Fiscal Decentralisation, Dapel Indept, Sustainable Development.

INTRODUCTION

The implementation of regional autonomy in Indonesia, as mandated by Law No. 23 of 2014 on Regional Government, places district and city governments as the primary bodies responsible for financing development in their respective areas. Within the framework of contemporary fiscal decentralisation, the capacity of sub-national governments to generate their own revenue is widely recognised as the cornerstone for the sustainability of local public service provision and productive public capital investment (Bahl & Martinez-Vazquez, 2022; Canavire-Bacarreza et al., 2020). This normative expectation is grounded in modern public finance theory, which holds that substantial fiscal autonomy will enhance allocative

efficiency, enabling local governments to align public spending more accurately with the diverse preferences of the local community (Vidyattama, 2021). However, the empirical reality in many developing countries often diverges from this ideal. Decentralisation policies frequently lead to a chronic and prolonged dependence on central government transfer payments. A phenomenon known as the ‘flypaper effect’ occurs, which ultimately undermines local governments’ incentives to maximise their potential local revenue (Afrizal & Khoirunurrofik, 2022; Swasito, 2021). It is this fiscal paradox that is currently evident in the financial performance of district and city governments in Jambi Province.

The Degree of Fiscal Decentralisation (DDF), calculated as the ratio of Local Own-Source Revenue (PAD) to total local revenue, remains the definitive composite indicator for assessing the level of fiscal autonomy (Akalbeo et al., 2023; Swasito, 2021). A high DDF reflects strong fiscal capacity and greater flexibility in responding to local socio-economic challenges, whereas a persistently low DDF locks regions into structural dependence on vertical fiscal transfers, which constricts fiscal space and distorts local development priorities (Henkel et al., 2021; Lewis, 2023). In the Indonesian context, this asymmetrical fiscal relationship forces local governments into a position where capital expenditure allocation becomes highly sensitive to the volatility of central transfer payments rather than local economic dynamics (Pradana & Mun’im, 2022; Wibowo & Oktivalerina, 2022). Therefore, the focus of current academic research must shift from merely calculating the administrative value of the DDF to identifying the internal and external determinants that influence the financial capacity of these local authorities.

The fiscal conditions of regencies and cities in Jambi Province present a compelling empirical anomaly. During 2017–2022, the average DDF stood at only 9.46%, well below the national ideal of 20–30%, while the average financial dependency ratio on central government transfers reached 79.75% over the same period (Devita et al., 2022; Lago et al., 2024). This figure is well below the national average, which ideally ranges between 20–30%, whilst highlighting a mismatch between the legislative targets for regional autonomy and the reality of fiscal capacity on the ground. A direct consequence of this low DDF is the high financial dependence of local governments on the State Budget (APBN), with the average dependency ratio on central government transfers reaching 79.75% over the same period. This structural vulnerability exposes the sustainability of regional development to national macro-fiscal shocks and shifts in central government policy direction (Amin et al., 2024; Damayanti et al., 2023). Longitudinal observations also indicate that the dominance of these transfer funds is no longer a temporary transitional phase, but has evolved into a structural lock-in with no signs of convergence towards local fiscal autonomy (Kinanti & Santorry, 2025).

A body of literature on the determinants of sub-national financial performance has produced varied but still fragmented findings. Globally, Kluza & Wójtowicz, (2025) argue that strengthening domestic revenue instruments, such as improving the efficiency of local tax collection, yields more sustainable long-term effects than expanding intergovernmental transfers. In Indonesia, most studies indicate that vertical transfers such as the General Allocation Fund (DAU) and the Special Allocation Fund (DAK) remain the primary sources of funding for regional development, particularly in the infrastructure sector (Swasito, 2021). On the other hand, (Herlina et al., 2025) found that macroeconomic variables have a positive relationship with local fiscal capacity in Jambi Province, although the study did not take into account the simultaneous influence of central government transfers. Furthermore, the study Damayanti et al., (2023) indicates that weak governance of Regionally Owned Enterprises (BUMD/Perumda) also hinders the optimisation of local non-tax revenue. These findings suggest that the issue of local fiscal autonomy is influenced not only by administrative fiscal aspects, but also by structural and institutional factors at the local level.

The divergence of findings in literature leaves two major research gaps. Firstly, most studies still evaluate internal fiscal factors, vertical transfers and macroeconomic variables in isolation, which risk introducing model specification bias when explaining the Degree of Fiscal Decentralisation (DFD). Second, previous studies generally stop interpreting econometric results without linking them to policy formulations that are implementable by local governments. Unlike previous studies, which focused solely on testing statistical relationships between fiscal variables (Hardiana, 2023; Herlin et al., 2022; Negara & Khoirunurrofik, 2021), To address these gaps, this study proposes the Dapel Indept (*Data Panel Integrated Evidence-Based Policy Prioritisation*) approach, which simultaneously analyses internal fiscal instruments, vertical transfers, and macroeconomic variables within a single integrated panel data regression model, and explicitly translates empirical findings into targeted and operationalisable policy recommendations for local governments. Unlike previous studies that evaluate these determinants in isolation or stop at econometric interpretation, Dapel Indept systematically bridges quantitative evidence with actionable fiscal policy prioritisation. This approach not only identifies the determinants of the Degree of Fiscal Decentralisation (DDF) but also translates empirical findings into more targeted and actionable policy recommendations for local governments. Furthermore, this study simultaneously analyses internal fiscal factors, vertical transfers, and macroeconomic variables within a single integrated model, thereby aiming to provide a more comprehensive picture of local fiscal autonomy in Jambi Province (Afrizal & Khoirunurrofik, 2022; Mubarok et al., 2022; Nurcahyo & Mahi, 2022).

This study analyses the financial performance of nine regencies and cities in Jambi Province over the period 2017–2022. It employs panel data regression integrated with an evidence-based policy prioritisation matrix. The aim is to evaluate the impact of internal fiscal instruments, vertical transfers, and macroeconomic variables on the degree of fiscal decentralisation. Through this approach, the study seeks to answer two main questions: whether internal, external, and macroeconomic determinants have a significant impact on the DDF of local governments in Jambi Province, and what priority policy strategies can be implemented to systematically strengthen local fiscal autonomy.

METHOD

This study employs a quantitative explanatory approach to analyse the determinants of regional financial performance in districts and municipalities in Jambi Province during the 2017–2022 period. The study uses secondary data obtained from the Central Statistics Agency (BPS), the Directorate General of Fiscal Balance (DJPK) of the Ministry of Finance, and the Regional Development Planning Agency (Bappeda) of Jambi Province. The research sample consists of 9 out of 11 districts/cities in Jambi Province that met the completeness and consistency criteria of panel data availability. Tanjung Jabung Timur and Sungai Penuh were excluded due to incomplete fiscal data across several observed variables during the study period, which could potentially affect the consistency of panel estimation results.

Two analytical models were employed. First, panel data multiple regression was used to address the first research objective, with the following formulation:

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 X_{6it} + \beta_7 X_{7it} + e$$

Notes: Y = regional financial performance, X1 = regional taxes, X2 = special allocation funds, X3 = regional investment, X4 = regional economic growth, X5 = regional infrastructure expenditure, X6 = regional current assets, X7 = performance of regional enterprises, and e = error term.

Model estimation was carried out using three approaches: the Common Effects Model (CEM), the Fixed Effects Model (FEM), and the Random Effects Model (REM). The selection of the best model was determined using the Chow test to choose between the CEM and FEM, the Hausman test to choose between the FEM and REM, and the Lagrange Multiplier test to choose between the CEM and REM. In addition, classical assumption tests were conducted to ensure model robustness. Multicollinearity was tested using the Variance Inflation Factor (VIF), heteroscedasticity was examined using the Breusch–Pagan test, and autocorrelation was tested using the Wooldridge test.

Secondly, the Dapel Indept (*Data Panel Integrated Evidence-Based Policy Prioritisation*) model was employed to address the second research objective, namely formulating strategies to improve regional financial performance. This model operates through two sequential stages. The first stage involves evidence-based identification, in which statistically significant variables identified through the Fixed Effects Model estimation are prioritised according to two simultaneous quantitative criteria: the probability value as a measure of statistical certainty, and the absolute regression coefficient as a measure of effect magnitude. The second stage involves priority-based policy formulation, in which each priority variable is translated into contextually relevant policy instruments through a verifiable policy matrix. Unlike conventional policy analysis approaches, the entire policy priority hierarchy in Dapel Indept is derived explicitly and transparently from quantitative econometric evidence rather than normative judgement alone.

RESULT AND DISCUSSION

Panel Data Model Selection

Panel data regression estimation in this study was conducted using three alternative approaches, namely the Common Effects Model (CEM), the Fixed Effects Model (FEM), and the Random Effects Model (REM). The comparative estimation results of the three models are presented in Table 1.

Table 1. Comparison of the Estimation Results of the Three Panel Data Regression Models

Criteria	CEM (PLS)	Fixed Effect	Random Effect
R-squared	0.524710	0.977661	0.154369
Adjusted R-squared	0.287066	0.843628	0.025686
Prob. F-statistic	0.098158	0.006433	0.322151
Durbin-Watson stat	1.8033725	3.592898	1.866256
Significant Variables ($\alpha=5\%$)	X2	X2, X4, X7	None

Based on Table 1, the Fixed Effects Model (FEM) produced the highest coefficient of determination with an R-squared value of 0.977661 and an adjusted R-squared value of 0.843628. In addition, the FEM approach identified three statistically significant independent variables at the 5% significance level, namely special allocation funds (X2), regional economic growth (X4), and the performance of regional state-owned enterprises (X7).

Meanwhile, the Common Effects Model (CEM) generated a lower explanatory power with an R-squared value of 0.524710 and identified only one significant variable. The Random Effects Model (REM) showed the weakest explanatory performance, with an adjusted R-square value of 0.025686 and no statistically significant variables. To determine the most appropriate panel regression specification, the Chow test and Hausman test were subsequently conducted. The results are presented in Table 2.

Table 2. Results of the Chow test and the Hausman test

Testing	Statistical Results	Decision
Chow's test	$\chi^2 \text{ stat} > \chi^2 \text{ tabel (df=6, } \alpha=5\%)$	Reject H0: select Fixed Effects
Hausman test	p-value < $\alpha = 5\%$	Reject H0: select Fixed Effects

The results of both tests consistently identified the Fixed Effects Model (FEM) as the most appropriate approach. The choice of the FEM is relevant because each district/city in Jambi Province has distinct fiscal characteristics, and the FEM is able to accommodate this heterogeneity through individual intercepts. These findings are consistent with the approach adopted by similar studies analysing cross-regional financial performance in Indonesia using panel data (Surjaningsih et al., 2011; Nadeak et al., 2022).

Regression Estimation Results

Based on the estimation results using the Fixed Effects Model, the panel regression equation for districts and municipalities in Jambi Province during the 2017–2022 period is formulated as follows:

$$Y = 891,9982 - 1,9620 X1 - 34,3501 X2 - 0,7781 X3 - 6,9926 X4 - 1,0323 X5 - 2,8435 X6 - 3,4772 X7$$

Of the seven independent variables included in the model, three variables were found to have statistically significant effects on regional financial performance at the 5% significance level. These variables are ranked according to their statistical significance in Table 3.

Table 3. Significant Variables by Level of Significance (Fixed-Effect Model)

Prior.	Variabel	Coefficient	Prob.	Direction of Influence
1	Regional Economic Growth (X4)	-6.992560	0.0189	Significantly Negative
2	Performance of Regional State-Owned Enterprises (X7)	-3.477176	0.0300	Significantly Negative
3	Special Allocation Fund (X2)	-34.35008	0.0496	Significantly Negative

The estimation results indicate that regional economic growth (X4), the performance of regional state-owned enterprises (X7), and special allocation funds (X2) had significant negative effects on regional financial performance during the observation period.

Regional Variation in Financial Performance

The Fixed Effects Model (FEM) also captures regional heterogeneity through differences in individual intercept values across districts and municipalities in Jambi Province. These intercepts reflect the inherent fiscal characteristics of each region after controlling for the explanatory variables included in the model.

The estimation results show that Jambi City recorded the highest individual intercept value, amounting to Rp921,212.89 million, while Muaro Jambi Regency exhibited the lowest intercept value at Rp844,825.74 million. This variation indicates substantial disparities in fiscal capacity and regional financial performance among local governments in Jambi Province. The complete individual intercept values are presented in Table 6.

Table 4. Individual Intercepts of Districts/Municipalities in Jambi Province (Fixed Effects Model)

No	District/Municipality	Individual Intercept Value
1	Kota Jambi	921,21289
2	Bungo	898,544218
3	Kerinci	891,230772
4	Batanghari	888,844168
5	Tanjung Jabung Barat	887,240766
6	Merangin	886,505111
7	Sarolangun	885,504513

No	District/Municipality	Individual Intercept Value
8	Tebo	881,95239
9	Muaro Jambi	884,82574

These differences in individual intercept values demonstrate that the fiscal performance of districts and municipalities in Jambi Province is characterised by considerable regional disparity. Regions with stronger economic concentration and more diversified sources of local revenue tend to exhibit higher fiscal capacity, while regions that remain highly dependent on intergovernmental transfers show relatively weaker financial performance. This finding confirms that the effectiveness of fiscal decentralisation in Jambi Province remains uneven across regions, thereby indicating the importance of strengthening region-specific fiscal policies that are capable of accommodating differences in local economic structure, institutional capacity, and revenue-generating potential.

Discussion

1. The Effect of Regional Economic Growth on Regional Financial Performance

The empirical findings demonstrate that regional economic growth had a statistically significant negative effect on regional financial performance in districts and municipalities in Jambi Province. Based on the Fixed Effects Model estimation, the regional economic growth variable (X4) obtained a regression coefficient of -6.992560 with a probability value of 0.0189 (prob. < 0.05), indicating that increases in regional economic growth during the observation period were associated with a decline in regional financial performance. This finding indicates that improvements in regional economic output were not automatically followed by stronger fiscal autonomy or greater local financial capacity.

This paradox can be attributed to a fundamental structural mismatch between the composition of regional economic growth and the institutional capacity of local governments to capture fiscal dividends from that growth. During 2017–2022, the economic structure of Jambi Province remained heavily concentrated in plantation, mining, and commodity-based sectors, which contributed substantially to Gross Regional Domestic Product (GRDP) growth but generated limited direct contributions to Local Own-Source Revenue (PAD). Data from the Central Statistics Agency (BPS Provinsi Jambi, 2023) consistently show that the agricultural, forestry, and fishery sector contributed more than 30% of provincial GRDP throughout the observation period. However, large-scale extractive and plantation industries predominantly operate under centralised taxation frameworks, meaning that fiscal revenues flow upward to the central government rather than being retained locally through regional taxes and levies. This creates a condition where economic growth occurs at the regional level without producing proportional fiscal benefits for local governments, a phenomenon consistent with what Bahl & Martinez-Vazquez (2022) describe as the disconnection between economic activity and subnational fiscal capture in resource-dependent economies.

This finding diverges markedly from evidence observed in more industrialised and urbanised regions in Indonesia, where economic growth tends to strengthen fiscal capacity through diversified tax bases and broader local revenue sources. The divergence reflects structural differences in economic composition, governance quality, and institutional capacity for fiscal extraction. Regions with manufacturing and service-oriented economies generate broader and more locally taxable economic activities, whereas commodity-dependent economies like Jambi tend to produce growth that is fiscally captured at the central rather than local level. This structural asymmetry aligns with the argument advanced by Herlina et al. (2025), who found that macroeconomic growth in several Indonesian regions was not always accompanied by improvements in fiscal decentralisation performance due to weak local revenue mobilisation systems. From an international perspective, (Canavire-Bacarreza

et al., 2026) argue that strong fiscal institutions and effective local tax administration are essential prerequisites for transforming economic growth into sustainable fiscal decentralisation outcomes.

The findings of this study differ from evidence observed in more industrialised and urbanised regions in Indonesia, where economic growth tends to strengthen fiscal capacity through diversified economic structures and broader tax bases. The divergence may therefore be attributed to differences in economic structure, governance quality, and regional institutional capacity. Compared with manufacturing-based and service-oriented regions, the economy of Jambi Province remains relatively dependent on primary commodity sectors that are vulnerable to price fluctuations and generate lower locally retained fiscal multipliers.

From a policy perspective, these findings imply that local governments in Jambi Province cannot rely on macroeconomic growth alone as a pathway to fiscal strengthening. Sustainable improvement in regional financial performance requires parallel institutional reforms, including the expansion of the regional tax base beyond commodity sectors, strengthening of local tax administration systems, and deeper integration between regional economic planning and local revenue optimisation strategies (Kamara & Kamara, 2024; Nurbekova et al., 2024). Without these institutional complements, economic growth may continue to occur in Jambi Province without meaningfully improving local fiscal autonomy.

2. The Effect of the Performance of Regional State-Owned Enterprises on Regional Financial Performance

The results of this study indicate that the performance of regional state-owned enterprises (BUMD) had a statistically significant negative effect on regional financial performance. The regression estimation shows that the BUMD performance variable (X_7) obtained a coefficient value of -3.477176 with a probability value of 0.0300 (prob. < 0.05). This finding reveals that increases in BUMD operational performance during the observation period were not accompanied by proportional improvements in regional fiscal capacity, a result that demands institutional rather than purely financial explanation.

The negative relationship identified in this study reflects a deeper structural problem in the governance architecture of BUMDs across districts and municipalities in Jambi Province. In many regions, BUMDs continue to operate under weak corporate governance frameworks characterised by low profitability, limited managerial accountability, and insufficient transparency mechanisms. As a consequence, increases in BUMD operational activity tend to generate higher expenditure demands on local government budgets, including capital injections and operational subsidies, without producing proportional returns in the form of profit contributions to PAD. This dynamic effectively creates a fiscal drain rather than a fiscal asset, wherein expanded BUMD operations consume local budgetary resources faster than they generate local revenue. Damayanti et al. (2023) found that weak governance structures, low accountability, and limited transparency mechanisms remain major obstacles preventing BUMDs from functioning as effective instruments for strengthening regional fiscal capacity. Similarly, (Jubaidah, 2025) reported that the effectiveness of BUMD profit generation in Indragiri Hulu Regency remained categorised as ineffective due to limited contributions to local revenue targets.

This finding is further compounded by the sectoral orientation of BUMDs in Jambi Province, many of which operate in public service sectors with inherently low commercial returns, such as regional water supply companies and plantation-related enterprises. These sectors are typically governed by public service obligations that structurally prioritise service delivery over profitability, thereby limiting their potential contribution to PAD regardless of operational scale. This sectoral constraint aligns with the broader argument advanced by Melnychuk et al. (2019), who demonstrated that the fiscal contribution of state-owned enterprises at the subnational level is highly contingent on the commercial viability of the

sectors in which they operate, rather than on operational scale alone. Regions where BUMDs are concentrated in commercially viable and market-oriented sectors tend to generate stronger fiscal contributions, whereas those operating in public utility or primary commodity sectors consistently underperform fiscally (Dalisawintri et al., 2025).

Nevertheless, these findings differ from several studies conducted in regions with stronger BUMD governance systems. Evidence from West Aceh and several other Indonesian regions demonstrates that professionally managed BUMDs operating in commercially viable sectors contribute positively and significantly to local fiscal capacity. This divergence suggests that the fiscal impact of BUMD performance is not inherently negative but is instead highly contextual, shaped by governance quality, managerial capability, and the commercial orientation of the sectors in which BUMDs operate. Without structural reform in these dimensions, BUMDs in Jambi Province are likely to remain fiscal liabilities rather than productive instruments for strengthening regional financial autonomy.

From a policy perspective, these findings imply that improving regional financial performance in Jambi Province requires fundamental reform in BUMD governance rather than simply expanding operational scale. Local governments should prioritise the implementation of good corporate governance principles, strengthen performance-based supervision mechanisms, adopt merit-based managerial recruitment systems, and conduct regular independent financial audits (Sary et al., 2024). Furthermore, local governments should evaluate the commercial viability of existing BUMDs and consider strategic reorientation toward sectors capable of generating sustainable fiscal returns. Without these institutional reforms, increases in BUMD operational performance may paradoxically continue to burden rather than strengthen local fiscal capacity.

3. The Effect of Special Allocation Funds on Regional Financial Performance

The results of this study indicate that special allocation funds (DAK) had a statistically significant negative effect on regional financial performance. The regression estimation shows that the DAK variable (X2) obtained a coefficient value of -34.35008 with a probability value of 0.0496 (prob. < 0.05). This finding indicates that increasing dependence on DAK during the observation period tended to weaken regional fiscal autonomy and reinforce dependence on central government transfers.

The negative relationship identified in this study reflects the persistence of the “flypaper effect” phenomenon in local government fiscal management. In the context of fiscal decentralisation, the flypaper effect occurs when transfer funds from the central government stimulate higher regional expenditure without simultaneously encouraging improvements in local revenue generation capacity. As a result, local governments become increasingly dependent on transfer allocations rather than developing sustainable local fiscal sources independently.

This finding is highly relevant to the fiscal conditions of districts and municipalities in Jambi Province. During the 2017–2022 period, the average Degree of Fiscal Decentralisation (DDF) of local governments in Jambi Province was only 9.46%, while the average dependence on central government transfers reached approximately 79.75%. These figures indicate that local fiscal structures remain heavily dependent on intergovernmental transfers and possess relatively weak local revenue bases. Consequently, increases in DAK allocation may unintentionally reinforce fiscal dependency patterns instead of stimulating fiscal independence.

The findings of this study are consistent with several previous studies conducted in Indonesia. Research in the Special Region of Yogyakarta found that DAK negatively affected regional financial independence because higher transfer allocations increased fiscal dependency on the central government. Similar evidence was also reported in Central Java Province, where DAK utilisation was found to strengthen expenditure dependency patterns

rather than stimulate productive local fiscal expansion (Kinanti & Santorry, 2025b; Rianto, n.d.; H. S. Sugiyanto & Musfirati, 2021). Widowati et al. (2024) further emphasised that the effectiveness of DAK is strongly influenced by the institutional capacity of local governments to allocate funds toward productive and economically transformative programmes.

The negative impact of DAK in Jambi Province may also be associated with the allocation pattern of transfer funds, which remains concentrated on administrative expenditure and short-term programme fulfilment rather than productive infrastructure capable of generating long-term economic multipliers. In several districts, DAK utilisation appears to prioritise expenditure absorption over strategic investments that could strengthen the regional tax base and stimulate sustainable local economic activity (E. Sugiyanto et al., 2018).

The divergence between normative expectations and empirical findings highlights an important institutional challenge within regional fiscal governance. Ideally, DAK should function as a fiscal stimulus capable of supporting infrastructure development, investment attraction, and local economic expansion. However, in regions characterised by weak planning quality and limited fiscal management capacity, transfer funds may instead reinforce structural dependency over the long term.

From a policy perspective, these findings imply that local governments in Jambi Province need to improve the quality of DAK allocation planning and prioritise programmes capable of generating sustainable economic multipliers. Productive infrastructure development, support for regional economic diversification, and stronger integration between DAK utilisation and local development priorities are essential to ensure that transfer funds contribute to strengthening regional financial autonomy rather than perpetuating fiscal dependency.

4. Regional Variation in Financial Performance

The Fixed Effects Model estimation captures substantial heterogeneity in regional financial performance across districts and municipalities in Jambi Province through differences in individual intercept values. These intercepts represent the inherent fiscal characteristics of each region after controlling the explanatory variables included in the model and therefore reflect the underlying structural and institutional conditions that shape fiscal capacity independently of the observed determinants.

Jambi City recorded the highest individual intercept value at Rp921,212.89 million, while Muaro Jambi Regency recorded the lowest at Rp844,825.74 million. Although the absolute difference may appear modest in numerical terms, the structural implications are significant. The relatively strong fiscal position of Jambi City reflects its role as the provincial economic centre, characterised by a more diversified economic base, stronger service-sector development, and broader local revenue sources. Urban economic concentration in Jambi City generates wider opportunities for regional tax collection through property taxes, restaurant and hotel taxes, business licensing, and service-sector activities, all of which constitute locally taxable and administratively accessible revenue streams. This finding is consistent with

Surjaningsih et al. (2011), who argued that fiscal decentralisation tends to perform more effectively in regions with diversified economic structures and stronger institutional capacity for local revenue mobilisation.

Conversely, the relatively weak fiscal position of Muaro Jambi Regency reflects structural constraints in local revenue generation that extend beyond mere administrative inefficiency. Muaro Jambi's economy remains more dependent on agricultural and plantation activities, which, as discussed in the preceding sections, generate economic output that is predominantly captured through centralised taxation frameworks rather than local revenue

instruments. This creates a condition of structural fiscal disadvantage that persists even after controlling for the influence of DAK, economic growth, and BUMD performance in the regression model. The persistence of this disadvantage in the intercept term suggests that it is rooted in deeper institutional and structural factors, including limited fiscal extraction capacity, narrower tax bases, and weaker local administrative systems, that are not fully captured by the observed variables alone. Melnychuk et al. (2019) similarly found that prolonged dependence on intergovernmental transfers weakens local fiscal resilience and reduces financial flexibility in ways that become structurally embedded over time.

The pattern of intercept variation across the nine regions further reveals that fiscal capacity in Jambi Province does not distribute evenly along a simple urban-rural divide but reflects the complex interplay of economic structure, institutional capacity, and historical fiscal governance patterns specific to each region. Regions such as Bungo and Merangin, which occupy intermediate intercept positions, reflect moderate levels of economic diversification and institutional development that partially offset their dependence on central transfers. This heterogeneity underscores the limitation of applying uniform fiscal policy prescriptions across all districts and municipalities in Jambi Province. As Lewis (2023) argues in the context of Indonesia's fiscal decentralisation framework, asymmetric fiscal capacity among subnational governments necessitates differentiated policy interventions that are sensitive to local economic structure, institutional capacity, and revenue potential rather than administratively standardised approaches.

These findings therefore carry an important implication for fiscal policy design in Jambi Province. Strategies aimed at strengthening regional financial performance must move beyond aggregate provincial targets and adopt region-specific approaches that address the particular structural and institutional constraints of each district and municipality. Without differentiated fiscal strengthening strategies, disparities in regional financial performance are likely to persist and potentially widen despite ongoing decentralisation policies, as structurally advantaged regions continue to benefit disproportionately from economic growth and institutional capacity while structurally constrained regions remain locked in fiscal dependency.

5. Strategy Formulation Through the Dapel Indept Model

To address the second research objective, this study employed the Dapel Indept (Data Panel Integrated Evidence-Based Policy Prioritisation) model which operationalises a systematic two-stage analytical process connecting econometric findings with fiscal policy prioritisation. This section elaborates the application of both stages and demonstrates how the model translates empirical evidence into targeted and verifiable policy recommendations for local governments in Jambi Province.

In the first stage, evidence-based identification, the Fixed Effects Model estimation results were used to identify statistically significant determinants of regional financial performance. Of the seven variables examined, three met the significance threshold at the 5% level. These variables were subsequently ranked according to two simultaneous quantitative criteria: the probability value as a measure of statistical certainty, and the absolute regression coefficient as a measure of effect magnitude. The integration of both criteria produces a more informationally complete prioritisation hierarchy than reliance on statistical significance alone, because it distinguishes between variables that are statistically certain but modest in effect and those that are both statistically robust and substantively influential. Applying these criteria, regional economic growth (X4) was designated as Priority 1 with a probability value of 0.0189 and an absolute coefficient of 6.992560, the performance of regional state-owned enterprises (X7) as Priority 2 with a probability value of 0.0300 and an absolute coefficient of 3.477176, and Special Allocation Funds (X2) as Priority 3 with a probability value of 0.0496 and an absolute coefficient of 34.35008.

In the second stage, priority-based policy formulation, each prioritised variable was translated into specific policy instruments and focus programmes through a structured policy matrix. This translation process was guided by three contextual considerations: the structural fiscal conditions of Jambi Province as identified in the empirical analysis, the institutional capacity constraints of local governments as reflected in the regional variation findings, and the policy relevance of each variable to the overarching objective of strengthening the Degree of Fiscal Decentralisation. The resulting policy matrix is presented in Table 5.

Table 5. Key Policy Instruments and Programmes for Improving Local Government Financial Performance (Dapel Indept Model)

No.	Strategic Priority	Policy Actions and Focus Programmes	Indicators of Success
1	Strengthening Regional Economic Growth	Development of leading economic sectors and stimulation of productive investment based on regional potential	Increase in GRDP growth and the contribution of PAD to total regional revenue
2	Improving the Performance of Regional State-Owned Enterprises	Governance reform focusing on efficiency, transparency, accountability, and profitability of BUMDs	Increase in BUMD profit contribution to PAD
3	Optimisation of Special Allocation Funds	More efficient allocation of DAK toward productive and priority infrastructure programmes	Decline in the regional fiscal dependency ratio on central government transfers

The first strategic priority, strengthening regional economic growth, addresses the structural mismatch between commodity-based economic expansion and local fiscal capture capacity. Policy interventions under this priority focus on developing productive economic sectors with broader local taxability, stimulating investment in non-commodity industries, and integrating regional economic planning with local revenue optimisation strategies. Hanif et al. (2020) emphasise that sustainable fiscal decentralisation requires economic growth to be supported by strong institutional and fiscal governance capacity, a condition that necessitates deliberate effort rather than passive reliance on macroeconomic expansion.

The second strategic priority, improving BUMD governance performance, targets the institutional mechanisms through which BUMD operations currently function as fiscal liabilities rather than fiscal assets. Policy interventions focus on implementing good corporate governance principles, strengthening transparency and accountability mechanisms, adopting merit-based managerial recruitment systems, and reorienting BUMD activities toward commercially viable sectors capable of generating sustainable PAD contributions. Damayanti et al. (2023) argue that improvements in governance quality are essential prerequisites for transforming BUMDs into productive instruments for strengthening local non-tax revenue.

The third strategic priority, optimising Special Allocation Fund utilisation, addresses the institutional path dependency that currently causes DAK to reinforce fiscal dependency rather than stimulate fiscal autonomy. Policy interventions focus on reorienting DAK allocation toward productive infrastructure and economic diversification programmes, strengthening institutional capacity for strategic DAK planning and performance monitoring, and integrating DAK utilisation with local revenue expansion strategies. Widowati et al. (2024) emphasise that the transformative potential of DAK is strongly conditioned on the ability of local governments to allocate funds strategically toward programmes with measurable long-term fiscal and economic returns.

Collectively the Dapel Indept model demonstrates that the translation from econometric findings to policy recommendations need not be arbitrary or purely interpretive. By grounding policy prioritisation in a dual-criteria quantitative framework and contextualising

each priority within the structural and institutional conditions of Jambi Province, the model provides a replicable and transparent analytical pathway from empirical evidence to actionable fiscal governance strategies. This contribution addresses the second major research gap identified in the introduction, namely the tendency of fiscal decentralisation studies to stop econometric interpretation without producing implementable policy guidance for local governments.

CONCLUSION

This study confirms that the Fixed Effects Model (FEM) is the most appropriate approach for analysing regional financial performance in districts and municipalities in Jambi Province during the 2017–2022 period. Of the seven variables examined, regional economic growth, the performance of regional state-owned enterprises (BUMDs), and special allocation funds (DAK) were found to have significant negative effects on regional financial performance. These findings indicate that economic expansion, transfer fund allocation, and BUMD operations have not yet been optimally transformed into stronger fiscal autonomy due to persistent structural problems, including weak local revenue mobilisation, inefficient governance, and high dependence on central government transfers. In addition, this study reveals substantial disparities in fiscal capacity among regions, reflecting the uneven outcomes of fiscal decentralisation across districts and municipalities in Jambi Province.

Theoretically, this study contributes to the fiscal decentralisation literature through the introduction of the Dapel Indept (Data Panel Integrated Evidence-Based Policy Prioritisation) model, which integrates panel regression analysis with evidence-based policy prioritisation to produce more targeted regional fiscal strategies. Based on this framework, three strategic priorities were identified, namely strengthening productive regional economic sectors, reforming BUMD governance through transparency and performance-based management, and optimising DAK allocation toward productive infrastructure programmes with long-term fiscal multiplier effects. Future studies are recommended to expand comparative analysis across provinces, incorporate institutional and governance variables, and further develop the Dapel Indept framework through the integration of quantitative and qualitative policy approaches in order to strengthen regional fiscal governance analysis in Indonesia.

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