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Research paper

Strengthening Fiscal Capacity and Investment Spending for Enhanced Public Financial Performance

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Abstract

This study uses empirical evidence to examine the effect of fiscal capacity and investment spending on subnational financial performance in a decentralized public finance system that relies heavily on transfers. The panel data and estimation strategy yielded three key results. Firstly, it is evident that revenue capacity, when owned in-house, is consistently linked to favourable financial outcomes. This underscores the pivotal role that revenue autonomy plays in fostering incentives for financial prudence and sustainable budget management. Secondly, invest-ment spending has been shown to positively impact fiscal performance, indicating that public investment can serve as an effective long-term stabilizer for fiscal management, provided that there is sufficient institutional capacity. Thirdly, intergovernmental transfers have a detriental effect on financial performance, significantly undermining the fiscal stimulus of own-source revenue. This suggests soft budget con-constraints and distorted fiscal incentives under dependent transfers. Transfers do not have a significant impact on the relationship between capital expenditure and investment effectiveness. This suggests that investment effectiveness is more influenced by internal man-agerial com-competencies than financial form characteristics. The results demonstrate that subnational fiscal performance is influenced by a number of factors. These include internal fiscal capacity, investment decisions, and the incentive properties of intergovernmental fiscal arrangements. The paper makes a valuable contribution to the literature by explaining how transfer dependence affects the efficiency of local fiscal tools and by providing relevant policy implications for building up fiscal resilience in centralized systems.

Keywords: *Public Investment; Intergovernmental Transfers; Subnational Finance; Fiscal Performance.*

1. Introduction

Over the past three decades, the focus on fiscal decentralization has been an important part of public sector reform in both developed and developing countries. In an effort to improve the efficiency of public expenditure allocation, governments have transferred expenditure responsibilities and, to a certain extent, revenue authority to the subnational level. (Oates, 1999; Yilmaz et al., 2010). This aims to increase local accountability and responsiveness. A decentralized fiscal system has the potential to enable local governments to tailor public services more closely to the preferences of citizens, which could potentially improve welfare and more effective governance outcomes. (Ngounou et al., 2025; Wang & Ran, 2025). However, the practical implications of decentralization have turned out to be much more diverse. An important question that arises is what conditions enable a decentralized fiscal system to achieve better financial performance. “Financial performance” in this work signifies subnational financial soundness, which is the capacity of local governments to control public service delivery with fiscal prudence and budgetary robustness. In a decentralized system that relies on transfers, financial performance cannot be interpreted as accounting surplus or profit, but ultimately depends on the ability to generate revenue from own sources and therefore the ability to manage expenditure while maintaining fiscal flexibility within economic/institutional constraints. With this approach, we can more comprehensively assess how certain forms of decentralization predict local fiscal outcomes.

A crucial issue in the discussion of fiscal decentralization relates to the persistent long-term structural imbalance between expenditure authorization and the ability to generate autonomous financial resources at the local level. Subnational governments in many countries are responsible for providing education, health services, infrastructure, and administration, but they have a weak tax base and little authority to collect revenue. (Eaton et al., 2025). Therefore, intergovernmental transfers may constitute the largest part of local budgets, with some developing countries showing transfers accounting for more than 60%–70% percent of total revenues. (Lewis & Smoke, 2017; Masaki, 2018). Although transfers play an important role in equity, excessive dependence on transfers can have adverse incentive implications. Evidence from real-world situations has demonstrated the dangers of SBC, showing how it can lead to a reduction in the amount of money available to local governments when they expect financial support from external sources. (Eyraud & Lusinyan, 2013; Lago-Peñas et al., 2024). These developments have sparked a resurgence of academic research. This study examines the conditions that create fiscal incentives in decentralized systems.

In this discussion, two policy tools have been identified as key to improving local government financial performance: local revenue and capital expenditure. Fiscal autonomy is widely recognized as a hallmark of decentralization. Local revenue increases fiscal flexibility, strengthens the accountability relationship between taxpayers and the government, and reduces vulnerability to external fiscal shocks. (Afonso et al., 2018). Empirical evidence consistently shows that regions with stronger local revenue capacities perform better in terms of fiscal discipline, budget management, and financial sustainability. (Andonova & Trenovski, 2023; Ebel & Yilmaz, 2002; Martinez-Vazquez & McNab, 2003). However, significant variations in revenue capacity and administrative capabilities remain across regions, particularly in the context of developing countries. This raises questions about how increased revenue mobilization relates to overall fiscal performance, given that most tax revenues currently come from transfers from higher levels of government.

One source of potential long-term financial benefits is capital expenditure, which is the second policy tool. As (Barro, 1990) and (Aschauer, 2000) Have shown, public investment in infrastructure, capital goods, or service provision is expected to have positive externalities. These externalities are expected not only to stimulate economic activity but also to expand the revenue base in the future. Research shows that capital expenditure has a stronger positive impact on productivity than current expenditure and administrative expenditure. Moreover, its beneficial impact on fiscal sustainability is more enduring. (Adarov & Panizza, 2024; Rodríguez-Pose, 2012). However, the effectiveness of capital expenditure is highly dependent on institutional capacity, transparency in procurement, and the quality of project implementation. Poor administrative culture and excessive bureaucracy, as well as waves of investment with clear political objectives, often erode the expected benefits of capital expenditure, especially in developing countries where implementation difficulties are widespread. (Drama et al., 2025; Murova & Khan, 2017).

However, there is a significant gap in the literature on decentralization, fiscal incentives, and public investment. First, most existing studies consider own-source revenues, capital expenditures, and/or intergovernmental grants separately. Recent studies show that the effectiveness of decentralization systems is determined by the complementary nature of fiscal instruments, rather than by the individual effects of each. (Li & Bai, 2024; Panao, 2023). Second, although the negative incentive effects of excessive dependence on transfers are well known in principle, empirical knowledge about how transfer receipts affect local revenue efforts and investment spending remains limited. In some transfer-receiving regions, financial incentives can be altered in such a way that revenue autonomy or capital investment borrowing is not truly realized. Third, very little empirical research describes the fiscal dynamics occurring at the subnational level in the post-pandemic period, which has brought about significant changes in local fiscal pressures and public financial resilience in developing countries.

In this context, the objective of this paper is to investigate whether fiscal capacity and public investment affect subnational financial performance, and to examine how these relationships are affected by dependence on intergovernmental transfers. Specifically, we analyze whether high own-revenue and local capital expenditure are associated with good financial health, and to what extent dependence on transfers undermines these relationships. Using a large panel of subnational governments during recent difficult times, this analysis provides the empirical content necessary to discuss whether established fiscal arrangements can promote or hinder resilience in decentralized systems.

The structure of the second part of this paper is as follows. Section 2: Theoretical background and hypothesis development. Conceptual arguments are presented in this section, along with a review of the relevant literature and the derivation of the proposed hypotheses. Section 3 describes the data, variable measurements, and empirical strategy. Section 4 presents the main empirical findings, and Section 5 compares the implications of these findings for fiscal incentives and subnational governance with the previous literature. Section 6 draws policy implications and directions for further research.

2. Literature Review

2.1. Theoretical foundations

Subnational fiscal performance is understood as being fundamentally linked to the principles of fiscal federalism. This is the idea that local governments have the best knowledge to provide public goods most effectively, according to the specific needs of their regions. (Oates, 1999; Ria Dwi Putri & Raden Budi Hendaris, 2025). This hypothesis is supported by fiscal incentive theory, which states that institutional factors influence local behavior. Strong revenue incentives are associated with fiscal prudence, while dependence on transfers can lead to moral hazard and weaken budget constraints. (Nomo Beyala, 2025; Parwez, 2025). The overspending theory also highlights the difference between capital expenditure and current expenditure, emphasizing that investment spending has a long-term impact on productivity and income, unlike consumption spending. (Barro, 1990) (Adarov & Panizza, 2024). The institutional economics argument states that the nature of the regulatory system, the quality of governance, and administrative capacity are key factors in fiscal outcomes, especially in environments where transfers are an important part of the economy. In this case, de jure autonomy may not be a good measure of de facto fiscal power. (Coban & Apaydin, 2025; Yesdauletov, 2025). In short, it seems that how well local governments manage money is influenced by how much money they have, how they spend it, and the rules they must follow.

2.2. Fiscal decentralization and local government financial performance

There are arguments in favor of intergovernmental objectives in fiscal decentralization. These arguments include the expectation that transferring limited expenditure responsibilities and revenue powers to subnational governments will result in more effective use of resources, as well as greater responsiveness and transparency. It is expected that local governments will be more accessible to citizens than higher levels of government, thereby ensuring that public spending is more aligned with community needs. (Alonso-Morales et al., 2025). Although decentralization can lead to significant vertical fiscal imbalances, the available empirical evidence is inconclusive, especially in the case of developing countries. Many subnational governments rely on intergovernmental transfers to support core services because their revenue-raising capacity and tax base are insufficient to finance their spending commitments. This has the potential to undermine fiscal prudence, obscure accountability, and encourage wasteful behavior, especially when transfer systems are designed to foster bailout expectations or when performance-based incentives are neglected. (Eyraud & Lusinyan, 2013). Recent studies highlight that the effectiveness of decentralization is more closely related to the institutional environment surrounding local budgets, including transfer design, oversight institutions, and fiscal rules, than to formal delegation of authority. (Panao, 2023). Therefore, the financial performance of local governments in the context of decentralization is influenced by the complex interaction of various factors, including fiscal autonomy, dependence on transfers, and institutional incentives, rather than solely by the degree of decentralization.

2.3. Local own-source revenue and financial performance

Subnational fiscal autonomy depends on strong revenue sources, which are the foundation for the financial independence of regional governments. This autonomy allows governments to allocate financial resources according to local priorities, build direct and accountable relationships with taxpayers, and reduce dependence on uncertain external transfers (Smith, 2025; van Helden et al., 2025). Revenue capacity also reflects administrative capacity and institutional effectiveness, both of which are essential for maintaining fiscal discipline. Empirical analysis shows that increased local revenue mobilization can improve budget balance, expenditure credibility, and overall fiscal performance in decentralized systems. (Ebel & Yilmaz, 2002; Martinez-Vazquez & McNab, 2003). New evidence from emerging economies also shows that increased taxation efforts can strengthen resilience to financial shocks and reduce structural deficits. (Kouwonou & Sodokin, 2025; Sun et al., 2025). When transfers are a significant feature of the budget, own-source revenues are crucial in enabling flexibility and discretion in expenditure management. It is also important to note that increased revenue mobilization leads to better financial outcomes.
H1. Local government financial performance is influenced by its own local revenue.

2.4. Capital expenditure and financial performance

Capital spending represents long-term investment in economic and productive public assets. This type of investment has the capacity to stimulate economic activities and broaden future revenue bases, leading to greater fiscal sustainability. According to the principles of public finance theory, if capital spending is targeted effectively, it can stimulate productivity growth and generate intertemporal returns, thereby contributing to the accumulation of government financial reserves over time. (Aschauer, 2000; Barro, 1990). Empirical evidence from several studies indicates that public investment can stimulate regional development and generate long-term fiscal capacity, provided that institutions can support effective project planning and management. (Adarov & Panizza, 2024; Rodríguez-Pose, 2012). In emerging market economies, capital expenditure can have a varied impact. (Insani & Hendaris, 2025; Made Susilawati et al., 2025). While projects initiated for infrastructure development can yield positive outcomes, including the enhancement of public services and the promotion of economic expansion, procrastination, deficient oversight, and subpar monitoring and evaluation capabilities can impede the anticipated investment returns. Consequently, fiscal consequences are frequently diminished. (Drama et al., 2025; Murova & Khan, 2017). Nevertheless, capital spending is an important tool for improving subnational financial performance when used in conjunction with solid institutional arrangements.
H2. Capital expenditure positively affects local government financial performance.

2.5. Intergovernmental transfers as a moderating factor

Intergovernmental transfers are an effective way to correct fiscal imbalances in decentralized systems. However, it should be noted that the widespread use of these transfers can have a significant impact on subnational fiscal discipline. Since transfer funds account for a large portion of local revenues, the marginal incentive to generate own-source revenues is reduced (Masaki, 2018; Yousaf et al., 2022). This results in lower motivation to raise revenue, which can lead to moral hazard and weakened fiscal efforts. Transfer-driven systems have also been found to create lax budget constraints. This occurs when subnational governments expect future assistance and bailouts, so they only manage their resources responsibly to a certain extent. (Allers & de Natris, 2021). Research shows that transfers should be considered both a source of financial flows and an institutional constraint, influencing spending decisions and reducing discretionary fiscal space (Panao, 2023; Andonova & Trenovski, 2023). It is important to recognize that these constraints can hamper revenue mobilization and spending, and therefore have a negative impact on financial performance. In an environment where there is a high level of fiscal interdependence between governments, the consequences of local fiscal policy become limited, which in turn can reduce the incentives and consequently the benefits of fiscal capacity and capital investment.
H3. Intergovernmental transfers weaken the positive effect of local own-source revenue on financial performance.
H4. Intergovernmental transfers weaken the positive effect of capital expenditure on financial performance.

2.6. Conceptual framework of fiscal capacity, investment, and financial performance

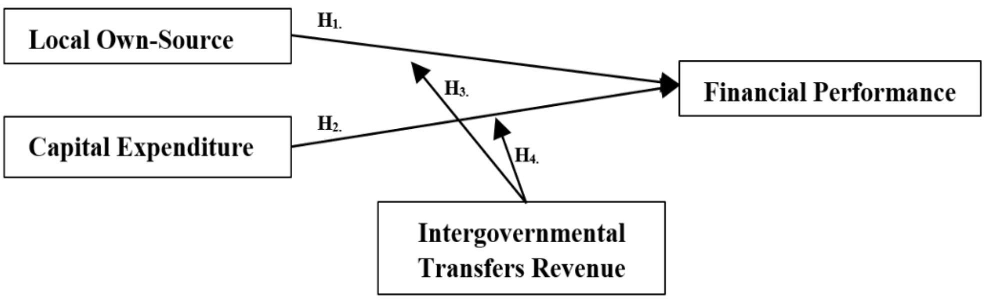

Fig. 1: Conceptual Model of Fiscal Capacity, Investment Spending, and Financial Performance.

The framework demonstrates how decisions regarding subnational fiscal capacity and investment influence the financial performance within decentralised systems. (Aisyiah Hassany & Faizall Al Saud, 2025; Ryani Kusumawati & Sulistiana, 2025). The model is grounded in fiscal federalism and public expenditure theory, and suggests that own-source revenue and capital expenditure have a beneficial effect on financial outcomes. However, it also highlights the risk of distortion to fiscal incentives caused by transfer dependence, which in turn weakens these effects. (Adisu Ayal, 2024; Barro, 1990; Kantus et al., 2025; Oates, 1999). The model integrates these relationships, providing valuable insights into performance variations across different local authorities.

3. Method

3.1. Research design

The research employs a quantitative explanatory approach to investigate the extent to which subnational financial performance is explained by fiscal capacity and investment. The application of panel data for analysis represents a logical progression of the approach, given that fiscal outcomes are influenced by both cross-sectional differences and time trends. This is in line with the federalism tradition, which underscores institutional and structural variations among local jurisdictions. (Oates, 1999). We use the technique of moderated regression to test whether dependence on intergovernmental transfers changes the lagged effect of own-source revenue on capital expenditure. This is consistent with a recent empirical trend in the field of decentralization literature, which recognises the conditional nature of the impact of institutional environments on fiscal behaviour. (Andonova & Trenovski, 2023; Dwianto et al., 2024). This research design aligns with current international (public) financial work, using longitudinal administrative data sets to study complex financial relationships in developing countries.

3.2. Population and sample

The study population includes all local governments operating under a decentralized fiscal system, where expenditure responsibilities significantly exceed local revenue-raising capacity. This is a scenario that has been widely documented in developing countries (Masaki, 2018; Lago et al., 2024). The sample consists of 535 districts and cities. The data was collected between 2019 and 2023, with a total of 2,330 observations. This is due to the natural availability of audited fiscal data. The selected period is widely considered to reflect a noteworthy financial situation, which was heavily influenced by economic volatility and the subsequent recovery that was a direct consequence of the pandemic. These findings are supported by various studies that emphasize the importance of analyzing post-crisis fiscal performance at the subnational level. (Dwi Amperawati et al., 2024; Nakatani, 2023). The sampling methodology complies with the standards set for empirical fiscal studies. In these studies, the use of administrative data and audit confirmation is standard practice for determining sample inclusion. This helps to ensure the suitability and reliability of the data.

3.3. Research instrument

Emphasis on secondary data is in line with best practices for empirical public finance research, which emphasise administratively confirmed via passively collected data quality and measurement validity. (Aulia & Qurrota A'yun, 2024). Financial statements (audited) of the Supreme Audit Institution contain information at the revenue, expenditure, and investment cost level, whereas official budget statistics from the Ministry of Finance present sector-disaggregated inter-governmental transfers. These measures encapsulate core concepts of fiscal capacity, investment behaviour, and transfer dependence variables, well embedded within theories explaining the nature of fiscal incentives and resource offering in decentralized systems. (Barro, 1990; Sabila et al., 2024). For both models, monetary variables are logarithmically transformed to account for skewness, following a standard practice of studies of fiscal performance when there is significant variation in the distribution of money across jurisdictions. (Syah Erlangga 2024; Yan & Reschovsky, 2023). Governance metrics, including audit opinions, proxies for institutional quality, are also included, which is consistent with literature from around the world that links fiscal performance to accountability structures in the public sector.

3.3.1. Conceptualization and measurement of financial performance

Performance in financial terms (FP) is understood as a proxy of subnational economic health, not of accounting profit or benefits. Reference to Appendix A1. In decentralized systems of public finance, fiscal health indicates the ability of local governments to perform sustainable financing for mandated public services as well as keep budgetary discipline and protect fiscal flexibility from economic shocks and intergovernmental reliance. This view of the fiscal performance is rooted in fiscal federalism and the psychology of incentives literature, where good fiscal behavior is defined as reflected by self-financing capacity, spending-priority discipline, or insensitivity to budget balance in the short run. (Eyraud & Lusinyan, 2013; Martinez-Vazquez & McNab, 2003; Oates, 1999). We thus measure FP as a composite administrative index based on audited fiscal data, reflecting revenue autonomy, expenditure discipline, and fiscal sustainability. The approach of combining the results would facilitate less susceptibility to single-ratio bias as well as institution heterogeneity, and thus could be adapted for transfer-dependent systems within a decentralized system.

3.4. Data collection protocol

The data collection process was conducted meticulously and systematically, ensuring data reliability, consistency over time and across locations, and alignment with established standards for subnational fiscal research. First, audited annual financial reports are obtained from official repositories. This is in line with findings from other decentralization analyses regarding information obtained from audited fiscal data. (Sulistyawati et al., 2024). Additionally, transfer data is adjusted to the Ministry of Finance's administrative code for each jurisdiction. This ensures accurate identification for both general and targeted transfers, in line with the analytical distinctions commonly used in studies of transfer incentives. (U. S. Yousaf et al., 2022). Third, governance indicators are adjusted to other official documents to ensure internal validity. In line with the standard approach described in (Adarov & Panizza, 2024)We have removed missing or inconsistent data observations. This procedure is widely accepted in the field of public finance studies. This procedural method ensures that the complete dataset is comprehensive and credible, making it suitable for use in causal inference in decentralized fiscal systems.

3.5. Data analysis technique

The paper employs panel data econometric methods suitable to account for both over-time and cross-jurisdictional variation in fiscal performance. We pose a fixed effects model on theoretical grounds and specification tests, aware that unobserved institutional/structural traits might be associated with fiscal variables, which is a well-documented issue in decentralisation literature. (Gonschorek, 2021). To control for the presence of heteroskedasticity, serial correlation, and cross-sectional dependence frequent in fiscal data sets that are subject to common macro shocks, the analysis utilizes Driscoll–Kraay standard errors, a technique that has been gaining popularity among empirical studies related to local public finance because they are robust against non-spherical error structures. (Adarov & Panizza, 2024; Ma et al., 2023). Moderation is probed by a product term approach with mean-centred predictors to mitigate multicollinearity, in line with current best practices for representing conditional fiscal relations. (Bella, 2024; Panao, 2023). Sensitivity checks using alternative specifications and regional subsamples continue to suggest that our estimates are reliable, in accordance with best empirical practice applied to fiscal economics.

4. Result

4.1. Descriptive statistics

Table 1 presents descriptive statistics of the variables included in the analysis. There is considerable dispersion of local government financial performance (FP), suggesting wide variation in fiscal situations across the different governments. This sort of variation is typical in decentralised systems, where the differences in economic structure, institutional capacity, and revenue bases will lead to varying fiscal outcomes as observed in previous empirical research on subnational finance. Own-source revenue and intergovernmental transfers. All four fiscal capacity variables, local own-source revenue (PAD), intergovernmental transfers (DT), capital expenditure (BM), and operational expenditure (BO), display very high right-skewness, indicating the concentration of fiscal resources among a minority of regions with greater economic size or administrative ability. These variables were logarithmically transformed in line with common procedures within public finance studies to achieve normality and preserve econometric stability.

Table. 1: Descriptive Statistics and Correlations

Variable	Obs	Mean	SD	Min	Max	Skewness	Kurtosis
PAD (Rp)	2,330	2.79E+11	4.98E+11	7.13E+09	6.31E+12	5.68	46.41
DT (Rp)	2,330	1.23E+12	7.01E+11	3.92E+11	7.68E+12	2.46	13.87
BM (Rp)	2,330	2.88E+11	2.51E+11	3.27E+10	3.51E+12	4.43	36.37
BO (Rp)	2,330	1.07E+12	8.34E+11	3.89E+10	1.13E+13	4.13	34.09
OA (dummy)	2,330	0.92	0.27	0	1	-3.09	10.55
FP (%)	2,330	19.69	32.53	0.96	850.92	13.39	282.9

The association patterns shown in Table 2 suggest that PAD and BM are positively associated with financial performance, supporting the expectation about revenue capacity and public investment acting on fiscal outcomes. Intergovernmental transfers have a lesser correlation with FP, which can imply that their effect acts in an indirect manner or as conditional effects rather than direct linear ones. Although we do not report it, Variance Inflation Factors are well under critical levels when mean-centered, indicating a lack of multicollinearity.

Table. 2: Correlations (Post-Log and Centering)

	ln_PAD_c	ln_BM_c	ln_DT_c	OA	ln_BO	FP
ln_PAD_c	1					
ln_BM_c	0.62***	1				
ln_DT_c	0.70***	0.73***	1			
OA	0.12***	0.05*	0.04	1		
ln_BO	0.82***	0.65***	0.90***	0.05**	1	
KK	0.57***	0.33***	0.16***	0.05*	0.38***	1

4.2. Panel regression results

Please refer to Table 3, which reports regression estimates for pooled OLS, random effects, and fixed effects models. Model comparison tests, e.g., the Hausman specification test, confirm the choice of estimator. This is because we have time-invariant unobserved heterogeneity, which is related to the main fiscal variables. In this section, we concentrate on the fixed effects model estimated using Driscoll–Kraay standard errors. This model provides robust inference for heteroskedasticity and autocorrelation, as well as cross-sectional dependence. These characteristics are common to fiscal panel data.

The key set of regression results on the relationship between fiscal capacity, investment spending, intergovernmental transfers, and subnational financial performance is in Table 3. Overall, the results demonstrate that own-source revenue and capital spending have positive influences on financial performance, while intergovernmental transfers (making good) are negative. These results are robust to different model specifications and in line with the theoretical predictions of fiscal federalism and fiscal incentive theory.

Local own-source revenue (Ln_PAD_C) has a significant and positive relationship with financial performance across all specifications. This finding is consistent with the literature on fiscal capacity, which highlights the role of revenue independence and tax effort in promoting budget sustainability and strengthening fiscal discipline. It has also been reported that ln_BM_C is significantly positively related to financial performance, thereby supporting theoretical predictions and motivating empirical analysis in public investment literature on how infrastructure spending may lead to enhanced long-term fiscal health via productivity channels.

In contrast, intergovernmental transfers (ln_DT_c) have consistently been found to be significant and to exert a negative impact on FP. This result is consistent with the limitations of so-called soft budget constraints in highly transfer-dependent systems, as highlighted in the literature on fiscal federalism. This literature suggests that inflows from outside limit incentives for fiscal discipline. It is confirmed that the dominant control parameters are behaving as expected. Operational expense (ln_BO) is positively related to cost efficiency. If this is the case, it would suggest that the administration requires significant resources to support effective fiscal management. The relationship between audit opinion and KK is not statistically significant, indicating that the variation in audit results across all jurisdictions for the specified time period is negligible.

Table. 3: Panel Regression Results

Variable	OLS (1)	RE (2)	FE (3)	FE Robust (4)
ln_PAD_c	18.82*** (22.98)	20.61*** (22.66)	15.60*** (10.35)	15.60*** (5.39)
ln_BM_c	16.71*** (13.72)	7.45*** (7.81)	5.36*** (5.62)	5.36*** (5.25)
ln_DT_c	-69.71*** (-26.68)	-31.94*** (-15.54)	-20.55*** (-9.71)	-20.55*** (-11.22)
ln_PAD_c × ln_DT_c	1.58 (1.41)	-4.78*** (-4.02)	-12.01*** (-8.80)	31.3461
ln_BM_c × ln_DT_c	-1.07 (-0.63)	-1.53 (-1.02)	-1.51 (-0.99)	-1.51 (-1.93)
OA	6.4367	0.09 (0.06)	0.24 (0.17)	0.24 (0.75)

ln_BO	31.02*** (13.12)	7.75*** (4.85)	4.82** (3.16)	4.82** (3.97)
Constant	-830.83*** (-12.77)	-191.43*** (-4.35)	-108.52** (-2.59)	-108.52** (-3.32)
R^2 (within)	-	0.1461	0.1695	0.1695
R^2 (overall)	0.5108	0.4544	0.3509	0.3509
N	2,330	2,330	2,330	2,330
Groups	-	466	466	466
Model Fit	F=346.42***	χ^2=931.13***	F=54.13***	F=28.19***

4.3. Moderating effects of intergovernmental transfers

Revenue from own sources and intergovernmental transfers (ln_PAD_c × ln_DT_c) is negative and significant. This indicates that the positive relationship between revenue mobilization and financial performance is reduced when dependence on transfers is taken into account. (Aisyiah Hassany & Faizall Al Saud, 2025). The current moderation approach is in line with the established theoretical basis that high dependence on transfers can reduce financial motivation for local revenue mobilization efforts. This can be an accurate assessment if jurisdictions depend on external funding and do not feel compelled to optimize local resources.

The interaction term coefficient between capital expenditure and intergovernmental transfers (-ln_BM_c × ln_DT_c) is negative but does not reach statistical significance. Intuitively, the moderation results indicate that the benefits of strengthening own-source revenue depend on how dependent local governments are on intergovernmental transfers. When transfers account for a large share of local budgets, increases in own-source revenue do not lead to proportional improvements in financial performance. This occurs because local governments in highly transfer-dependent environments face weaker incentives to optimize revenue collection and expenditure efficiency, as fiscal outcomes are less directly linked to local effort and accountability. In contrast, when reliance on transfers is lower, own-source revenue plays a stronger role in improving fiscal discipline and overall financial performance. These findings illustrate how transfer dependency can dilute the disciplining effect of revenue autonomy in decentralized fiscal systems. This suggests that dependence on transfers does not have a consistent impact on the financial performance of capital expenditure. The role of the mother and child factors as moderators was not found to be significant. This is consistent with the argument that the effectiveness of capital expenditure is much more sensitive to project selection, implementation quality, and institutional capacity than to the source of funding. These findings are in line with the latest literature on public investment, which emphasizes good governance as a major factor influencing investment outcomes.

4.4. Summary of main findings

The study results show three key insights regarding subnational fiscal policy performance. First, it is important to recognize the role of local fiscal capacity, especially own-source revenue, in improving budget performance. This highlights the importance of promoting local revenue autonomy in a decentralized system. In addition, capital expenditure has been shown to have a positive impact on financial performance. In line with standard theory, this is because public investment has the potential to increase productivity. Third, government transfers have a direct negative impact and also contribute to a decline in own-source revenues and performance. The results show that the context of dependence on transfers can hamper fiscal incentives and consequently undermine the effectiveness of decentralization reforms. C. The results show that local fiscal performance depends on the interaction between internal fiscal capacity, investment behavior, and institutional dependence on central transfers.

5. Discussion

The results of this analysis provide valuable insights into the relationship between fiscal capacity, investment spending, and transfer dependency. These factors can affect sub-national financial performance in a decentralized fiscal structure. These findings are particularly relevant in the context of fiscal decentralization, where financial performance reflects not only accounting results but also the ability of local governments to manage public funds wisely and responsibly (Aisyiah Hassany & Faizall Al Saud, 2025; Desta Maya & Rahmawati, 2025). The positive relationship between own-source revenue and financial performance confirms the main predictions of fiscal federalism theory and incentive-based public finance theory. This is because the own-source revenue authority strengthens local spending discipline by increasing citizen oversight of local decision-making. (Ebel & Yilmaz, 2002; Kim & Park, 2022; Oates, 1999). Local governments with greater capacity to generate revenue are more likely to be encouraged to manage budgets efficiently and sustainably, while being closer to the communities they serve. This statement is supported by recent empirical findings for developing countries, which show that greater budget autonomy strengthens fiscal resilience and budget credibility, especially in the face of macroeconomic volatility. (Adisu Ayal, 2024; ElBerry & Goeminne, 2021).

It has been confirmed that capital expenditure contributes to improved financial performance. However, its impact appears to be less significant than revenue from its own sources. This is in line with standard public infrastructure investment theory, which suggests that investment in productive infrastructure can generate long-term economic benefits. These benefits include increased productivity, expansion of the tax base, and reduced service provision costs. (Barro, 1990; Dwi Wibawa et al., 2024). Empirical evidence shows that effective capital expenditure management can contribute to local economic activity and intertemporal fiscal stability when investments are well managed. (Adarov & Panizza, 2024; Martín-Rodríguez & Madrigal-Cerezo, 2025). The facilitation impact appears to be slightly lower in this study. This indicates that the financial returns from public investment are highly dependent on institutional capacity, project quality, and administrative capabilities. In less developed financial systems, problems in the procurement process, project implementation, and monitoring systems can often reduce the effectiveness of investment spending, which can negatively impact its contribution to financial sustainability. (Drama et al., 2025; Murova & Khan, 2017).

The negative impact of intergovernmental transfers on financial performance highlights the inherent risks associated with transfer-based decentralization. These findings are consistent with the soft budget constraint theorem, which states that dependence on external funding can lead to weak fiscal discipline by creating expectations of continued financial support. This can make local governments less vulnerable to inefficient investment and ineffective revenue collection. (Bertheussen, 2025; Qurrota A'yun & adi wibowo, 2025). In this context, transfer systems, especially those that prioritize equity over performance, have the potential to cause displacement effects. Efficiency-enhancing measures may have led to reductions in critical financial management. (Chu & Fei, 2021; Rosadi et al., 2025).

Furthermore, the moderation analysis shows that the relationship between own-source revenue and financial performance is moderated by grants. These results provide additional support for the claim that high levels of transfer dependency (dependence) hurt the marginal effect of local revenue efforts, given their ability to weaken the relationship between fiscal inputs and fiscal outputs (Masaki, 2018; U. Yousaf &

Dogar, 2025). If transfers represent a large portion of the local budget, subnational governments may prioritize the management of centrally funded programs, potentially allocating less attention to developing their own revenue base. As discussed in previous research on decentralization, high levels of transfer dependency have been found to weaken local tax efforts and the potential performance gains from fiscal autonomy (Cheng et al., 2025; Panao, 2023). Dependence on transfers has direct and indirect impacts on financial performance, which can be mitigated by removing the incentive mechanisms contained in local fiscal capacity.

On the other hand, there was no statistically significant moderating effect for either capital expenditure or intergovernmental transfers. It is clear that the effectiveness of capital expenditure is not systematically related to the source of funding; rather, it is influenced by institutional and managerial issues. It should also be noted that investment outcomes in some developing countries are less influenced by fiscal incentives and more by project readiness, technical capacity, and ease of tender processes. (Adarov & Panizza, 2024; Rodríguez-Pose, 2012; Rofiatus Saadah & Rahmawati, 2025). The level of dependence on transfers was not found to have a significant impact on the fiscal impact of infrastructure investment. This further supports the view that the effectiveness of investment depends more on the quality of governance than on the fiscal composition.

The main conclusion is that, although decentralization can increase the formal authority of subnational entities, it does not always lead to better fiscal performance. The financial outcome depends on a combination of local revenue capacity, investment governance, and the nature of incentives embedded in intergovernmental fiscal relations. Recent research suggests that the benefits of decentralization appear to be more sensitive to institutions. The former is highly dependent on institutions and the degree of autonomy/dependence in fiscal relations. (Dea Nurita et al., 2024). To improve subnational fiscal governance appropriately, it is necessary to adjust this comprehensive package. This should include allowing subnational entities to directly control more revenue from their own sources, improving investment management practices, and reformulating transfer mechanisms to support, rather than undermine, fiscal incentives.

6. Conclusion

We consider the influence of local fiscal capacity, investment spending, and dependence on intergovernmental transfers on the financial performance of subnational entities in a decentralized system, with a particular focus on the prevalence of high transfer dependence. The findings also show that own-source revenue is the most significant factor in improving fiscal performance, as revenue autonomy increases the transparency and accountability of public spending. Capital expenditure has a positive impact, although its impact is more dependent on specific conditions. This largely depends on the quality of institutions and project selection, rather than on the intensity of spending. Intergovernmental transfers have been shown to hurt financial performance and weaken the effectiveness of own-source revenue in improving performance. This suggests that loose budget constraints are common in transfer-dominated systems. Findings indicate that dependence on transfers does not consistently alter the financial consequences of capital expenditure. This suggests that investment efficiency is more closely related to internal governance capacity than to the form of financing. Overall, this article demonstrates the value of financial arrangements that combine autonomy and accountability. Therefore, measures aimed at improving subnational fiscal resilience should seek to leverage local revenue-raising capacity while managing public investment more efficiently and reforming the transfer system to strengthen, rather than weaken, fiscal efforts. This also applies in the context of developing countries.

Policy Implications

The results highlight the importance of subnational fiscal reforms to improve local incentives for responsible financial management. Developing own-source revenue capacity is a priority through better tax administration, expanded revenue bases, and fostering local fiscal innovation; Capital expenditure has modest, positive effects; therefore, governments have to invest in procurement quality, project appraisal systems, and implementation oversight for public investment to result in fiscal gains that can be rated. The unagreeable view of transfer dependence underscores the imperative to reform intergovernmental fiscal arrangements towards a set of rules rewarding effort, punishing chronic underperformance, and lessening bailout expectations. Modifying transfer formulas to account for performance measures, revenue-raising effort, and investment quality would help restore stronger accountability relationships between local governments and their citizens. Together, these reforms can enable decentralized systems to achieve more fiscal resilience and sustainability.

Limitations and Future Research

This study examines how fiscal capacity and investment spending affect subnational financial performance in a decentralized public finance system characterized by high dependence on transfers. Using panel data and robust estimation strategies, the analysis reveals three key findings. First, stronger own-revenue capacity consistently improves financial performance, highlighting the crucial role of revenue autonomy in promoting fiscal discipline and sustainable budget management. Second, capital expenditure is found to contribute positively to fiscal outcomes, suggesting that well-executed public investment can strengthen long-term fiscal resilience when supported by adequate institutional capacity. Third, intergovernmental transfers have a direct negative impact on financial performance and significantly weaken the positive influence of own-source revenue on financial performance. This points to weak budget constraints and distorted fiscal incentives in a transfer-dependent environment. However, it should be noted that transfers do not significantly alter the effect of capital expenditure. This suggests that the effectiveness of investment is more influenced by internal administrative capacity than by the financing structure. The collective findings show that subnational fiscal performance is influenced by complex interactions between internal fiscal capacity, investment choices, and the nature of incentives embedded in intergovernmental fiscal arrangements. This study makes a significant contribution to the existing literature by providing valuable insights into how dependence on transfers affects the effectiveness of local fiscal instruments. It also provides relevant policy recommendations for improving fiscal resilience in decentralized systems.

Author Contributions

R.B.H: Conceptualization, theoretical framework, methodology design, data analysis, manuscript drafting. R.Z: Literature review synthesis, empirical model refinement, interpretation of results, manuscript editing. M.M: Data curation, validation, robustness checks, preparation of tables and figures. E.Y.I: Critical review, supervision, policy implications development, and final manuscript revision. All authors have read and approved the final version of the manuscript.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

Data Availability Statement

The study uses publicly accessible fiscal and financial data obtained from official government publications. Processed datasets used in the analysis can be made available by the authors upon reasonable request.

Ethical Considerations

This study relies entirely on secondary, publicly available administrative data. No human subjects were involved, and no confidential or personally identifiable information was used. Ethical approval was therefore not required under standard academic research guidelines.

Table A1: Components and Measurement of Financial Performance

Dimension	Indicator Code	Indicator Description	Measurement / Formula	Interpretation	Theoretical & Empirical Support	Data Source
Revenue Capacity & Autonomy	FP1	Fiscal Autonomy Ratio	Own-source revenue (PAD) / Total revenue	Higher values indicate stronger self-financing capacity and reduced transfer dependence.	Fiscal federalism & revenue incentive theory (Oates, 1999; Ebel & Yilmaz, 2002; Martinez-Vazquez & McNab, 2003)	Audited local government financial statements
	FP2	Revenue Mobilization Capacity	Growth rate of own-source revenue (PAD)	Reflects the effectiveness of local tax effort and administrative capacity	Fiscal incentive & tax effort literature (Masaki, 2018; Andonova & Trenovski, 2023)	Audited local government financial statements
Expenditure Management & Discipline	FP3	Capital Expenditure Ratio	Capital expenditure / Total expenditure	Higher ratios indicate growth-oriented and productivity-enhancing spending.	Public investment & growth theory (Barro, 1990; Aschauer, 2000; Adarov & Panizza, 2024)	Audited local government financial statements
	FP4	Operational Expenditure Control	Operational expenditure / Total expenditure	Lower values indicate better expenditure efficiency and cost control	Budget discipline & public expenditure management (Eyraud & Lusinyan, 2013; Panao, 2023)	Audited local government financial statements
Fiscal Sustainability & Resilience	FP5	Fiscal Space Indicator	(Total revenue – Mandatory expenditure) / Total revenue	Higher values signal greater budgetary flexibility and shock resilience	Fiscal sustainability & resilience literature (Afonso et al., 2018; Nakatani, 2023)	Audited local government financial statements
	FP6	Budget Balance Capacity	(Total revenue – Total expenditure) / Total revenue	Positive values reflect fiscal discipline and long-term sustainability	Soft budget constraint & fiscal discipline theory (Kornai, 1986; Eyraud & Lusinyan, 2013)	Audited local government financial statements

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