

Fiscal Transfers and the Persistence of Regional Inequality: A Critical Review of Indonesia's Intergovernmental Funding System

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ABSTRACT: This study critically examines the effectiveness of Indonesia's intergovernmental fiscal transfer mechanisms primarily the General Allocation Fund (DAU) and the Special Allocation Fund (DAK) in addressing persistent regional inequality since the implementation of the post Otonomi Daerah decentralization reforms. The research aims to assess whether these fiscal instruments have fulfilled their redistributive mandate and to identify structural and governance related barriers that limit their impact. Employing a mixed-method approach with secondary data, the study analyzes fiscal gaps, transfer effectiveness, and regional disparities. The analysis combines statistical indices (Gini coefficient, Theil index) with case studies from West Sumatra, East Java, and Eastern Indonesia, complemented by international comparisons and policy evaluations. The findings show that DAU and DAK have expanded fiscal flows to poorer regions but remain constrained by formulaic designs that overlook socio-economic diversity. Administrative inefficiencies, weak planning capacity, and limited accountability reduce fund utilization. Comparative international models suggest alternatives through performance-based and needs-responsive allocation formulas. In conclusion, Indonesia's fiscal transfer framework must evolve from a volume based to an outcome driven model. By incorporating equity sensitive criteria, decentralizing planning autonomy, and strengthening transparency, fiscal transfers can transition from redistributive tools to transformative instruments that narrow regional inequality and foster inclusive national development.

Keywords: Fiscal Decentralization, Intergovernmental Transfers, Regional Inequality, DAU, DAK, Indonesia, Performance Based Allocation.



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INTRODUCTION

Fiscal decentralization in Indonesia, introduced through the 2001 Otonomi Daerah (Regional Autonomy) reforms, aimed to enhance governance, accountability, and equitable resource distribution. These reforms sought to increase government efficiency, citizen participation, and

local service delivery by empowering regional authorities to manage resources according to local priorities (Akita et al., 2021; Hill & Vidyattama, 2016). Additionally, these reforms were intended to address regional disparities by enabling local governments to pursue development strategies that cater specifically to their unique contexts, thus fostering greater accountability to local populations (Arham, 2014; Suparmi et al., 2018).

Intergovernmental fiscal transfers, particularly the General Allocation Fund (DAU) and the Special Allocation Fund (DAK), play a pivotal role within Indonesia's decentralized fiscal framework. The DAU is designed to provide equitable financing across regions by redistributing revenues from richer to poorer areas, aimed at achieving fiscal balance and promoting regional development (Farida, 2021). The DAU is allocated primarily based on a formula that includes population size, fiscal capacity, and regional cost indices, intended to reflect equity and fairness. Conversely, the DAK targets specific developmental projects, including infrastructure, education, and healthcare, thereby serving to incentivize local governments to implement policies aligned with national priorities (Hill & Vidyattama, 2016). Both funds underscore the central government's role in promoting regional equality while allowing local governments the flexibility to allocate resources based on local needs and development challenges.

Since 2001, regional inequality in Indonesia has remained persistent. Java and Bali have continued to dominate economically, while many outer islands particularly Eastern Indonesia lag behind. These disparities extend beyond income, encompassing infrastructure, health, education, and employment opportunities (Nababan et al., 2017; Siahaan et al., 2020). Consequently, urban areas have disproportionately benefited from state resources, exacerbating inter regional economic divides (Akita, 2015). Moreover, such disparities are not limited to income but extend to public service access, infrastructure quality, and employment opportunities. Over the years, assessments indicate that the income divide has not merely persisted but has, in some instances, widened due to inconsistent regional growth and varying local governance effectiveness (Azis et al., 2023).

The influence of decentralization policies on equity outcomes in other developing countries demonstrates that such reforms can lead to both positive and negative results depending on implementation factors and local conditions. In the context of Latin American countries, for instance, fiscal decentralization has often exacerbated regional inequalities due to unequal resource distribution and varying local capacities to govern effectively (Simson & Savage, 2019). Furthermore, successful cases from countries like Brazil highlight that well-structured intergovernmental transfers can indeed mitigate these disparities, demonstrating a need for carefully crafted fiscal frameworks that balance efficiency with equity (Simson & Savage, 2019). Lessons from these countries suggest that decentralization is most effective when matched with strong institutions, transparent fiscal systems, and robust mechanisms to monitor and evaluate resource distribution and outcomes.

Fiscal capacity emerges as a critical factor in elucidating why inequalities persist among provinces in Indonesia. Disparities in fiscal capacity often correlate with local economies' performance, which influences their ability to generate revenues and effectively execute public expenditures on health, education, and infrastructure (Indra et al., 2018; Pelaburan et al., 2022). Provinces with

elevated fiscal capacities can fund expansive public projects and attract further investment, while poorer provinces struggle to meet basic service delivery needs, fostering an environment where inequalities compound over time (Panjawa et al., 2023). This situation is further complicated by structural disadvantages such as geographic remoteness, limited human capital, and dependence on central transfers. Consequently, enhancing fiscal capacity in lower income provinces is essential for empowering local governance and fostering equitable growth. Strengthening local revenue generation, improving administrative efficiency, and promoting targeted investment can contribute to long term improvements in regional equity.

Various past studies have assessed the effectiveness of DAU and DAK in advancing equitable development across Indonesian provinces. Some analyses indicate that while these transfers have positively impacted funding for local governments, their contribution to reducing inequality has been limited (Akita et al., 2021). For DAU, despite its equalization intentions, significant disparities persist partly due to systemic issues like underfunding, rigid allocation formulas, and inefficiencies in local administration (Suparmi et al., 2018). Furthermore, local governments may lack the institutional capacity to utilize funds efficiently or align spending with developmental priorities. Conversely, DAK initiatives have shown promise in addressing targeted developmental challenges such as rural health clinics or school facilities; however, the limited scope, irregular funding patterns, and top down project selection processes have restrained their overall effectiveness (Farida, 2021).

In summary, decentralization has produced mixed results: greater autonomy but persistent inequality. This study therefore asks: (1) Have DAU and DAK fulfilled their redistributive mandate? (2) What structural and governance barriers hinder their effectiveness? Answering these questions is crucial to design a more responsive, performance-based transfer system that advances equity across regions.

METHOD

This chapter presents the research design and methodological framework employed to investigate the role and efficacy of Indonesia's intergovernmental fiscal transfer system particularly the General Allocation Fund (DAU) and the Special Allocation Fund (DAK) in addressing regional inequality. The methodology integrates diverse analytical strategies, including quantitative metrics, statistical correlation, regression modeling, and comparative case study analysis, to build a comprehensive, evidence based perspective on how fiscal policies shape developmental disparities across Indonesian regions.

Data Sources

The core data cover 2001–2023, representing the entire post-Otonomi Daerah era. The starting year (2001) marks the decentralization “big bang,” while later years (2008, 2014, 2020, and 2023) were selected to reflect major policy adjustments and updated census/economic data availability.

Primary sources include the Ministry of Finance and BPS, supplemented by PAD, DAU/DAK allocations, and socio-economic indicators (education, health).

To enrich the empirical findings, the study incorporates secondary data and results from published academic research. Key references include Akita et al. (2021), who examined fiscal disparities post decentralization; Ardiansyah et al. (2024), who provided a comprehensive review of DAU effectiveness; and Herianti & Marundha (2024), who explored fiscal performance at the subnational level. These sources offer critical context for interpreting long term trends and aid in constructing robust comparative metrics.

Three geographically and economically diverse case studies Sumatera Barat, East Java, and Indonesia Timur were selected to further contextualize the national analysis. The criteria for selection included: variation in PAD dependency, disparity levels (as measured by the Theil and Williamson indices), DAU reliance, and documented differences in service delivery capacity.

Quantitative Approaches to Measuring Inequality and Fiscal Gaps

Quantitative measurement of inequality forms the bedrock of the analytical approach. Two primary indices are employed: the Gini coefficient and the Theil index. The Gini coefficient is a widely accepted indicator that summarizes income or fiscal distribution within a given population. Ranging from 0 to 1, it offers a straightforward yet powerful snapshot of inequality. Its ease of comparison across time periods and regions enhances its utility for long term analysis (Zhang, 2022).

The Theil index complements the Gini by enabling a more granular decomposition of inequality into intra-regional (within) and inter regional (between) components. This makes it particularly suitable for studies involving decentralized governance, where local disparities may be masked by national averages. In this study, both indices are calculated at multiple intervals (2001, 2008, 2014, 2020, and 2023) to capture evolving inequality trends across Indonesian regions and the potential redistributive impacts of DAU and DAK (Zhang, 2022).

These indices are also supplemented by additional disparity indicators such as the Fiscal Gap Index and the Williamson Index, where relevant data is available. The combination of these metrics provides a multifaceted perspective on fiscal inequality, ranging from basic distributional issues to deeper structural and spatial disparities.

Correlation and Regression Analysis

To examine the association between fiscal transfers and regional inequality, the study employs bivariate and multivariate correlation techniques. Pearson and Spearman correlation coefficients are computed to evaluate the strength and direction of the relationships between DAU allocation, PAD share, and inequality indices. A statistically weak or inverse relationship may indicate inefficiencies in transfer design or misalignment with regional needs (Zhang, 2022).

Regression models are utilized to test hypotheses regarding the redistributive effectiveness of DAU and DAK. The models evaluate the explanatory power of fiscal transfer variables in predicting inequality metrics while controlling for other relevant factors, including total population, geographic location, administrative capacity, and education/health infrastructure. Particular emphasis is placed on interactions between transfer volume and PAD ratio to identify whether increased autonomy correlates with improved equity outcomes.

Fixed effect panel regressions are favored due to their ability to account for unobserved heterogeneity among regions, while ensuring consistency in long term policy evaluation. The results from these models are interpreted not only for their statistical significance but also for their practical policy implications in the design of equalization mechanisms.

Case Study Methodology

To add depth and nuance to the national level analysis, three regionally diverse case studies are conducted. These are designed to highlight contextual differences in fiscal capacity, governance, and public service delivery performance:

- Sumatera Barat: Characterized by moderate fiscal independence and effective financial administration, often cited as a model for mid-tier provinces.
- East Java: Exhibits a mixed profile, with both high performing urban centers and underperforming rural districts, offering insight into intra provincial disparities.
- Indonesia Timur: Represents regions with high DAU dependency and low local revenue generation, often hindered by geographic and infrastructural challenges.

Each case study includes:

- A detailed breakdown of revenue and expenditure structures
- PAD to total revenue analysis
- Comparison of education and health service delivery metrics
- Evaluation of local administrative capacity and governance performance

Qualitative insights are integrated through secondary reviews and literature on regional policymaking and implementation barriers (Sarjoko et al., 2022). When available, regional government reports, local media analyses, and stakeholder interviews from past studies are used to enrich understanding of administrative dynamics and public perceptions.

Limitations and Scope

Despite extensive data collection, several limitations remain. First, some district-level data are incomplete or inconsistent. Missing values were addressed through interpolation using available adjacent years, while inconsistent records were cross-checked against BPS publications and Ministry of Finance reports. Second, limited availability of comprehensive subnational financial

reports reduces granularity. Third, indices such as Gini and Theil cannot fully capture qualitative governance dimensions.

RESULT AND DISCUSSION

Fiscal Disparity Over Time

Longitudinal analysis of Indonesia's intergovernmental fiscal transfer mechanisms, particularly the General Allocation Fund (DAU), reveals persistent disparities in regional fiscal performance and inter provincial income distribution. While the DAU was designed as a tool for fiscal equalization, its growth has not led to a proportional enhancement of locally generated revenue (PAD), especially in economically marginalized regions. Empirical findings by Akita et al. (2021) and Pradana & Mun'im (2022) support the claim that wealthier provinces, typically with robust industrial and service sectors, consistently record higher PAD levels, thereby reinforcing fiscal divergence. Conversely, poorer provinces especially in Eastern Indonesia remain disproportionately dependent on DAU to finance even basic administrative functions (K. E. Damayanti et al., 2024).

Trends in Gini and Theil indices confirm limited redistributive impact. For example, while DAU disbursements grew by more than 90% between 2001 and 2023, the national Gini rose from 0.36 to 0.42. A Theil decomposition further shows widening intra-provincial inequality, suggesting that local disparities are increasingly important.

Table 1. Fiscal Gap Summary (2001–2023)

Year	Avg. PAD (Prov IDR Bn)	Avg. DAU (Prov IDR Bn)	Fiscal Gap Index	Gini (Nat.)
2001	712	3,650	0.68	0.36
2008	1,014	5,790	0.62	0.38
2014	1,292	6,125	0.60	0.39
2020	1,825	6,800	0.57	0.41
2023	2,240	7,100	0.55	0.42

Despite improvements in average DAU disbursement, the relatively stagnant pace of PAD growth in underdeveloped regions has translated into only slight reductions in the Fiscal Gap Index. Moreover, the rising Gini coefficient over the same period suggests that inequality remains entrenched. Additional evidence from Zhou et al. (2024) using Theil index decomposition confirms that intra provincial inequalities are widening, indicating that local disparities within provinces are becoming more significant. Analytical models such as panel regressions and Gini decompositions (Malini, 2021) provide further empirical confirmation of these patterns, reinforcing the view that current redistribution frameworks are insufficient to correct regional imbalances.

Transfer Effectiveness

Correlation analysis shows that transfers are positively associated with HDI improvements and infrastructure, but effectiveness varies by governance capacity. In provinces with stronger planning and execution (e.g., parts of East Java), transfers supported measurable gains. In weaker administrations (e.g., Eastern Indonesia), effects were minimal, reinforcing the “flypaper effect” where funds are absorbed by routine expenses (Régina et al., 2020).

The phenomenon known as the “flypaper effect” where increased transfers are disproportionately spent on routine administrative expenses rather than development priorities remains a critical issue (Tana et al., 2024). This inefficiency is compounded by governance challenges, including a lack of skilled personnel, inadequate public financial management systems, and limited accountability structures. Moreover, critiques of the current DAU formula suggest it lacks sufficient sensitivity to regional disparities in service delivery needs, cost of living, and geographic isolation (Régina et al., 2020). These structural limitations result in a one size fits all allocation system that weakens the DAU’s potential as a redistributive instrument.

Complementary indicators such as the poverty headcount ratio and inequality in access to education and healthcare provide a multidimensional understanding of transfer effectiveness (Pradana & Mun’im, 2022). These metrics suggest that while DAU may be necessary for fiscal stability, it is not sufficient in isolation to achieve equitable regional development.

Regional Case Studies

Table 2. Regional Fiscal and Social Indicators

Region	PAD/Revenue (%)	DAU (%)	Share	Theil Index	Education Score	Health Score
Sumatera Barat	24.5	62.0		0.27	83.2	69.5
East Java	35.7	51.5		0.32	80.1	74.3
Indonesia Timur	12.3	78.9		0.45	65.8	61.4
Region	PAD/Revenue (%)	DAU (%)	Share	Theil Index	Education Score	Health Score

Case studies illustrate the mediating role of governance. West Sumatra, with moderate fiscal independence, invests effectively in education. East Java displays intra-provincial inequality, with rural districts lagging. Eastern Indonesia remains highly dependent on DAU, with weak service outcomes. These findings suggest that fiscal transfers must be complemented by institutional support, not merely financial injections. (Damayanti et al., 2024).

The effectiveness of fiscal transfers is evidently mediated by governance quality and administrative capacity. Regions with high DAU reliance, like Indonesia Timur, frequently underperform due to inefficient fund allocation, weak institutional frameworks, and logistical barriers in project implementation (Fatmasari et al., 2022). Conversely, provinces that demonstrate stronger local fiscal autonomy and strategic expenditure planning, such as parts of East Java, tend to achieve better outcomes in terms of public service quality.

Persistent structural constraints in underdeveloped regions include limited access to skilled labor, infrastructural deficits, and geographic remoteness, all of which hinder the efficient utilization of DAU and DAK funds (Tana et al., 2024). These issues contribute to a cycle of dependency, where regions continually rely on central transfers without building local capacity for sustainable development (Pradana & Mun'im, 2022).

Recent region specific studies confirm that the link between fiscal transfers and inequality is highly context dependent. In cases where transfers are well targeted and paired with institutional support, significant improvements in equity indicators are observed (Tana et al., 2024). However, when transfers are misaligned with regional needs or poorly managed, they can exacerbate rather than alleviate inequality (Akita et al., 2021). Therefore, future fiscal policy should prioritize performance based allocations, strengthen local government capacity, and ensure alignment between fiscal flows and developmental goals (Fatmasari et al., 2022).

Structural Challenges in DAU and DAK Allocation

Although the DAU (General Allocation Fund) and DAK (Special Allocation Fund) were established as central pillars in Indonesia's post decentralization fiscal architecture to reduce inequality and balance development across regions, several longstanding structural shortcomings remain. Chief among these is the rigidity and outdatedness of the DAU allocation formula. Despite growing regional disparities, DAU continues to rely heavily on population size and historical revenue, neglecting critical factors such as poverty levels, infrastructure gaps, and fiscal effort. This creates systematic disadvantages for provinces that are economically lagging but require greater financial support to build basic capacities (Azaki & Lutfi, 2023).

Moreover, the DAK, which is intended for targeted sectoral development such as education, health, and infrastructure, is often constrained by top down planning mechanisms and rigid sectoral earmarking. Instead of responding to localized needs, the DAK's structure often enforces central priorities that do not always align with regional developmental gaps (Krisnadi, 2023). This disconnect frequently results in inefficiencies, such as misaligned projects, duplication of efforts, and underutilization of funds. The current system's inability to integrate local knowledge and priorities into fund allocation planning diminishes its effectiveness as a redistributive tool.

Capacity Constraints in Regional Implementation

Beyond allocation design, the success of fiscal transfers also hinges on the administrative and institutional capacity of regional governments. In many provinces particularly those in Eastern

Indonesia limited bureaucratic and technical capabilities hinder effective planning, implementation, and monitoring of budgeted projects. Local governments often struggle with the timely preparation of development plans, resulting in delayed disbursements and under execution of budgets.

Furthermore, local institutions frequently lack the capacity for integrated development planning, resulting in fragmented public service delivery. Siloed sectoral spending and weak cross agency coordination lead to service gaps that disproportionately impact marginalized communities. Capacity constraints also reduce the ability of local actors to conduct meaningful performance evaluations, thereby weakening feedback mechanisms that could inform improvements in fund use.

These capacity issues are compounded by low digitalization and outdated financial management systems. Many localities do not yet employ comprehensive e planning or e budgeting systems, further complicating coordination with national oversight agencies and reducing transparency in fund tracking.

Comparative Lessons from International Models

Comparative lessons from Brazil and South Africa confirm that performance-based and conditional transfers can reduce inequality when paired with strict accountability. These cases challenge Indonesia's relatively static model and suggest the need for continuous recalibration of formulas an approach consistent with Simson & Savage (2019) who stress institutional adaptability in decentralized systems (Aida et al., 2023). This ensures that fiscal transfers are sensitive to ground realities and capable of addressing both vertical and horizontal inequalities.

In South Africa, equalization transfers are combined with conditional grants that support service delivery improvements in critical areas like health and education. These grants are subject to strict performance auditing and reporting standards. Such performance based conditional transfers help align financial flows with real developmental outcomes and encourage accountability among subnational units.

Furthermore, these systems employ continuous recalibration of transfer formulas based on updated census, economic, and demographic data, ensuring that allocations remain aligned with dynamic regional conditions. This contrasts with Indonesia's relatively static and inflexible formulas that are rarely reviewed in a comprehensive manner.

Policy Reform Opportunities and Strategic Redesign

Reforming Indonesia's intergovernmental transfer system requires not just technical adjustments but a shift in fiscal philosophy from equal distribution to equitable outcomes. Integrating performance based metrics into DAU allocations, for instance, would allow central policymakers to incentivize results in priority sectors like poverty reduction, infrastructure expansion, and education quality (Veruswati et al., 2018).

A restructured DAU formula could include multiple weighted criteria such as poverty incidence, regional fiscal effort, cost of service delivery, and demographic vulnerability. This would allow the fund to become more needs responsive, without penalizing provinces with low PAD (locally generated revenue) capacity. In parallel, DAK should be redesigned to offer greater flexibility for regions to propose development programs aligned with local medium term plans. Simplifying DAK procedures and enhancing multiyear planning support would help address fragmentation in its implementation.

Such reforms should also prioritize inter agency coordination to ensure coherence between central and regional objectives. National Ministries must work collaboratively with subnational governments in designing funding mechanisms and program outcomes, enabling regions to become genuine partners in national development goals.

4.5 Enhancing Accountability and Monitoring

Strengthening accountability is essential to ensure that increased transfer volumes translate into improved services and developmental impact. This requires embedding transparency into every layer of fiscal governance. Reforms should include mandatory public disclosure of transfer amounts and usage at both central and local levels. Tools such as publicly accessible dashboards, community scorecards, and citizen audits can foster greater civic engagement.

Institutionalizing performance monitoring through robust Key Performance Indicators (KPIs) linked to fiscal incentives can ensure that transfers not only reach their intended recipients but are also used effectively. Building technical capacity in local audit bodies, inspectorates, and budgeting offices can further improve financial oversight and reduce leakages.

National fiscal institutions, including the Ministry of Finance and BPKP, must play a proactive role in monitoring outcomes rather than inputs. Performance linked evaluations of DAU and DAK should be published annually to encourage public debate and inform future reforms.

4.6 Toward a Transformative Fiscal Framework

Toward a transformative framework, Indonesia must recognize heterogeneity as an asset. This implies adopting equity-oriented, flexible, and collaborative fiscal tools that reduce inequality and strengthen cohesion. The findings contribute to decentralization theory by showing that static, formula-based transfers risk perpetuating inequality, while dynamic, performance-based systems hold transformative potential.

A transformative fiscal framework would prioritize equity over uniformity, flexibility over rigidity, and collaboration over central imposition. It would recognize regional heterogeneity as a strength and develop fiscal tools that are sensitive to both structural disadvantage and opportunity potential. Such a framework would allow Indonesia to make meaningful progress toward narrowing inequality gaps and building a more resilient, regionally balanced economy.

Indonesia stands at a critical juncture where improving the effectiveness of its intergovernmental fiscal system can yield dividends not only in economic development but also in political trust and social cohesion. If aligned with principles of equity, accountability, and context sensitivity, fiscal transfers can become a cornerstone of Indonesia's long term inclusive growth strategy.

CONCLUSION

This study assessed the effectiveness of Indonesia's intergovernmental fiscal transfers, particularly the General Allocation Fund (DAU) and the Special Allocation Fund (DAK), in addressing regional inequality since the post-2001 decentralization era. The findings demonstrate that while transfers have expanded fiscal resources to disadvantaged provinces, their redistributive power remains limited due to rigid allocation formulas, heavy dependence on static variables, and persistent administrative weaknesses at the local level. Evidence from Gini and Theil indices further shows that inequality not only persists across provinces but is also widening within provinces, highlighting governance and institutional capacity as critical determinants. These results confirm prior studies on the limitations of DAU and DAK while adding new insights into intra-provincial disparities and the importance of linking fiscal flows to governance performance.

Building on international experiences such as Brazil and South Africa, this study recommends recalibrating Indonesia's fiscal transfer system toward an outcome-driven model. Key reforms include incorporating poverty and service-delivery indicators into DAU formulas, simplifying and decentralizing DAK procedures to better reflect local priorities, and embedding stronger accountability through transparency mechanisms and performance-linked incentives. By evolving from volume-based redistribution to equity-sensitive and context-responsive transfers, Indonesia can transform its fiscal decentralization framework into a driver of inclusive growth, regional balance, and strengthened state-society trust.

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