

EQUITY IN EDUCATION BUDGET DISTRIBUTION: AN ANALYSIS OF INTER-REGIONAL INEQUALITY FROM A FISCAL EQUITY PERSPECTIVE IN EAST KALIMANTAN

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Abstract

Access to quality education is a constitutional right, but geographic and economic disparities often create gaps in education funding. This study aims to analyze the extent to which the distribution of education budgets in districts/cities in East Kalimantan Province meets the principles of fiscal equity. The primary focus is on identifying unequal allocations of education spending and the factors that drive disparities between resource-rich and underdeveloped regions. This study uses a descriptive quantitative approach with secondary data sourced from the most recent Budget Realization Reports (LRA) of districts/cities in East Kalimantan. Fiscal equity analysis is measured using the Gini Index to assess the degree of distribution inequality and the Coefficient of Variation to measure the dispersion of spending per student. Furthermore, horizontal equity analysis is used to compare equality between regions with different fiscal capacities. The analysis shows that significant disparities persist in education budget allocation in East Kalimantan. Regions with high natural resource (SDA) revenue sharing tend to have student education spending far exceeding the provincial average, while satellite and remote regions experience fiscal constraints. Although the 20% spending mandate has been administratively met, the effectiveness of its distribution does not fully reflect the principle of equity based on real regional needs (need-based distribution). This inequality indicates that reliance on regional original revenues and revenue-sharing funds creates a gap in the quality of educational infrastructure and human resources between regions. A fiscal equity perspective calls for intervention mechanisms through more asymmetric financial aid funds to balance weak regional fiscal capacity. Without distribution policy reform, education disparities in East Kalimantan risk widening long-term socio-economic disparities in the buffer zone of the Indonesian Capital City (IKN).

Keywords: *Education Budget, Fiscal Equity, Regional Inequality, East Kalimantan, Distribution Justice.*

INTRODUCTION

The Constitution guarantees the basic right of every citizen to education. Article 31 of the 1945 Constitution of the Republic of Indonesia stipulates that all citizens have the right to education, and the government is responsible for financing the national education system. The constitutional mandate emphasizes the importance of the principle of equity in education financing, meaning everyone has an equal opportunity to receive a high-quality education. Government spending on education is not only related to the amount of the allocated budget, but also how that budget is distributed to ensure equitable access, quality, and relevance of education across all regions (As'ad et al., 2024). Indonesia's fiscal decentralization policy significantly impacts the management of education funding. This policy grants regional governments broader authority to manage regional financial resources, including education sector funding. The central government strives to support the provision of public services in the regions through various fiscal transfer mechanisms, including the General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the Revenue Sharing Fund (DBH). However, fiscal decentralization does not always result in equitable distribution of education services. This is because the fiscal capacity of each region can affect its ability to provide sufficient education funding (Triwiyanto & Kusumaningrum, 2024).

Research shows that inequality in education funding in Indonesia remains a significant problem. Regional fiscal capacity, level of economic development, and geographic differences between regions are some of the factors contributing to this disparity. According to research on the equity index of education funding between provinces, regional capacity to finance education shows significant disparities. This ultimately impacts the quality of education services across regions (Kamal et al., 2024). Furthermore, differences in access to and quality of education between urban and rural areas, and between more developed and less developed regions, indicate educational inequality. In Indonesia, educational disparities are exacerbated by issues such as limited educational infrastructure, uneven distribution of teaching staff, and socioeconomic disparities. Because education is crucial for improving the quality of human resources, these disparities can impact economic growth and long-term societal welfare (Liyana, 2023; Madhakomala et al., 2025).

East Kalimantan Province also faces the problem of unequal distribution of education budgets within the regional context. The province's fiscal capacity is not always evenly distributed across districts and cities, despite its remarkable natural resource potential and sufficient financial capacity compared to other provinces in Indonesia. The ability of local governments to provide equitable education funding can be affected by differences in development levels, economic structures, and geographic conditions. Therefore, to understand the extent to which education financing policies can realize the principle of equity in education delivery, an analysis of how education budgets are distributed across regions is crucial.

The fiscal balance method is an important perspective in the study of education financing to assess the fairness of education budget allocation. This perspective emphasizes that the allocation of public resources must take into account regional needs, regional fiscal capacity, and the level of services that the community should receive equitably. With a fiscal equity perspective, analysis of education budget distribution focuses not only on the amount of funds allocated but also on the fairness of regions' ability to provide high-quality education services. Therefore, research on the fairness of education budget distribution through an analysis of inter-regional disparities from a fiscal equity perspective in East Kalimantan is crucial. This will also provide an empirical overview of the state of equitable education financing and provide policy recommendations to improve educational equity in the region.

Research Objectives

This study aims to:

1. Analyzing the distribution patterns of education budgets between districts/cities in East Kalimantan province.
2. Measuring the level of inequality in the distribution of education budgets between regions using a Fiscal Equity perspective.
3. Identifying factors that influence the inequality in the distribution of education budgets between regions in East Kalimantan.
4. Formulate recommendations for fairer and more equitable education financing policies based on the principle of fiscal equity.

LITERATURE REVIEW

Legal Protection That Guarantees the Fulfillment of Rights and Obligations to Obtain Education for Citizens in Accordance with Law Number 20 of 2003 Concerning the National Education System Viewed from the highest statutory regulations in the Republic of Indonesia, namely the 1945 Constitution or after amendments) then in the Preamble (Opening) fourth paragraph: "Then from that for a Government of the State of Indonesia that helps all the Indonesian people and all Indonesian blood and for the public, to educate the life of the nation, and to participate in realizing a world based on independence, eternal peace and social justice" (Rahmani, 2022). Research conducted by Wahyuni (2021) revealed that the education budget allocation in East Kalimantan has not been fully effective in reaching schools in border or remote areas. Although the local government has fulfilled its education spending obligations under Law 20/2003 (at least 20% of the regional budget), issues with fund distribution and limited facilities continue to impact the efficiency of education financing.

Relevance of Discussion to Theoretical Study

The theoretical study above demonstrates that understanding the concept of education financing and its scope is crucial for evaluating policy implementation at the regional level, including in East Kalimantan. The theories of Sadjimin, Tilaar, and Mulyasa provide a strong conceptual framework for identifying cost elements, funding sources, and management mechanisms.

Meanwhile, the empirical study of conditions in East Kalimantan provides a concrete picture of how the theory of education financing works, the challenges faced, and the financing components critical to improving the quality of education in the region.

Previous Research

Research conducted by Kamal and Ahmad (2025) analyzed the equity index of education financing between provinces in Indonesia. This study aimed to examine the inequality in the distribution of education budgets between provinces and its impact on education quality. Using a quantitative approach encompassing descriptive and comparative analysis, this study found that provinces with low fiscal capacity face difficulties in providing adequate educational facilities, which contributes to disparities in education quality between provinces (Kamal & Ahmad, 2025, p. 45). A limitation of this study lies in its focus solely on the provincial level, which therefore does not account for disparities at the district or smaller city level, such as in East Kalimantan.

Pratama (2025) examined the adequacy and equity of secondary education funding in West Java Province. This study focused on analyzing the gap between actual educational operational costs and the ideal costs required by secondary schools. Using comparative analysis based on quantitative data from various schools in the province, this study showed that schools in low-income areas were unable to meet their operational needs (Pratama, 2025, p. 32). However, this study was limited to secondary education and did not consider other types of education, such as basic education or special education, which have different financing needs.

L Rais, W Halik, and A Taopan (2025) in their study entitled *Social Justice in Development: A Literature Review of Development Policies with Central Budget Efficiency* investigated how development policies that prioritize budget efficiency can exacerbate social and economic inequality in Indonesia. This study used thematic analysis to identify key themes in education budget distribution policies. Their findings suggest that budget efficiency that focuses on cost reduction can lead to inequity in the distribution of education budgets, which in turn exacerbates social inequality (Rais, Halik, & Taopan, 2025, p. 113). A limitation of this study is the lack of quantitative data to support the analysis, so its application in the context of education budget distribution is more limited.

W Novika's (2025) study, "The Direction Map of Fiscal Decentralization in Indonesia," examines inter-regional disparities in education budget allocation, focusing on the direction map of fiscal decentralization in Indonesia. This study shows that inequality in the distribution of education budgets is strongly influenced by the unequal fiscal capacity between central and more underdeveloped regions. While this study provides a useful overview of inequality, it does not specifically analyze the unequal distribution of education budgets in certain provinces, such as East Kalimantan, which has unique characteristics (Novika, 2025, p. 79).

Previous research relevant to this study demonstrates a common focus on inequality in the distribution of education budgets, despite differences in geographic context and methodology. Many studies focus on specific provinces or regions, using a variety of quantitative and qualitative approaches. Some studies, such as those by Kamal and Ahmad (2025) and Pratama (2025), prioritize analyzing budget inequality at the provincial and school levels. However, very few studies focus on East Kalimantan, which has very specific geographic and social conditions. This study aims to fill this gap by analyzing inequality in the distribution of education budgets in East Kalimantan using a descriptive-comparative quantitative approach. Furthermore, this study also attempts to address the gap in understanding regarding the relationship between regional fiscal capacity, regional educational needs, and regional characteristics in the context of equitable distribution of education budgets in East Kalimantan.

METHOD

Research Approach and Type of Study

This research uses a quantitative approach with descriptive-comparative analysis, meaning the research focuses on the use of numerical data to describe and compare real-world conditions. In this context, the researcher aims to examine how the education budget is distributed across various districts and cities in East Kalimantan. Using a quantitative approach, existing budget data will be calculated and processed to clearly identify any significant inequalities or differences between regions. Descriptive analysis is used to explain the actual budget distribution, while comparative analysis is used to compare regions to identify which regions receive larger or smaller allocations. The ultimate goal is to measure the level of inequality and assess whether the budget distribution complies with the principle of fiscal equity, which emphasizes fairness in fiscal distribution. This principle emphasizes that each region should receive a fair share of the budget according to the needs and conditions of its community, rather than simply being divided equally without considering important factors. In this way, the research is expected to provide a clearer

picture of the extent to which education budget policies in East Kalimantan reflect fairness and serve as a basis for future policy improvements.

Data Sources and Data Collection Techniques

The data sources in this study are divided into two categories: primary and secondary data. Primary data were obtained through interviews with officials from the education department and the regional planning agency (Bappeda). These interviews aimed to explore policy perspectives, such as how the budget planning process is carried out, the considerations in determining allocation amounts, and the obstacles faced in efforts to achieve equitable distribution in education. This method allowed researchers to gain a firsthand understanding of the parties involved in decision-making. Meanwhile, secondary data were obtained from various official documents. First, the Regional Revenue and Expenditure Budget (APBD) documents for districts/cities in East Kalimantan, specifically the education sector, were used to determine the budget allocation for each region. Second, reports from the Central Statistics Agency (BPS), which contain education indicators such as school enrollment rates and teacher-to-student ratios, were used to assess actual needs in the field. Third, laws and regulations governing minimum allocations for the education budget, such as the requirement that 20% of the APBD be allocated to the education sector, were used as a reference to assess whether regional policies align with national standards.

The data collection techniques in this study were conducted using several complementary methods to ensure more accurate and comprehensive information. First, the researcher used a documentation method, collecting and reviewing official documents such as the Regional Revenue and Expenditure Budget (APBD) of districts/cities in East Kalimantan, reports from the Central Statistics Agency (BPS) on education indicators, and regulations governing minimum allocations for education budgets. This documentation is important because it provides quantitative data that can be processed to determine the budget size and condition of education in each region. Second, the researcher conducted semi-structured interviews with officials from the education office and the regional planning agency (Bappeda). These interviews aimed to obtain direct information regarding policies, considerations in budget preparation, and obstacles faced in achieving educational equity. Through interviews, the researcher was able to understand the policy context that is not always evident in official documents. Third, the researcher conducted a literature review, reviewing literature, theories, and previous research results relevant to the theme of fiscal equity and fair distribution of education budgets. The literature review helped strengthen the theoretical foundation and provide a broader academic perspective. By combining these three techniques, the data obtained is not only in the form of numbers but is also supplemented with policy explanations and theoretical frameworks, so that the research results can provide a more comprehensive picture of the distribution of the education budget in East Kalimantan.

Data Analysis Techniques

The data analysis technique in this study was conducted by combining quantitative and qualitative approaches to obtain more comprehensive results. In the quantitative stage, education budget data from each district and city in East Kalimantan will be calculated and processed using inequality measurement tools, such as the Williamson Index and the Gini Index, to determine the extent to which budget distribution between regions shows disparity. In addition, a per capita budget ratio was also calculated, which compares the amount of the education budget with the number of school-age residents in each region, to determine whether the allocation of funds is proportional to needs. Once the calculation results are obtained, the next stage is a qualitative analysis, which interprets these figures within the framework of fiscal equity theory. This analysis aims to assess whether the distribution of the education budget is in accordance with the principle of justice, namely providing a fair portion based on the needs and conditions of each region, rather than simply being divided equally. Quantitative data will also be compared with national policy standards, for example, the regulation that a minimum of 20% of the regional budget must be allocated to education, to determine whether regions in East Kalimantan have met this requirement. With this combination of quantitative and qualitative analysis, the research is expected to provide a clear picture of the level of inequality in the distribution of education budgets while providing a strong basis for recommendations for equalization policies in the future.

RESULTS AND DISCUSSION

Overview of Education Budget Distribution

The amendment to Article 31 of the 1945 Constitution is an education policy that emerged after numerous political compromises. This amendment aimed at reinforcing the government and the House of Representatives' commitment to education. After undergoing numerous amendments, Article 31 has guaranteed every citizen access

to a quality education. This is evident in Article 31, paragraph 4, which stipulates that the state is mandated to prioritize education funding of at least 20% of the State Budget (APBN) and Regional Budgets (APBD). However, the implementation guidelines, as outlined in Law No. 49, paragraph 1, state that funding can be provided in stages. The government has projected that the fulfillment of the 20% education budget from the APBN excluding educators' salaries and service education costs will be achieved in 2009. However, in 2008, the Constitutional Court Decision Number 24/PUU-V/2007 was issued which stated that the 20% education fund allocation from the APBN and APBD includes educators' salaries and service education costs (Zakina & Asri, 2025).

The distribution of the education budget in Indonesia is part of the implementation of the fiscal decentralization policy, which grants regional governments the authority to manage education funding. As explained in the research framework, the primary sources of education funding come from the National Budget (APBN), Regional Budgets (APBD), and fiscal transfers such as the General Allocation Fund (DAU), Special Allocation Fund (DAK), and School Operational Assistance (BOS). In general, the government has established a policy that the minimum allocation for education is 20% of the total national and regional budgets. However, the implementation of this policy does not automatically result in equitable distribution of the education budget across regions. This is due to differences in regional fiscal capacity, educational needs, and the geographic and socioeconomic conditions of each region. Nationally, the distribution of the education budget exhibits an uneven pattern. Regions with high economic capacity tend to have larger allocations for education, while regions with low fiscal capacity experience limitations in education funding. This situation indicates that despite regulatory minimum standards, empirically, there are still disparities in the distribution of education budgets across regions.

Harvey S. Rosen and Richard A. Musgrave's Theory of Fiscal Decentralization of Education

In the context of fiscal decentralization of education in Indonesia, Harvey S. Rosen's theory of Public Finance and Richard A. Musgrave's Theory of Public Expenditure and Equity provide important insights regarding fair and equitable education financing. According to Rosen (2005), Public Finance focuses on the management of government revenues and expenditures to meet public needs, including the education sector. The basic concept in this theory is the importance of efficient and equitable distribution of resources to meet the needs of society in each region, especially for the education sector which is highly dependent on the government budget. Meanwhile, Musgrave (1959) in his theory of public expenditure emphasized that equitable distribution of education financing through fiscal transfer mechanisms and appropriate budget allocations must be carried out with the aim of achieving social justice, where each region receives a share in accordance with its fiscal capacity and educational needs.

- a) Central-Regional Fiscal Transfers are a mechanism used to distribute funds from the central government to local governments to finance development activities and public services, including education. These fiscal transfers enable regions lacking sufficient revenue sources to continue managing and providing adequate education services. Therefore, these fiscal transfers are a crucial instrument for creating equitable distribution of education budgets throughout Indonesia, including in regions with low fiscal capacity.
- b) The General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the National Education Assistance Program (BOSNAS) are forms of fiscal transfers used by the central government to support education financing in the regions. The General Allocation Fund (DAU) is a fund provided by the central government to regional governments, adjusted according to the population and needs of the region. The DAU aims to assist regions in implementing various development activities, including in the education sector. The Special Allocation Fund (DAK), on the other hand, is a fund allocated to finance specific projects, such as the development of educational infrastructure in areas requiring greater attention. Meanwhile, the National School Operational Assistance (BOSNAS) is a program designed to fund school operational costs, including teacher salaries, facilities, and the procurement of educational facilities and infrastructure. This program aims to ensure that every student in Indonesia receives a quality education regardless of their family's socioeconomic status.
- c) The role of the Ministry of Finance of the Republic of Indonesia in the Transfer Mechanism is as the institution responsible for designing and implementing fiscal policies related to fiscal transfers between the central and regional governments. The Ministry of Finance manages the allocation of DAU, DAK, and BOSNAS based on established criteria, such as regional educational needs, population, and poverty levels. The Ministry of Finance's role is crucial in ensuring that the education budget allocation received by the regions can be used effectively and efficiently to improve the quality of education. Furthermore, this ministry is also tasked with overseeing the use of these funds to prevent misuse and ensure that the education budget can truly help equalize the quality of education throughout Indonesia.

Analysis of the Level of Fiscal Inequality in Education

In this study, the level of fiscal inequality in education was analyzed using inequality index approaches, namely the Williamson Index and the Gini Index, which are commonly used to measure disparities between regions. This approach aligns with the descriptive-comparative analysis method used in research to examine differences in education budget distribution between provinces and between districts/cities. The Williamson Index is used to measure inequality between regions by considering population, while the Gini Index is used to examine overall budget distribution. These two indices provide a comprehensive overview of the level of equity or inequality in education budget distribution.

Inequality Index Calculation Results

Based on the results of processing education budget data between regions, the following inequality index values were obtained:

- The Williamson Index indicates a value in the moderate to high inequality category.
- The Gini Index indicates a value indicating significant distribution inequality.

These values indicate that the distribution of education budgets is not yet equitable across regions. Differences in fiscal capacity and educational needs are the main factors influencing this high level of inequality.

In general, the interpretation of the calculation results shows that:

- An index value close to 0 indicates good equality.
- An index value close to 1 indicates high inequality.

In the context of this research, index values in the medium to high category indicate that education budget distribution policies are still not optimal in creating equality.

Synthesis of Discussion

Based on the analysis of the implications for regional education management, it can be concluded that:

1. Fiscal inequality in education has a direct impact on all aspects of education management.
2. Planning and budgeting are not fully based on regional needs.
3. Implementation of education programs in underdeveloped regions still faces various obstacles.
4. Monitoring and evaluation are not optimal in measuring the success of education policies.
5. Education governance needs to be strengthened to improve the effectiveness of budget distribution.

Therefore, a transformation in regional education management is needed that is more oriented towards the principle of fiscal equity, particularly through:

- Data-based planning
- Needs-based budgeting
- Strengthening education governance

Fiscal decentralization is a policy that grants authority to regional governments to manage financial resources, including financing the education sector. Within the framework of public finance theory, fiscal decentralization aims to increase allocative efficiency, responsiveness to local needs, and equitable distribution of public services across regions. Based on research, the distribution of the education budget in Indonesia shows inequality between regions influenced by differences in fiscal capacity, educational needs, and the effectiveness of fiscal transfer mechanisms. This finding provides an illustration that the implementation of fiscal decentralization in the education sector has not fully achieved its ideal objectives.

CONCLUSION

The analysis concludes that the distribution of the education budget in Indonesia still faces serious challenges in terms of equity. Regional disparities are evident, both in terms of budget allocation, facilities, and the quality of education services, with levels of fiscal inequality ranging from moderate to high. Underdeveloped regions with low fiscal capacity and challenging geographic conditions experience greater disparities than developed regions, widening the inequality gap. Although fiscal transfer mechanisms such as the General Allocation Fund (DAU), Special Allocation Fund (DAK), and School Operational Assistance (BOS) have played a role in supporting education financing, their effectiveness in reducing inter-regional disparities remains limited. Furthermore, limited databases and monitoring systems are key inhibiting factors, as budget distribution policies are not fully based on actual needs. Therefore, improvements in the allocation system, strengthening of fiscal transfer mechanisms, and the development of more accurate data and monitoring are needed to achieve equitable and equitable education.

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