The Performance Equity Financing Nexus: A Systematic Review of Indonesia's School Operational Assistance (BOS) Program

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Abstract
The School Operational Assistance (Bantuan Operasional Sekolah or BOS) program is Indonesia's primary educational financing policy, designed to improve school operations, educational quality, and equitable access to education. However, previous studies have predominantly examined educational financing, performance, equity, and governance separately, resulting in fragmented evidence on BOS implementation. This study synthesizes empirical findings to examine how BOS influences educational performance and equity and to identify governance factors explaining variations in implementation outcomes. A Systematic Literature Review (SLR) following the PRISMA 2020 guidelines was conducted using 14 empirical studies published between 2020 and 2026 and indexed in Scopus and Google Scholar. The findings indicate that the BOS program improves instructional quality, teacher professionalism, school operational capacity, and institutional effectiveness while reducing financial barriers and expanding educational access. However, these outcomes depend largely on governance quality, including financial accountability, school leadership, institutional capacity, digital financial management, and context-sensitive policy implementation. This review proposes a performance equity Financing Nexus, highlighting governance as the mechanism linking educational financing with educational performance and equity. The findings provide an integrated perspective on BOS implementation and offer policy recommendations for strengthening governance, improving educational quality, and reducing regional educational disparities.

Keywords: *Educational Equity, Educational Financing, Educational Governance, Educational Performance, School Operational Assistance*

1. INTRODUCTION

Education financing has become a central policy instrument for improving educational quality, promoting human capital development, and reducing socioeconomic inequalities. Beyond supporting school operations, public investment in education is expected to strengthen teaching quality, improve institutional capacity, and provide equitable learning opportunities across socioeconomic and geographical contexts. Nevertheless, international evidence suggests that increases in educational expenditure do not automatically translate into better educational outcomes because the effectiveness of educational financing depends on governance quality, institutional capacity, leadership, and policy implementation. Consequently, educational financing has increasingly been understood as a governance issue rather than as merely a fiscal intervention (Khasanah, Wijaya, & Sidik, 2025).

Despite continuous educational reforms, achieving equitable and high-quality education remains a persistent challenge in many developing countries. Educational disparities continue to emerge across regions with different levels of economic development, institutional capacity and access to educational resources (Syarif, Sopyan, & Rozzana, 2025). Recent evidence from Indonesia demonstrates that contextual inequalities substantially influence students' academic achievement, indicating that learning outcomes are shaped not only by individual characteristics but also by institutional and regional conditions (Aditia & Széll, 2025). Likewise, educational achievement gaps remain strongly associated with socioeconomic status and unequal educational opportunities, suggesting that improving educational quality requires more than expanding financial investment (Muttaqin, Wittek, Heyse, & van Duijn, 2020). These findings reinforce the argument that educational financing should be evaluated within a broader framework that incorporates governance, institutional effectiveness, and educational equity.

Therefore, the relationship between educational financing and performance has attracted increasing scholarly attention. Rather than viewing financial resources as direct determinants of educational quality, contemporary educational research emphasizes the importance of organizational processes that enable schools to transform financial investments into improved learning outcomes (Syaifudin & Rifani, 2025). Institutional collaboration among governments, schools, communities, and other stakeholders has been identified as an essential prerequisite for sustainable school improvement because educational policies are implemented through complex governance networks rather than through individual institutions (Bandur, 2018). Similarly, policy implementation studies argue that the effectiveness of public programs depends on implementation arrangements, institutional coordination, and administrative capacity, all of which shape how policy objectives are translated into practical outcomes (Casula & Steinebach, 2025).

School-level governance has become an increasingly important determinant of educational effectiveness. Leadership, organizational culture, teacher professionalism, and institutional readiness influence schools' capacity to utilize available resources effectively. Juharyanto, Arifin, Sultoni, Adha, and Qureshi (2023) found that school quality, particularly in remote areas, is strongly associated with leadership practices, stakeholder participation and institutional management. Likewise, principal instructional leadership has been shown to improve teacher performance, strengthen the school climate, and enhance organizational effectiveness (Elfira et al., 2024). Complementing these findings, Habibi et al. (2025) demonstrated that instructional leadership contributes significantly to improving educational quality through stronger teacher commitment and more effective learning environments. These studies collectively indicate that governance quality mediates the relationship between educational investment and outcomes.

Another important dimension is the institutional readiness to implement educational policies. Educational reforms frequently produce heterogeneous outcomes because schools differ substantially in their managerial competence, organizational capacity, and teacher preparedness. Prasojo et al. (2020) argue that institutional readiness is fundamental to ensuring successful policy implementation because teachers and school organizations ultimately determine how educational policies are translated into classroom practices. Consequently, financial resources alone are insufficient to improve educational performance unless accompanied by adequate institutional capacity and organizational support (Juniasri, Harsono, & Dwikardana, 2026).

Recent studies have also indicated that improving educational quality requires continuous institutional adaptation to changing educational policies and management practices. Educational reforms are increasingly expected to strengthen not only financial efficiency but also organizational learning, strategic planning, and institutional responsiveness to local educational needs. Jannata, Sumaryanto, Hadi, and Setiawan (2024) argue that sustainable educational improvement depends on schools' capacity to integrate policy objectives into everyday management practices, suggesting that institutional adaptability is as important as financial support in determining educational outcomes. This perspective reinforces the view that educational financing should be accompanied by organizational development to maximize its contribution to improving schools.

Furthermore, policy implementation in education increasingly emphasizes the importance of balancing financial accountability and educational effectiveness. Anwar, Yudaruddin, Naprida, Wibowo, and Lesmana (2024) highlight that educational management should move beyond administrative compliance toward outcome-oriented governance that prioritizes educational quality and continuous institutional improvement. This argument is particularly relevant to educational financing policies because schools are expected to comply with financial regulations and utilize available resources strategically to improve learning quality and expand educational opportunities. Accordingly, evaluating educational financing requires consideration of how governance mechanisms facilitate the transformation of financial resources into meaningful educational results.

In Indonesia, educational financing reforms have sought to reduce disparities in educational access while improving learning quality. In addition to the School Operational Assistance (*Bantuan Operasional Sekolah*/BOS) program, the government has introduced complementary initiatives, such as the Smart Indonesia Program, to expand educational participation among disadvantaged populations. Evaluations of these programs indicate that educational financing has successfully reduced financial barriers and increased school participation, although considerable challenges remain regarding implementation consistency and educational quality across regions (Ninghardjanti, Murtini, Hindrayani, & Sangka, 2023). Moreover, recent evidence suggests that educational reforms continue to produce uneven outcomes between urban and rural schools because differences in infrastructure, teacher availability, and institutional capacity remain substantial (Baharuddin & Burhan, 2025).

Against this background, the BOS program represents one of Indonesia's most important educational financing policies. Since its introduction, the BOS has functioned as the principal mechanism for supporting school operational expenditures while reducing the financial burden on students and families. The program is expected to not only sustain school operations but also improve educational quality, strengthen institutional performance, and promote more equitable educational opportunities throughout the country. However, the effectiveness of BOS varies considerably across schools and regions because its implementation is influenced by governance quality, school leadership, financial accountability, institutional readiness, and contextual socioeconomic conditions. Consequently, understanding BOS implementation requires moving beyond financial allocation toward a broader examination of how educational financing interacts with governance processes to influence educational performance and equity.

Despite the growing body of literature on educational financing and BOS implementation, existing studies remain fragmented, examining educational performance, equity, governance, and financing as separate dimensions. Consequently, there is still a limited understanding of how these dimensions interact to explain the overall effectiveness of the BOS program. Addressing this gap requires an integrated synthesis of existing evidence. Accordingly, this study addresses the following research questions.

RQ_1: How does the BOS program influence educational performance in Indonesia?

RQ_2: How does the BOS program contribute to educational equity in different regional and institutional contexts?

RQ_3: How does governance mediate the relationship between educational financing, performance, and equity, leading to the proposed performance equity Financing Nexus?

2. LITERATURE REVIEW

Educational financing has received increasing scholarly attention as an essential policy instrument for improving educational quality and promoting equitable opportunities. Rather than functioning solely as a fiscal mechanism, recent studies have conceptualized educational financing as a strategic investment capable of strengthening school capacity, improving instructional quality, and supporting long-term educational development. Pont (2020) argues that financial investment becomes effective only when accompanied by strong school leadership, institutional capacity, and good governance. Similarly, Ardoin, Bowers, and Gaillard (2020) emphasized that educational interventions generate meaningful outcomes only when implementation considers institutional readiness and local contexts. Banerjee, Mishra, and Maruta (2021) further demonstrated that disparities in access to educational resources remain a major obstacle to improving educational outcomes in developing countries. Collectively, these studies indicate that financial resources alone cannot guarantee educational improvement because policy effectiveness is strongly influenced by governance structures, implementation capacity, and context.

Within developing countries, educational financing is increasingly expected to address not only school operational needs but also persistent educational inequities. In Indonesia, educational financing policies have evolved through the implementation of BOS program, which serves as the primary funding mechanism to support operational activities in primary and secondary schools. Since the 2020 policy reforms, the BOS has adopted greater funding flexibility, strengthened accountability mechanisms, and introduced digital financial management systems to improve efficiency and transparency. Consequently, BOS is no longer viewed merely as operational assistance but as a strategic instrument for improving educational performance and reducing educational disparities across regions of Indonesia.

Previous empirical studies have generally reported the positive contributions of BOS implementation to school improvement. Putra (2022) found that the realization of the BOS program contributes to educational quality improvement and human capital development, despite its indirect influence on educational outcomes. Similar findings were reported by Maulida and Mulawarman

(2025), who identified a positive relationship between effective BOS management and improvements in learning quality, school facilities, and institutional performance in Indonesia. Simanjuntak, Suriansyah, and Purwanti (2025) further demonstrated that BOS strengthens teaching quality, school governance, and teacher professionalism when supported by effective managerial practices. Similarly, Adiningrum, Sitanggang, Selina, and Zahro (2025) and Theoline, Ahmad, and Soraya (2025) concluded that BOS facilitates educational innovation, infrastructure improvement, and operational sustainability while simultaneously improving the quality of educational services. These findings collectively suggest that the BOS contributes positively to school performance through improvements in organizational capacity rather than through financial expenditure alone.

Despite these positive findings, the literature reports considerable variation in BOS effectiveness. Several studies argue that schools receiving relatively similar financial allocations often demonstrate substantially different educational outcomes because the quality of implementation differs across institutional contexts. Putra (2022) reported that the relationship between educational financing and quality is indirect and mediated by school management. Gumilang, Oktaviany, and Ashari (2022) similarly observed that increasing BOS allocations has not been accompanied by proportional improvements in national educational indicators because regional disparities remain significant. Adiningrum et al. (2025), Simanjuntak et al. (2025), and Theoline et al. (2025) consistently identify managerial capacity, governance quality, and institutional readiness as major determinants of variations in BOS effectiveness. These contrasting findings imply that educational financing should be understood as an enabling mechanism whose effectiveness depends on organizational capability rather than funding magnitude alone.

Research has increasingly emphasized the relationship between educational financing and equity. Existing evidence suggests that the BOS program has contributed to expanding educational access by reducing financial barriers and supporting minimum operational standards across Indonesian schools. However, equitable funding does not necessarily produce equitable educational outcomes. Putra (2022) found that the BOS program improves educational access, but its contribution to educational equity varies considerably across regions. Gumilang et al. (2022) further revealed that the current flat-grant funding formula disadvantages schools located in eastern Indonesia and other disadvantaged regions because their operational costs are substantially higher than those in urban areas. Likewise, Adiningrum et al. (2025) and Theoline et al. (2025) argue that schools operating under limited institutional capacity frequently experience difficulties in maximizing BOS benefits despite receiving comparable financial support.

International studies reinforce these observations by demonstrating that marginalized regions commonly experience structural constraints that affect access to public services, including education. Moralli, Pachocka, and Leung (2023) argue that geographical isolation, institutional limitations, and socioeconomic vulnerability create persistent inequality in public service delivery. Similarly, Bao et al. (2024) reported that marginalized populations face cumulative disadvantages that restrict access to essential development resources and human capital opportunities. These international findings provide a broader perspective for understanding why uniform educational financing policies frequently produce unequal outcomes in geographically and socially diverse settings, such as Indonesia.

Another consistent theme across previous studies is the importance of governance, accountability, and school leadership in determining BOS effectiveness. Simanjuntak et al. (2025), Maulida and Mulawarman (2025), and Putra (2022) consistently demonstrate that transparent financial management, accountable governance, and effective planning significantly improve BOS fund utilization. Pont (2020) similarly identified school leadership as the central mechanism linking educational resources to organizational improvement. More recent studies by Ramadhani and Hudayati (2024), Astuti and Hanif (2025), and Arma, Sugandi, Myrna, and Sukarno (2026) suggest that organizational commitment, institutional capacity, digital governance, and regulatory compliance strengthen accountability while simultaneously improving educational service delivery. These findings collectively indicate that governance functions as a mediating mechanism through which educational financing influences educational performance and equity, rather than as an independent administrative process.

Previous studies have extensively examined the implementation of BOS program from various perspectives, including educational financing, school performance, educational equity, governance, and financial accountability issues. Although these studies generally acknowledge the strategic role of BOS in supporting school operations and improving educational services, their findings are fragmented across different analytical dimensions. Most empirical investigations have focused on specific aspects of BOS implementation, such as financial management, school operational effectiveness, educational quality, or regional disparities, with relatively limited attention devoted to understanding the interrelationships among these dimensions. Consequently, a comprehensive synthesis is required to identify the dominant research themes, methodological approaches, principal findings, and remaining research gaps in the existing literature. Table 1 summarizes the characteristics of the previous studies included in this review to provide an overview of the current state of knowledge regarding BOS implementation in Indonesia.

Table 1. Summary of previous studies on BOS implementation in Indonesia

No.	Authors	Research Focus	Method	Main Findings
1	Putra (2022)	BOS implementation and educational quality	Quantitative analysis	BOS positively contributes to educational quality and human development, although its effect is indirect.
2	Gumilang et al. (2022)	BOS and educational equity in Eastern Indonesia	Secondary data analysis	The flat-grant allocation formula disadvantages schools in remote and disadvantaged regions because their operational costs are substantially higher.
3	Wirandana and Khoirunurrofik (2024)	Fiscal transfer and educational inequality	Quantitative analysis	Fiscal transfers help reduce educational disparities; however, regional inequalities remain significant.
4	Romlah, Imron, Maisyaroh, Sunandar, and Dami (2023)	Free education policy and educational access	Quantitative study	Free education policies improve school participation but have inconsistent effects on educational quality.
5	Moralli et al. (2023)	Marginalized regions and public services	Qualitative study	Structural inequalities in marginalized regions limit access to essential public services, including education.
6	Maulida and Mulawarman (2025)	BOS management and school performance	Quantitative survey	Effective BOS management improves school performance, learning quality and educational facilities.
7	Bao et al. (2024)	Marginalization and human development	Secondary data analysis	Marginalized populations experience cumulative disadvantages that affect their access to development resources.

8	Ramadhani and Hudayati (2024)	Financial accountability in educational institutions	Quantitative study	Organizational commitment and internal control improve financial accountability.
9	Simanjuntak et al. (2025)	Effectiveness of BOS policy	Qualitative study	BOS improves school performance through better governance, teacher professionalism and learning quality.
10	Adiningrum et al. (2025)	BOS management in senior secondary education	Literature review	BOS strengthens infrastructure and instructional quality but remains constrained by limited managerial capacity.
11	Theoline et al. (2025)	BOS effectiveness in basic education	Systematic literature review	BOS contributes to educational quality and access; however, implementation varies according to governance quality.
12	Astuti and Hanif (2025)	Transparency and accountability in educational finance	Quantitative study	Financial transparency strengthens public accountability and the quality of educational services.
13	Arma et al. (2026)	Legal compliance and BOS governance	Qualitative study	Regulatory compliance strengthens financial governance but may encourage excessive administrative orientations.
14	Pont (2020)	School leadership and educational governance	Literature review	School leadership is essential for transforming financial resources into better educational outcomes.

As presented in Table 1, previous studies consistently report that the BOS program contributes positively to improving school operational capacity, learning facilities, teacher professionalism and educational access. However, the reported effectiveness of BOS varies considerably across institutional and regional contexts. Several studies indicate that governance quality, managerial capacity, and financial accountability play decisive roles in determining whether educational financing can be translated into improved educational performance (Maulida & Mulawarman, 2025; Putra, 2022; Simanjuntak et al., 2025; Theoline et al., 2025). Other studies emphasize that uniform funding allocation does not necessarily produce equitable educational outcomes because schools located in disadvantaged and marginalized regions continue to experience structural constraints, including higher operational costs, limited institutional capacity, and unequal educational resources (Gumilang et al., 2022; Moralli et al., 2023; Wirandana & Khoirunurrofik, 2024). These findings collectively suggest that the effectiveness of BOS cannot be adequately explained through financial allocation alone but should instead be understood as the product of interactions among educational financing, governance, institutional capacity, and contextual implementation issues. This fragmentation of previous findings also reveals the absence of an integrated analytical framework capable of simultaneously explaining educational financing, educational performance, and educational equity, thereby providing the principal rationale for developing the performance equity financing nexus proposed in this study.

3. METHODOLOGY

This study employed a Systematic Literature Review (SLR) to synthesize empirical evidence on the implementation BOS program in Indonesia. The SLR approach was selected because it provides a systematic, transparent, and reproducible procedure for identifying, evaluating, and synthesizing previous studies while minimizing selection bias and enhancing research findings' reliability. This review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines Page et al. (2021), which provide standardized procedures for literature identification, screening, eligibility assessment, and study inclusion. Thematic synthesis was employed to integrate findings across the selected studies and generate higher-order analytical themes relevant to educational financing, performance, and equity.

The literature search was conducted between April and May 2026 using Scopus and Google Scholar, which were selected because they provide extensive coverage of international and Indonesian publications related to educational financing, policy, and school governance. The search strategy was developed based on three principal constructs: educational financing, performance, and equity. The primary search terms included dana BOS, school operational assistance, school operational funding, education financing, school finance, educational performance, school quality, educational outcomes, educational equity, educational inequality, marginalized regions, and Indonesia. These keywords were combined using the Boolean operators AND and OR to maximize search sensitivity while maintaining relevance to the study objectives.

To ensure consistency throughout the review process, predefined inclusion and exclusion criteria were established prior to the literature search. Studies were included when they were published between 2020 and 2026, focused on the implementation of the BOS program or educational financing in Indonesia, examined educational performance, educational quality, educational equity, or financing effectiveness, employed quantitative, qualitative, mixed-method, systematic review, or case study approaches, presented empirical findings relevant to the research objectives, were available in full text, and were published in either English or Indonesian. Studies published before 2020, lacking empirical evidence, addressing topics unrelated to BOS implementation, consisting of editorials or opinion papers, or unavailable in full text were excluded from the review.

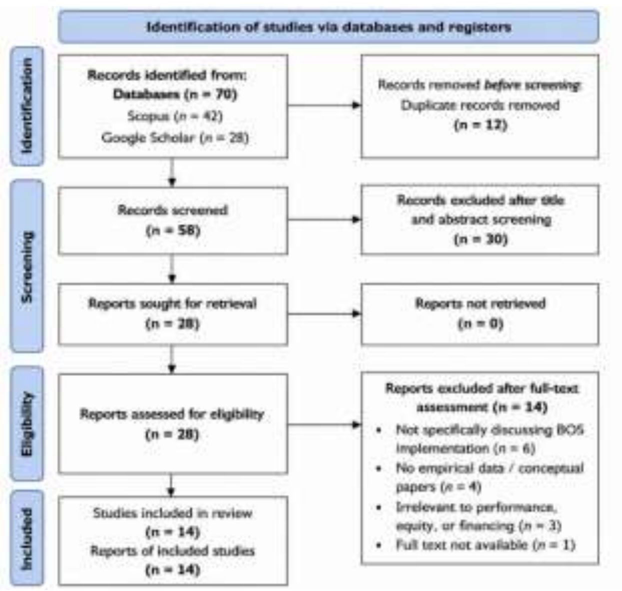

Figure 1. PRISMA 2020 flow diagram of study selection

Figure 1 shows the study selection process followed the four stages of the PRISMA 2020 framework, such as identification, screening, eligibility, and inclusion criteria. The initial database search identified 70 records, consisting of 42 studies from Scopus and 28 from Google Scholar. After removing 12 duplicate records, 58 articles remained for the title and abstract screening. Subsequently, 30 articles were excluded because they did not satisfy the predefined eligibility criteria, leaving 28 full-text articles for eligibility assessments. During the full-text review, 14 studies were excluded because they did not specifically discuss BOS implementation, lacked empirical evidence, were not relevant to educational financing, educational performance, or educational equity, or were unavailable in full text. Consequently, 14 empirical studies satisfied all the inclusion criteria and were included in the final review.

Following the study selection process, data from the included articles were extracted using a standardized extraction form to ensure consistency across all the studies. The extracted information included publication characteristics, research objectives, study location, methodological approach, sample characteristics, principal findings, and implications related to educational financing, performance, equity, and governance. To enhance methodological rigor, each selected study was further evaluated based on the recommendations of Xiao and Watson (2019), considering the clarity of research objectives, methodological appropriateness, transparency of data collection procedures, analytical rigor, and relevance of the findings to the objectives of this review.

The extracted studies were analyzed using thematic synthesis, following the procedures proposed by Thomas and Harden (2008). The analysis was conducted through three sequential stages, beginning with open coding to identify meaningful concepts within the selected studies. The identified codes were then grouped into descriptive themes representing recurring patterns across the literature. Subsequently, analytical themes were developed to explain the relationships among educational financing, performance, equity, and governance in the implementation of the BOS program. This process generated three overarching themes related to governance and BOS implementation, the contribution of BOS to educational performance, and the contribution of BOS to educational equity in marginalized regions. The findings were further interpreted using the proposed performance equity financing Nexus, which conceptualizes educational financing, educational performance, and educational equity as interconnected dimensions shaped by governance quality, institutional capacity, leadership effectiveness, and contextual implementation. This framework guided the interpretation of the synthesized evidence and provided an integrated explanation of how the BOS program contributes to improving educational quality and promoting educational equity in Indonesian schools.

4. RESULTS AND DISCUSSION

4.1 Result

4.1.1 Educational Financing and Educational Performance: Beyond Financial Allocation

The thematic synthesis identified several recurring patterns regarding the contribution BOS program to educational performance across selected studies. Although the reviewed literature employed diverse methodological approaches and research settings, the findings consistently indicate that the BOS contributes to strengthening school operational capacity, improving instructional quality, enhancing teacher professionalism, and supporting institutional performance. Nevertheless, the magnitude of these improvements varies considerably according to the quality of governance, managerial competence, and contextual implementation. Rather than demonstrating a direct causal relationship between financial allocation and educational outcomes, the reviewed studies collectively suggest that BOS functions as an enabling policy instrument, whose effectiveness depends on schools' ability to transform financial resources into meaningful educational improvements. Table 2 summarizes the synthesized evidence regarding the contribution of BOS to educational performance in the selected studies.

Table 2. Thematic synthesis of BOS contributions to educational performance

Theme	Supporting Studies	Synthesized Findings
Improvement of educational quality	Theoline et al. (2025), Putra (2022), and Maulida and Mulawarman (2025)	BOS improves instructional quality, learning processes, and educational services when financial resources are effectively managed.
Enhancement of school operational capacity	Putra (2022), Simanjuntak et al. (2025), and Adiningrum et al. (2025)	BOS strengthens school operational sustainability by financing learning activities, facilities, and teacher support.
Teacher professionalism	Theoline et al. (2025) and Simanjuntak et al. (2025)	Continuous professional development supported by BOS improves the effectiveness of instruction.
Infrastructure development	Adiningrum et al. (2025) and Maulida and Mulawarman (2025)	BOS facilitates infrastructure improvement that supports the teaching-learning process.
Governance and management	Theoline et al. (2025), Putra (2022), Ramadhani and Hudayati (2024), and Simanjuntak et al. (2025)	Governance quality mediates the relationship between educational financing and school performance.

Table 2 shows the reviewed studies consistently demonstrate that the BOS program contributes positively to educational performance through multiple pathways rather than through a single financial mechanism. The most frequently reported outcomes include improvements in instructional quality, school operational capacity, teacher professionalism, educational facilities and institutional effectiveness. However, the synthesis also revealed that these improvements were not uniformly experienced across schools. Instead, the effectiveness of BOS is strongly influenced by governance quality, managerial competence, and institutional capacity, indicating that financial allocation alone is insufficient to produce sustainable educational improvements.

4.1.2 Educational Financing and Educational Equity in Marginalized Regions

Educational equity emerged as the second dominant theme identified through thematic synthesis. Unlike educational performance, which primarily reflects improvements in teaching quality and school operations, educational equity concerns the extent to which the BOS program provides fair educational opportunities across schools with diverse socioeconomic and geographical conditions. The reviewed studies consistently indicate that the BOS Program has contributed to reducing financial barriers to education and sustaining school operational activities. However, the evidence also demonstrates that equal financial allocations do not necessarily produce equitable educational outcomes. Persistent disparities in institutional capacity, geographical accessibility, infrastructure availability, and local governance continue to influence the effectiveness of BOS implementation, particularly in disadvantaged and marginalized regions. Consequently, the contribution of educational financing to educational equity depends not only on the amount of funding distributed but also on how funding policies accommodate regional diversity and structural inequities.

Table 3. Thematic synthesis of BOS contributions to educational equity

Theme	Supporting Studies	Synthesized Findings
Expansion of educational access	Theoline et al. (2025), Putra (2022), and Romlah et al. (2023)	The BOS reduces financial barriers and supports broader participation in basic education.
Reduction of educational disparities	Wirandana and Khoirunurrofik (2024) and Gumilang et al. (2022)	Fiscal transfers help narrow educational disparities, although regional inequalities remain significant.

Challenges in marginalized regions	Moralli et al. (2023), Bao et al. (2024), and Gumilang et al. (2022)	Schools located in disadvantaged regions experience higher operational costs, infrastructure limitations, and institutional constraints that reduce the effectiveness of BOS.
Institutional capacity	Theoline et al. (2025), Simanjuntak et al. (2025), and Adiningrum et al. (2025)	Differences in managerial and institutional capacities create unequal educational outcomes despite comparable financial allocations.
Policy adaptation	Moralli et al. (2023), Wirandana and Khoirunurrofik (2024), and Gumilang et al. (2022)	More adaptive funding mechanisms are required to address geographical and socioeconomic differences.

Table 3 shows the reviewed studies consistently indicate that the BOS program contributes positively to expanding educational access and supporting the continuity of educational services throughout Indonesia. Most studies report that the program successfully reduces financial barriers for students while enabling schools to maintain their essential operational activities. Nevertheless, the synthesized evidence also demonstrates that improvements in educational equity remain uneven across different regions. Schools located in remote and disadvantaged areas frequently encounter structural challenges, including limited infrastructure, higher operational costs, shortages of qualified teachers, and weaker institutional capacity, all of which reduce the effectiveness of educational financing. These findings suggest that educational equity cannot be achieved solely through equal funding allocation; it requires differentiated policy implementation that reflects regional characteristics and local educational needs.

4.1.3 Governance as the Mediating Mechanism in BOS Implementation

The thematic synthesis identifies governance as the central mechanism explaining variations in the effectiveness of BOS program across Indonesian schools. While the previous sections demonstrate that the BOS program contributes to improving educational performance and expanding educational equity, the reviewed evidence consistently indicates that these outcomes are highly dependent on governance quality rather than financial allocation alone. Schools receiving comparable BOS funding frequently achieve different educational outcomes because they differ in terms of leadership capacity, financial management practices, institutional readiness, and accountability systems. Consequently, governance emerges as the principal mediating factor connecting educational financing, performance, and equity.

Table 4. Thematic synthesis of governance factors influencing BOS implementation

Theme	Supporting Studies	Synthesized Findings
Financial accountability	Putra (2022), Ramadhani and Hudayati (2024), and Astuti and Hanif (2025)	Transparent financial reporting strengthens accountability, improves budget utilization, and increases public trust in the government.
School leadership	Pont (2020), Simanjuntak et al. (2025), and Maulida and Mulawarman (2025)	Effective school leadership facilitates strategic planning, resource allocation, and improvements in schools.
Institutional capacity	Theoline et al. (2025), Simanjuntak et al. (2025), and Adiningrum et al. (2025)	Schools with stronger managerial capacities utilize BOS funding more effectively than schools with limited organizational capabilities.
Digital financial management	Astuti and Hanif (2025), Arma et al. (2026), and Maulida and Mulawarman (2025)	Digital governance improves the transparency, efficiency, and monitoring of BOS implementation.

Policy implementation	Putra (2022), Gumilang et al. (2022), and Adiningrum et al. (2025)	Successful BOS implementation depends on policy adaptation to local institutional and regional contexts rather than uniform administrative procedures.

Table 4 shows governance-related factors consistently emerged as the most influential determinants of BOS effectiveness in the reviewed studies. Although educational financing provides schools with essential operational resources, financial investment alone does not guarantee improvements in educational performance or equity. Instead, transparent financial management, accountable governance, competent leadership, and institutional capacity collectively determine whether BOS funding can be transformed into meaningful educational improvement. These findings indicate that governance functions as an organizational mechanism through which educational financing produces sustainable educational outcomes.

4.2 Discussion

4.2.1 Governance as the Connecting Mechanism

The findings demonstrate that educational financing alone cannot adequately explain the differences in BOS implementation outcomes. Rather, governance has emerged as the key mechanism connecting educational financing with both educational performance and equity. Schools receiving similar financial allocations frequently achieve different outcomes because they differ in leadership quality, institutional capacity, financial accountability, and managerial capability. This finding suggests that governance determines how financial resources are translated into meaningful educational improvement.

These findings reinforce the argument that educational financing should be interpreted as an enabling policy instrument, rather than a direct determinant of educational performance. While Putra (2022), Maulida and Mulawarman (2025), and Simanjuntak et al. (2025) consistently reported the positive effects of BOS implementation on educational quality, they also emphasized that successful outcomes depend on effective financial management, school leadership, and organizational capacity. Similar arguments are proposed by Pont (2020), who suggests that school leadership mediates the relationship between educational investment and outcomes. Consequently, schools receiving comparable financial allocations may demonstrate substantially different educational outcomes because governance quality determines how financial resources are translated into educational improvements. A notable finding of this review is that previous studies have predominantly explained BOS effectiveness from isolated perspectives.

The reviewed studies consistently emphasize the importance of financial accountability in strengthening the implementation of BOS. Ramadhani and Hudayati (2024) found that effective internal control systems and organizational commitment significantly improve financial accountability, thereby increasing the efficiency of educational resource utilization. Similar conclusions were reported by Astuti and Hanif (2025), who argued that transparent financial management enhances public accountability and strengthens institutional trust. Likewise, Putra (2022) demonstrated that accountability is closely associated with improvements in educational quality because transparent resource allocation enables schools to prioritize learning needs effectively. Collectively, these findings suggest that accountability should not be viewed merely as an administrative requirement but as a strategic governance mechanism that supports educational improvement.

Another recurring finding concerns the role of school leadership and its institutional capacity. Pont (2020) argues that school leadership is essential for translating educational investment into improved educational outcomes because leaders determine organizational priorities, allocate resources strategically, and cultivate institutional commitment to continuous improvement. This perspective is supported by Simanjuntak et al. (2025), who reported that competent school leadership strengthens teacher professionalism, improves governance quality, and facilitates effective BOS implementation in schools. Similarly, Maulida and Mulawarman (2025) and Adiningrum et al. (2025) observed that schools with stronger managerial capacities consistently demonstrate higher levels of educational performance despite receiving comparable financial allocations. These findings reinforce the argument that institutional capability mediates the relationship between educational financing and outcomes.

The thematic synthesis also highlights the growing importance of digital governance following recent policy reforms. Several studies have indicated that digital financial management systems improve transparency, accelerate fund disbursement, strengthen financial monitoring, and reduce administrative inefficiencies. However, the benefits of digitalization remain uneven because schools differ considerably in terms of technological readiness, administrative competence, and human resource capacity. Consequently, digital governance should be interpreted as a supporting mechanism that enhances BOS effectiveness when accompanied by sufficient institutional capacity and strong leadership.

Further insight emerging from the reviewed studies concerns the importance of contextual policy implementation. The evidence demonstrates that schools operating in disadvantaged and geographically isolated regions face substantially different institutional conditions than urban schools. Consequently, identical administrative procedures and funding formulas frequently produce unequal outcomes. Gumilang et al. (2022), Adiningrum et al. (2025), and Putra (2022) consistently suggest that adaptive governance and context-sensitive implementation strategies are necessary to maximize the effectiveness of educational financing across diverse educational settings. These findings imply that policy effectiveness depends not only on regulatory compliance but also on the flexibility of implementation mechanisms in responding to local institutional conditions.

Another important finding emerging from the synthesis is the interaction between institutional capacity and educational equity. Several studies indicate that schools receiving comparable BOS allocations often achieve different educational outcomes because their organizational capacities differ significantly. Schools with stronger governance, more competent leadership, and better financial management are generally more successful in utilizing BOS funds to improve educational services than schools that operate under institutional constraints. Therefore, governance quality not only influences educational performance but also determines the extent to which educational financing contributes to equitable educational opportunities across regions.

4.2.2 The Performance Equity Financing Nexus

A comprehensive synthesis of the reviewed studies indicates that the effectiveness of BOS program cannot be adequately explained by financial allocation alone. Rather, educational financing, performance, equity, and governance should be understood as interconnected dimensions within a broader educational policy system. While previous studies have generally examined these dimensions separately, this review demonstrates that governance serves as the principal mechanism linking educational financing with both educational performance and equity. This integrated interpretation provides a more comprehensive explanation of BOS implementation than approaches that emphasize financial accountability or educational outcomes independently.

The findings further suggest that educational performance and equity should not be viewed as competing policy objectives. Instead, improvements in school performance contribute to expanding equitable learning opportunities, and greater educational equity creates conditions that support sustainable improvements in educational quality. Governance quality, including financial accountability, institutional capacity, school leadership, and context-sensitive implementation, determines how financial resources are translated into complementary outcomes. Consequently, strengthening governance should receive equal policy attention to increasing educational investment.

The proposed performance equity financing nexus also explains why educational financing does not automatically eliminate regional educational disparities. Although the BOS program has substantially improved educational participation by reducing direct educational costs for students, Putra (2022) and Romlah et al. (2023) found that BOS has substantially improved educational participation by reducing direct educational costs for students. Similarly, Wirandana and Khoirunurrofik (2024) reported that fiscal transfer policies contribute to reducing regional disparities in educational provision. However, Gumilang et al. (2022) argued that the existing flat-grant allocation formula remains less effective for schools located in disadvantaged and remote regions, because operational expenditures are considerably higher than those of schools in urban areas. These findings suggest that educational financing alone cannot ensure equitable educational outcomes without governance mechanisms that can accommodate regional diversity and institutional differences.

This interpretation is further supported by international evidence demonstrating that educational equity is shaped by structural and contextual conditions beyond financial allocation alone. Moralli et al. (2023) argue that marginalized communities frequently experience structural disadvantages associated with geographical isolation, socioeconomic vulnerability, and limited institutional capacity, all of which constrain access to essential public services, including education. Likewise, Bao et al. (2024) demonstrated that marginalized populations often face cumulative barriers that affect human development and access to public resources. These international findings reinforce the argument that educational equity should be interpreted as a context-sensitive policy objective, rather than a simple consequence of equal financial distribution. Consequently, financing policies designed to improve educational equity must consider institutional readiness and local implementation contexts, in addition to financial allocation.

Accordingly, this review proposes a performance equity financing nexus as an integrated conceptual framework for interpreting BOS implementation in Indonesia. Unlike previous studies that predominantly focused on educational financing, school performance, governance, or educational equity as separate dimensions, the proposed framework demonstrates that these dimensions operate as mutually reinforcing components within the broader educational policy system. Governance functions as a connecting mechanism through which educational financing simultaneously improves educational performance and promotes educational equity. By integrating these interrelated dimensions into a single analytical perspective, the proposed framework extends the existing educational financing literature and provides a more comprehensive explanation of how the BOS Program contributes to sustainable educational development in Indonesia.

4.3 Theoretical Contribution

The principal theoretical contribution of this study is the development of the performance equity financing nexus as an integrated conceptual framework for understanding the effectiveness of BOS program. Existing studies have predominantly examined educational financing, governance, performance, and equity as separate dimensions, resulting in fragmented explanations of BOS implementation. By synthesizing evidence across these dimensions, the proposed framework demonstrates that governance functions as the connecting mechanism through which educational financing simultaneously improves educational performance and promotes equity.

The proposed framework extends the educational financing literature in two important ways. First, it shifts the analytical focus from viewing educational financing as a direct determinant of educational outcomes to understanding financing as an enabling policy instrument whose effectiveness depends on governance quality. Second, it integrates educational performance and educational equity into a complementary rather than competing relationship, demonstrating that improvements in educational quality and equitable educational opportunities reinforce each other when supported by effective governance systems.

This theoretical perspective also contributes to the broader literature on educational governance by highlighting governance as a dynamic implementation mechanism, rather than merely an administrative function. Financial accountability, school leadership, institutional capacity, digital governance, and context-sensitive implementation collectively explain how financial resources are transformed into sustainable educational improvement. Consequently, the Performance–equity–Financing Nexus provides a more comprehensive analytical perspective for future studies examining educational financing policies, particularly in developing countries characterized by significant regional and institutional disparities.

4.4 Policy Implications

From a policy perspective, the findings suggest that future BOS program reforms should prioritize governance alongside financial investment. Policymakers should improve institutional capacity, strengthen school leadership, enhance financial accountability, expand digital financial management, and adopt more adaptive funding mechanisms that reflect regional disparities and local educational requirements. Such measures would improve schools' capacity to utilize BOS resources effectively, while promoting more equitable educational development across Indonesia. The findings also indicate that future educational financing policies should move beyond uniform funding allocations toward more adaptive and equity-oriented financing strategies. Although the BOS program has substantially expanded educational access and reduced financial barriers, regional disparities in institutional capacity and implementation continue to influence policy effectiveness. Therefore, policymakers should consider differentiated funding formulas, targeted capacity-building programs for disadvantaged schools, and governance support tailored to local institutional conditions. Such an approach would strengthen the contribution of the BOS program not only to improving educational access but also to achieving more equitable and sustainable educational outcomes across Indonesia.

5. CONCLUSIONS

5.1 Conclusion

The findings demonstrate that the effectiveness of BOS extends beyond its function as an operational funding mechanism for preschools. Rather, BOS serves as a strategic educational financing policy that contributes to improving educational performance through enhanced instructional quality, school operational capacity, teacher professionalism, and institutional effectiveness, while simultaneously supporting educational equity by reducing financial barriers and expanding educational access. However, these positive outcomes are neither automatic nor uniformly distributed across schools or regions.

The review further reveals that governance constitutes the principal mechanism that explains variations in BOS implementation outcomes. Financial accountability, school leadership, institutional capacity, digital financial management, and context-sensitive policy implementation consistently emerged as critical factors determining whether educational financing could be effectively transformed into improved educational performance and more equitable educational opportunities. These findings indicate that educational financing alone is insufficient for achieving sustainable educational development. Instead, governance quality determines the extent to which financial resources generate meaningful educational outcomes, particularly in disadvantaged and marginalized regions.

The principal theoretical contribution of this study lies in integrating educational financing, performance, equity, and governance into a single analytical perspective, referred to as the performance equity financing nexus. Unlike previous studies that predominantly examined these dimensions independently, this review demonstrates that they operate as interconnected components of the broader educational policy system. This integrated perspective provides a more comprehensive explanation of BOS implementation and extends the existing literature on educational financing by emphasizing governance as the mechanism that links financial investment with educational outcomes.

5.2 Research Limitations

This study is subject to several limitations. First, the review synthesized evidence from 14 empirical studies, which may not fully capture the diversity of BOS implementation across all educational contexts in Indonesia. Second, the analysis relied exclusively on peer-reviewed publications indexed in Scopus and Google Scholar, potentially excluding relevant evidence from government reports and other forms of grey literature. Finally, the findings represent a qualitative synthesis rather than a quantitative meta-analysis; therefore, the magnitude of the relationships among educational financing, governance, educational performance, and educational equity cannot be statistically estimated.

5.3 Suggestions and Directions for Future Research

Future research should expand the evidence base by incorporating additional international databases, grey literature, and more recent empirical studies as educational financing policies continue evolving. Comparative studies across provinces or developing countries are also needed to examine how different governance models influence the effectiveness of educational financing. Furthermore, future empirical research should validate the relationships proposed in the performance equity financing nexus using quantitative approaches, such as structural equation modeling or multilevel analysis, to provide stronger empirical support for the conceptual relationships identified in this review.

AUTHOR CONTRIBUTIONS

AASK contributed to the conceptualization, methodology design, literature search, data analysis, thematic synthesis, and manuscript preparation. R contributed to the validation of the research framework, supervision, critical review, and refinement of the manuscript. LIM contributed to the interpretation of findings, theoretical discussion, manuscript review, and improvement of the final version. All authors have read and approved the final manuscript.

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