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# Evaluation of the Effectiveness of Education Subsidy for Low-Income Community: A Systematic Literature Review

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**A B S T R A C T**

Inequality of access to education in Indonesia is still a major problem, especially for low-income people (MBR). The high dropout rate in this group reflects structural and economic barriers that hinder the sustainability of education. The government responded through education subsidies such as the Smart Indonesia Program (PIP), School Operational Assistance (BOS), and scholarships for poor families. This study evaluates the effectiveness of the program in reducing dropout rates and increasing graduation through the *Systematic Literature Review* (SLR) approach to literature and data for the past five years. The results show that the subsidy has reached around 3.8 million recipients, reduced the dropout rate by 42%, and increased graduation by 68%, with a budget of Rp4.2 trillion. Despite showing moderate efficiency, challenges remain, such as uneven distribution of funds and limited aid. The conclusion of this study is that education subsidies contribute significantly to increasing access and sustainability of education for MBR, but improvements are needed in governance and data collection.

**Keywords**: *Education Subsidies, Low-Income Communities, School Dropouts, Effectiveness.*
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## INTRODUCTION

Inequality in access to education in Indonesia is one of the fundamental problems in efforts to realize social justice and economic mobility between generations. Low-income communities (MBR) are the group most affected by this gap. Children from poor families tend to experience obstacles in continuing their education, both due to limited funds, the lack of educational infrastructure in their area, and the burden of domestic or economic work that they carry from an early age (Yeni, 2024). This inequality not only widens socioeconomic gaps, but also reduces the quality of human resources in the long run.

This inequality phenomenon is reflected in the high dropout rate among MBR. Data from the Central Statistics Agency (BPS) shows that in the 2022/2023 school year, there were more than 40,000 elementary school students, 13,716 junior high school students, and 10,091 high school students who dropped out of school. Most come from poor families, with 76% of cases caused by economic reasons (BPS, 2023). According to GoodStats, which processes the 2024 BPS report, the dropout rate at the elementary level has a percentage of 0.19%, the junior high school level 0.18%, and the vocational school level 0.28%. For the high school level, the dropout rate has decreased from 0.20% to 0.19% (BPS, 2024). When education is not accessible to all levels of society, the principles of inclusion and equality mandated in the 1945 Constitution will not be achieved.

School decisions not only impact individuals, but also impact overall national development. Children who do not complete primary and secondary education are at higher risk of becoming unemployed or working in the low-income informal sector. As a result, it is difficult for them to get out of the structurally inherited cycle of poverty. As explained by

Wardhana et al. (2020), low educational attainment is closely correlated with low income and widening social gaps.

In response to these problems, the government has initiated various education subsidy programs, such as the Smart Indonesia Program (PIP), School Operational Assistance (BOS), and scholarships for the poor. The goal is to provide opportunities for children from MBR to stay in school without being burdened with education costs. These programs target millions of students throughout Indonesia, and have spent a very large budget, as in the last case involving the allocation of Rp4.2 trillion for education subsidies (Rahayu et al., 2025).

However, the effectiveness of education subsidies is still a big question. Some reports show that although the dropout rate has decreased by 42% and the beneficiaries have reached 3.8 million students, the graduation rate has only reached 68%. This shows that education subsidies are not fully optimal in achieving their goals. Problems in the distribution of aid, inaccuracy of targets, and lack of periodic evaluation of program implementation are the main inhibiting factors (Amelia et al., 2025).

For this reason, a comprehensive and systematic evaluation of the effectiveness of education subsidies is needed, especially in the context of decreasing the dropout rate and increasing the graduation rate. This evaluation is important not only to assess the performance of the program that has been running, but also as a basis for formulating more targeted policies in the future. One approach that can be used is the *Systematic Literature Review* (SLR) method, which allows researchers to compile, synthesize, and analyze various findings of previous research in a structured and objective manner.

Through the SLR method, this article seeks to present a comprehensive picture of the extent to which education subsidy programs have an impact on the MBR group. The main focus of this study includes: reducing school dropout rates, increasing graduation rates, number of beneficiaries, and budget use efficiency. With this approach, it is hoped that best practices and challenges that need to be improved in the implementation of education subsidy programs in Indonesia can be identified.

By understanding the effectiveness of subsidy programs more deeply, education policies can be directed to be more inclusive, equitable, and sustainable. The results of this research are expected to be useful not only for policymakers and educational institutions, but also can be a scientific reference in developing a national education system that is more equitable and responsive to the needs of low-income communities.

## METHOD

This study uses *the Systematic Literature Review* (SLR) approach to examine the effectiveness of education subsidies for low-income communities (MBR). SLR was chosen because it allows researchers to review and synthesize various empirical findings in a structured, transparent, and replicable manner (Kitchenham & Charters, 2007; Petticrew & Roberts, 2006).

SLR is carried out through three main stages, namely: identification, filtering, and synthesis. First, the identification process is carried out by searching for relevant scientific articles and education policy reports from 2020 to 2025. Data sources are obtained through academic databases such as Google Scholar, Scopus, DOAJ, Garuda, and Sinta Portal. Keywords used in the search included: education subsidies, education assistance, school dropout rates, poor families, and the effectiveness of education policies.

Second, the screening process is carried out based on inclusion and exclusion criteria. Included articles must: (1) be published in the period 2020–2025, (2) discuss education assistance policies or programs in Indonesia or similar developing country contexts, (3) focus on achievements in the form of school dropout or graduation rates, and (4) be indexed articles or official reports. Meanwhile, articles that are opinion-based, not available in full text, or do not use a scientific approach are not included in the review.

The third stage is data analysis and synthesis. Data from each article that passed the selection stage was extracted using a coding form which included: author name, year of

publication, type of program studied, research method, achievement indicators (dropout rate, graduation rate), number of recipients, and budget value. The analysis was carried out thematically to identify patterns of the effectiveness of education subsidies and factors that support/hinder program implementation. The articles analyzed amounted to 17 articles.

## FINDINGS AND DISCUSSION

*Education Subsidy Program at a Glance*

The education subsidy program in Indonesia is one of the government's strategies to reduce the gap in access to education, especially for low-income people (MBR). Programs that have been widely implemented include the Smart Indonesia Program (PIP), School Operational Assistance (BOS), and Poor Student Scholarships (BSM). These three programs have different focuses but have the same goal, namely to ease the burden of education costs so that children from poor families can complete 12 years of compulsory education. PIP, for example, provides direct cash assistance to students based on data from the Integrated Social Welfare Data (DTKS), while BOS targets educational institutions to finance basic operational activities (Ministry of Education and Culture, 2020).

PIP is a flagship program in providing financial security to students from poor families so that they do not drop out of school. Based on the results of an evaluation conducted by Amelia, Sari & Pranata (2025), this program has effectively reached more than 17 million students since it was first launched, with funding allocations varying depending on the level of education. Elementary school students get assistance of IDR 450,000 per year, while high school students can get assistance of up to IDR 1,000,000 per year. This assistance can be used for school supplies, transportation, and other personal needs.

Meanwhile, BOS is a program to provide operational funds to eligible public and private schools. The funds are not given directly to students, but are intended to finance non-personal needs such as the purchase of books, maintenance of facilities, and the provision of learning aids (Ministry of Education, Culture, Research, and Technology, 2024). The results of research by Nurhadi and Lestari (2021) show that BOS has a positive impact on reducing school levies and increasing student participation, especially in rural areas. The target segmentation of these three programs is quite clear, namely reaching low-income communities recorded in DTKS or through school recommendations for vulnerable poor students but not administratively recorded. This criterion is important to ensure that the subsidy is not mistargeted. The results of the study by Rahayu et al. (2023) confirm that the accuracy of DTKS data is very crucial, because there is a risk of inclusion errors and exclusion errors in the aid distribution process.

According to data compiled by the Ministry of Finance and the Ministry of Education, Culture, Research, and Technology, until 2023, as many as 3.8 million students are actively receiving educational assistance through one of the above programs. This figure reflects a major achievement in efforts to expand access to education for vulnerable groups. Amelia et al. (2025) stated that 56% of the recipients were in rural areas, and 30% were female students who were previously at risk of dropping out of school due to economic and gender reasons. The results of the literature review also show that the implementation of this program is quite effective, although it is not evenly distributed. In some provinces such as NTT and West Papua, the distribution of aid is often delayed due to geographical and administrative constraints. This has an impact on the effectiveness of assistance in reducing the dropout rate directly. Wardhana et al. (2020) emphasized the importance of continuous training and supervision for fund managers in schools so that budget absorption is more efficient and appropriate.

One of the advantages of this program is the integration of data through electronic systems such as SIPINTAR and BOS Salur. This system allows the central government to monitor the use of funds in real time and provide early warning in case of irregularities. Research by Kharisma and Setiawan (2022) concluded that the digitalization of subsidy

distribution increases the transparency and accountability of education funds, as well as reduces the risk of corruption and misappropriation.

However, the effectiveness of the program does not only depend on the amount of funds or the distribution system, but also on the support of the school and household environment. Several studies reveal that students from MBR often still have difficulty completing their education due to non-financial factors such as low learning motivation, housework burden, or early marriage. This indicates the need for synergy between economic intervention and socio-cultural approaches (Suryadi, 2021).

Overall, the overview of education subsidy programs in Indonesia shows positive achievements in expanding access to education, especially for the MBR group. By continuously improving the aspects of distribution, data verification, and utilization monitoring, the effectiveness of this program can be further improved. In addition, an integrated approach between financial assistance and improving the quality of education will be the key to achieving the goals of inclusive and sustainable education development in the future.

*Effectiveness Evaluation*

Education subsidy programs such as the Smart Indonesia Program (PIP) and School Operational Assistance (BOS) have shown positive results in reducing the dropout rate among underprivileged communities. The SLR study found that since the program was implemented, the dropout rate has decreased significantly to 42% from the previous baseline of 50–60% (Amelia et al., 2025). This decline was especially seen at junior high and high school levels, which traditionally had a higher risk of dropping out of school due to economic reasons and learning transitions. These results are in line with findings in the policy evaluation literature that affirm that direct cash assistance to students is able to keep students who are vulnerable to dropping out of school stay at home.

The decline in the dropout rate was also offset by an increase in the graduation rate to 68%, up from the range of 60–62% before the program was expanded (Wardhana et al., 2020; Amelia et al., 2025). This increase shows that subsidies not only encourage students to stay in school, but also support their academic success until completion. There are reports from PIP evaluations in Mojokerto that show that PIP recipients have better attendance and higher academic scores than non-recipients – an important indicator for graduation.

Statistically, there is a positive correlation between the size of the subsidy budget and the achievement of reducing the dropout rate. The cross-district regression model shows that every increase of Rp100 thousand per student per year in subsidy allocation reduces the dropout rate by about 2–3%, although the marginal effect decreases after the disbursement of funds exceeds Rp1 million per student per year (Ministry of Education and Culture, 2024). This emphasizes the importance of maintaining budget proportionality and paying attention to diminishing returns in subsidy allocation.

The policy evaluation also revealed that the effectiveness of subsidies is highly dependent on the timing of disbursement of funds. The PIP implementation study shows that the delay in disbursement has a direct impact on student absence, because they return to help the family economy when the funds have not yet arrived (PSKP Kemendiknas, 2019). Smooth and timely implementation is the key to ensuring the sustainability of children's learning.

The 68% graduation rate can also be attributed to the effectiveness of non-financial assistance provided in conjunction with subsidies (Education Financing Service Center, Ministry of Education and Culture, 2024). Some studies show that when educational institutions provide tutoring, student motivation increases, and graduation rates also increase significantly. These results confirm that cash subsidies need to be accompanied by support services to achieve maximum results. A cross-review of international studies corroborates these findings. For example, in Africa and South Asia, direct subsidies help increase retention rates by 15–25% depending on program design and mentoring mechanisms (Zozoungbo, 2024). These findings are consistent with the PIP-BOS evaluation in Indonesia, which shows that effective program design requires a combination of local and master support systems. However, the study also revealed a diminishing return effect at higher budget levels. Subsidies

above IDR 1 million per student per year do not necessarily significantly increase the graduation rate, unless they are accompanied by quality inputs such as improving the quality of teachers and facilities. This indicates the need for integration between the aid budget and investment in the quality of education. Qualitative analysis of various studies shows that corporations and transparent reporting increase the effectiveness of the use of funds. Data shows that regions with integrated information systems (such as SIPINTAR and BOS Salur) absorb funds faster and fewer cases of abuse, resulting in better dropout rates (Kharisma & Setiawan, 2022).

Last but not least, evaluation shows that regular monitoring and evaluation is very important. A study in Medan found that schools that routinely monitor the use of BOS recorded an effectiveness of up to 89%, compared to the national average of only 68–70%. This emphasizes the importance of a combination of fund disbursement, monitoring, and accountability. Overall, the results of this study confirm that education subsidies such as PIP and BOS are effective in reducing school dropout rates by up to 42%, increasing graduation rates by up to 68%, and showing a positive correlation between fund allocation and program achievement. However, the success of this depends heavily on the timeliness of disbursements, educational assistance, the integrity of the distribution system, and the enforcement of accountability. Comprehensive integration between financial and non-financial aspects is the main foundation for the success of subsidy programs in the education sector (Mashur, M., 2023).

*Budget Efficiency Analysis*

The distribution of education subsidy funds such as PIP and BOS often experiences inequality, especially in 3T areas (disadvantaged, outermost, and remote). The Rethinking the Indonesia Smart Program study revealed that the distribution is not only slow, but also vulnerable to abuse by school officials or parents who are not on target. This condition widens inequality because excellent schools in urban areas receive funds faster, while poor and underdeveloped areas experience delays and uncertainty in distribution. Delays in disbursing funds are one of the fundamental obstacles to the effectiveness of the program. The SMERU report (2020) stated that inaccurate recipient data caused delays in disbursement time, and some poor families did not receive funds on time. This directly impacts student attendance, as families are forced to take their children out of school again to help the household economy (Muliasari, R., Maruapey, M. H., & Subagdja, O., 2023).

The lack of non-financial assistance is also a significant obstacle. Many schools and subsidy recipients have not received training on how to use funds optimally, for example for productive educational needs. The evaluation of SIP (Smart Indonesia Program) shows that without the support of tutoring or workshops, cash aid alone does not provide a significant change in students' academic achievement. The distribution of poverty data from DTKS (Integrated Social Welfare Data) is the backbone of the target of aid utilization. However, this data is also prone to misentry or double identification, which directly hinders recipients who should be getting help. Synchronization between DTKS and NIK is an important pillar so that the distribution is more on target and fair (Romadhoni, I. I., & Qibthiyyah, R. M., 2023).

In addition, the success of the distribution is closely related to collaboration between institutions, especially between the central and regional governments. The social mapping study of assistance shows that the DIKEMAS program at the village level was successfully implemented due to solid support from the local social service and education office. Collaboration like this ensures that goal verification, reporting, and monitoring of the use of funds runs smoothly. DTKS-based data collection has proven to be the foundation for accountability in the distribution of aid. The implementation of the registration system as described in the 2024 UNICEF/Bappenas report shows that data updates allow for real-time checking and management of complaints, so that the data of aid recipients becomes more accurate and efficient for assistance programs such as PIP and BOS (Asnawi, A. R., Wiyono, B. B., & Sunandar, A., 2024).

In addition, the transparency of fund distribution has a positive impact on accountability. Data integration through electronic systems such as SIPINTAR, BOS Salur, and

village social assistance visits shows that digital monitoring has consistently reduced cases of abuse and increased public trust. This transparency also encourages citizen participation in monitoring the flow of funds. The success of the program is also influenced by the real-time reporting system in the regions. The example in Jakarta shows that districts/cities with a digital reporting system have a faster and more responsive performance record of disbursing funds when problems occur, in contrast to rural areas that still rely on manual reports (Sitanggang, D. A., & Jasmina, T., 2023).

Triangulation research shows that when timely disbursement, accurate data collection systems, and non-financial assistance are provided, the impact of subsidies on student attendance and graduation is much greater. This confirms that the success of the program depends not only on the amount of funding, but also on how the program is managed and implemented on the ground. Overall, these findings confirm that supporting factors, namely institutional collaboration, accurate data collection based on DTKS, and transparency systems play an important role in the effectiveness of education subsidies. On the contrary, uneven distribution constraints, delays in funds, and lack of assistance are the main causes of the program's suboptimal achievements. In response to this, improving the implementation system and increasing local capacity are priorities to increase the effectiveness and fairness of education subsidies in the future (Lengkong, J. S. J., Pontoh, S., Kaparang, M., & Kumajas, V. N., 2024).

## CONCLUSIONS

Education subsidies such as PIP, BOS, and scholarships for poor families are strategic efforts to expand access to education, especially for low-income people (MBR). To date, around 3.8 million students have received the benefits of this program in various regions of Indonesia. The program showed a positive impact: the dropout rate decreased by 42%, while the graduation rate increased to 68%. This achievement shows that financial support plays an important role in encouraging the sustainability of education. Proper budget allocation has been proven to correlate with improved educational outcomes. In terms of efficiency, education subsidies have a positive ROI (*Return on Investment*), meaning that state investment produces real benefits. Although the budget is relatively large compared to other countries, the potential for improvement is still open, especially in the distribution and monitoring system of the program. The main obstacles include uneven distribution of funds, slow disbursement, and lack of non-financial support. The success of the program is highly determined by synergy between levels of government, accuracy of DTKS data, and transparency in implementation that builds public trust.

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