

# Impact of Accountability and Transparency on Achieving SDG 4 in Indonesia

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**Abstract:** The primary objective of this research is to evaluate how the openness and responsibility inherent in regional financial disclosures contribute to reaching SDG 4 targets across Indonesia. By examining these governance factors, the study clarifies their role in supporting national educational progress. The study used panel data from 34 provinces for the 2021–2024 period, with a total of 136 observations. Data were obtained from the Supreme Audit Agency (BPK), the Central Statistics Agency (BPS), BAPPENAS, and official local government websites. The analysis was conducted using the Generalized Least Squares (GLS) method with a Random Effect Model (REM) approach. The results show that accountability has a positive and significant effect on the achievement of SDG 4. These findings indicate that the quality of local government financial accountability can improve the effectiveness of education budget management. Transparency also has a positive and significant effect, with a more dominant effect than accountability. Openness of financial information encourages public oversight, increases the efficiency of budget use, and strengthens the implementation of education policies. Simultaneously, accountability and transparency have been proven to support the achievement of SDG 4. The research findings strengthen the perspective of good governance and agency theory in the context of regional financial governance.

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## INTRODUCTION

Introduced in 2016, the SDGs serve as a global roadmap intended to follow and expand upon the vision of the Millennium Development Goals (MDGs), which concluded their term at the end of 2015. This agenda is designed to encourage inclusive, sustainable development, and oriented towards improving community welfare through various interrelated development dimensions. National efforts to realize the SDGs are guided by Presidential Regulation No. 59/2017, which categorizes global objectives into five core strategic areas: advancing human potential, fostering economic growth, ensuring ecological sustainability, enhancing institutional governance, and building collaborative alliances (Amirya & Irianto, 2023; Safitri et al., 2022). One of the goals that has a strategic position in long-term development is SDG 4 concerning quality education. Rather than being viewed solely as a path to personal intellectual growth, education serves as a fundamental engine for economic expansion. It plays a vital role in generating jobs, fostering social advancement, and interrupting the persistence of poverty from one generation to the next. Good quality education contributes to increasing the competitiveness of a region because it produces human resources that are more productive, innovative, and adaptive to change. Maslamah & Mufidah (2025) The fourth Sustainable Development Goal functions as a primary stimulant for enduring growth by advancing the standard of a nation's human capital. Samputri et al. (2025) also state that achieving SDG 4 contributes to enhancing the standard of educational experiences, literacy, and the effectiveness of national education development. This highly strategic position of education makes the success of SDG 4 a crucial indicator in assessing the success of regional and national development.

Progress toward SDG 4 can be measured using several academic metrics, specifically the Gross Enrollment Rate (GER) for general, vocational, and religious secondary education institutions. The Central Statistics Agency (BPS) (2024) established the GER as the primary indicator of access to secondary education because it captures the level of participation in education broadly without limiting the age of students. Ramadhan (2023) explains that the GER reflects the education system's ability to reach the entire school-age population. The use of this indicator is considered relevant because it not only indicates the level of community participation in accessing secondary education but also reflects the education system's capacity to deliver academic programs to the general public. Naharin et al. (2023) explain that the GER reflects the educational capacity of a region and also indicates the level of community involvement in accessing secondary education services. The importance of GER in measuring equitable access to education is also emphasized by Cai & Wolff (2022); Reimers (2024), who state that equitable access to education is a crucial component in supporting sustainable development. Although various educational development programs have been implemented by the government over the past few years, the participation rate in secondary education in Indonesia still shows a significant gap between provinces. Data from 2024 shows that the GER in East Kalimantan reached 98.75%, while Central Papua only reached 53.66%. This significant difference indicates that opportunities for people to obtain secondary education are not evenly distributed and remains a challenge in efforts to achieve SDG 4 targets in Indonesia.

The disparity in educational attainment between regions demonstrates that the triumph of regional educational progress depends on more than just availability of educational facilities or the socioeconomic conditions of the community, but is also influenced by the quality of local government governance in managing public resources. Education budget management requires mechanisms capable of ensuring that all allocated resources are used effectively, efficiently, and on target. Significant attention is directed toward the caliber of regional fiscal management, as it fundamentally influences every stage of the budgetary process—from initial design to final auditing. Evaluating the excellence of regional fiscal administration heavily relies on the accountability of financial documentation. Audit findings released by the Supreme Audit Agency (BPK) serve as a comprehensive reflection of how strictly local authorities adhere to accounting regulations, the robustness of their internal oversight frameworks, the integrity of their financial reporting, and the proficiency with which public funds are utilized. Eisenhardt (1989) explains that accountability mechanisms function to Mitigate the knowledge gap across principals and agents in the management of public resources. Meckling & Jensen (1976) also emphasize that weak oversight can give rise to opportunistic behavior in government financial management. An Unqualified Opinion indicates better financial management quality than other opinions because it reflects a low level of budget irregularities and high compliance with regional financial management regulations. Barus et al. (2025) explain that accountable financial management can increase the effectiveness of education budget utilization through the development of educational facilities, equitable distribution of school facilities, elevating the standards of the teaching workforce while broadening the reach of senior secondary learning opportunities for the populace.

Another equally important aspect of regional government financial governance is transparency. Openness of public information provides the public with the opportunity to understand how regional budgets are planned, used, and accounted for by the government. The community's ability to provide efficient oversight is greatly improved by the disclosure of information concerning the execution of regional budgets and the success rates of government-led development programs. Publication of Regional Government Financial Reports through the official government website, the Information and Documentation Management Officer (PPID), and public information portals is an important means of supporting this information disclosure. The UNDP (1997) places transparency as one of the main principles of good governance because it can improve the quality of public oversight while strengthening accountability in government administration.

Rakhmawati (2018) explains that public information transparency can increase public participation in evaluating the use of education funds and the implementation of regional development programs. The level of transparency among local governments in Indonesia still shows significant variation. Some local governments have provided comprehensive and easily accessible financial information, while others still have limitations in publishing regional financial documents. Sartika et al. (2025) a lack of financial disclosure often results in a higher likelihood of budgetary anomalies and a significant drop in oversight efficiency, ultimately jeopardizing the targeted outcomes of municipal programs.

The dynamics between regional officials and the populace regarding the administration of public wealth are firmly grounded in the Agency Theory proposed in Meckling & Jensen's (1976) Agency Theory, which defines the roles of agents and principals in public administration. This framework highlights how government officials act as agents for the public. This model delineates how an agency connection emerges when one entity (the principal) entrusts another (the agent) with the management and control of resources on their behalf. In a governmental context, the public acts as the mandating party (principal) for the local administration (agent) regarding the management of public funds and development projects. Nevertheless, these interactions are rarely seamless due to divergent motivations and the inherent information asymmetry between the two parties. Local governments have greater access to information regarding the financial management process than the community, potentially giving rise to information asymmetry, moral hazard, and opportunistic behavior. Eisenhardt (1989) to minimize friction between principals and agents, accountability is utilized as a regulatory oversight mechanism that ensures regional actions remain consistent with public expectations. Transparency through the provision of adequate information also plays a role in minimizing the information gap and increasing the public's ability to monitor the use of public funds. Kyere & Ausloos (2021) explain that governance mechanisms, transparency, and oversight are important instruments in increasing the effectiveness of public resource management and organizations. Sui-Ni (2023) also points out that the quality of local government governance plays a crucial role in supporting the effectiveness of educational development and improving the quality of human resources towards Indonesia 2045.

This view is closely related to Good Governance Theory, which developed in response to increasing public demands for more open, accountable, and service-oriented governance. The concept of good governance positions the government not only as a manager of public resources but also as a party obliged to be held fully responsible for reporting all its governmental conduct to the populace. The UNDP (1997) defines good governance as the process of policy-making and implementation that upholds the fundamental pillars of information disclosure, fiscal responsibility, inclusive involvement, and regulatory conformity. To ensure that regional administrations are both high-performing and attuned to public demands, the integration of these principles is essential. Significant focus is placed on accountability and transparency, as they are intrinsically linked to the excellence of municipal financial administration. In this context, transparency involves the public release of fiscal records, whereas accountability is measured by the reliability of a government's financial justifications (Kurniawati et al., 2024; Tapalona et al., 2023). Accountable and transparent financial management provides greater opportunities for local governments to allocate resources effectively, including in the education sector. The proficient allocation of schooling capital is projected to enhance secondary participation rates, upgrade institutional offerings, and catalyze the equitable fulfillment of global educational goals within all regions.

The role of governance in supporting regional development has been the focus of various studies in the fields of public sector accounting and public administration. Evidence consistently demonstrates a strong correlation between the integrity of state resource management and the overall performance of public-sector programs, ensuring that budgetary funds are utilized with maximum efficiency. Kurniawati et al. (2024) a strong correlation exists between the application of governance standards and the efficacy of long-term

development goals, as these principles enhance the oversight of public wealth and cultivate institutional credibility. Furthermore, scholarly investigations into financial disclosure and answerability have produced largely convergent data. Marinah et al. (2023) Establishing transparency within the stewardship of learning resources has been shown by Marinah et al. (2023) to foster significant advancements in the standard of regional educational delivery, while Barus et al. (2025) explained that accountability in financial management is related to the effectiveness of education sector development. These findings are supported by Aji & Wahyudin (2025), established that the integrity of regional financial oversight is a primary driver for the effective delivery of public programs,. Despite this finding, most academic inquiries prioritize fiscal disclosure factors over the direct correlation between governance integrity and the attainment of the Sustainable Development Goals. In particular, utilizing the Gross Enrollment Rate (GER) as a tool for gauging SDG 4 progress remains an uncommon practice within public sector accounting literature of Senior High Schools (SMA/SMK/MA) and equivalent schools as an indicator of SDG 4 achievement is also rare in public sector accounting literature. This research distinguishes itself from previous investigations by shifting the focus from viewing accountability and transparency as mere indicators of financial integrity to examining their direct influence on SDG 4 attainment. Through the lens of the Gross Enrollment Rate (GER) for secondary schooling in various Indonesian regions, the study seeks to elucidate the critical link between effective fiscal governance and the advancement of sustainable educational development.

The conceptual the theoretical foundations on Agency Theory and Good Governance Theory, which position accountability and transparency as crucial instruments for effective public resource management. High accountability reflects better quality financial accountability, potentially increasing the effectiveness of education budget use, strengthening oversight of education program implementation, and expanding access to secondary education for the community. Barus et al. (2025) explain that financial management accountability has a positive relationship with the effectiveness of education sector development, while Aji & Wahyudin (2025) scholarly findings highlight that superior governance standards are essential for fostering policy efficacy, as the synergy between transparency and financial responsibility allows for more streamlined and responsive public-sector management. High transparency also provides opportunities for the public to monitor the use of the education budget, thereby improving the accuracy of targeting education development programs. Marinah et al. (2023); Sartika et al. (2025) suggests that fiscal openness maintains a positive correlation with the caliber of educational delivery and the overall efficacy of academic program implementation. The relationship between these two variables becomes increasingly important when accountability and transparency are applied simultaneously in regional financial management. Sumual et al. (2024); Utama & Setiyani (2014) explain that the synergy of accountability and transparency can strengthen the quality of governance and the effectiveness of public sector development. Drawing upon theoretical frameworks and prior empirical findings, this inquiry posits three central hypotheses. The first hypothesis (H1) suggests that the credibility and precision of state fiscal records foster the realization of SDG 4 in Indonesia, while the second (H2) asserts that public information disclosure yields a favorable impact on these educational targets. Furthermore, the third hypothesis (H3) proposes that the joint influence of transparency and fiscal responsibility significantly enhances SDG 4 attainment. Theoretically, this research bolsters the applicability of Agency and Good Governance models in elucidating how municipal financial oversight correlates with long-term development. Empirically, the study distinguishes itself by employing the Gross Enrollment Rate (GER) for secondary education as a benchmark for SDG 4 success, thereby evaluating the intersection of governance standards and national academic progress.

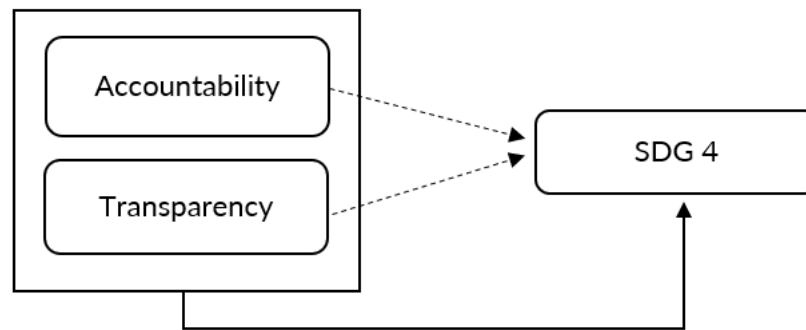


**Figure 1.** Research Model

## RESEARCH METHOD

To ensure the data remained relevant to the investigative goals, the researchers utilized a judgmental sampling approach, choosing cases based on predetermined standards that align with the study's focus. The study population included all 38 provincial governments in Indonesia. Four provinces were excluded from the sample because they lacked complete Sustainable Development Goals (SDG) data, particularly SDG 4 indicators, for the 2021–2024 period. Data for these four provinces were only available for 2021 and 2022, thus not meeting the requirements for panel data analysis. Based on these criteria, the final sample size was 34 provinces, with an observation period of four years, 2021–2024. A total of 136 observations were made (34 provinces  $\times$  4 years). The data used were secondary data sourced from official Indonesian government agencies. SDG 4 data was obtained from the Central Statistics Agency (BPS), accountability data from the Supreme Audit Agency (BPK), and transparency data from official local government websites, the PPID (Information and Communications Information System), the JDIH (Information and Communications Information System), open data portals, and archives from the Regional Finance Agency or Office.

To evaluate the data, this study utilized the Generalized Least Squares (GLS) technique within a Random Effect Model (REM) framework. The decision to use REM was dictated by the outcomes of several diagnostic tests tailored for panel data analysis. The GLS approach was chosen because it is able to produce more efficient estimators in panel data models and is able to accommodate variance-covariance structure problems such as heteroscedasticity and autocorrelation (Hou & Zhang, 2025; Poojari et al., 2025). The use of REM also allows the model to capture heterogeneity in characteristics between provinces that cannot be directly observed. Testing of classical assumptions in this study focused on normality and multicollinearity tests. The normality test was conducted to examine the distribution of model residuals, while the multicollinearity test was used to identify correlations between independent variables. Heteroscedasticity and autocorrelation tests were not conducted separately because the GLS approach has accommodated these problems in model estimation (Huda et al., 2025; Hutagaol, 2025). Hypothesis testing was carried out using simultaneous tests (F tests) and partial tests (t tests) to determine the influence of independent variables on dependent variables both jointly and individually (Aflah et al., 2025; Lestari et al., 2026).

## Operational Variables and Empirical Models

**Tabel 1.** Operational Variables

| Variable | Operational Variables                                                                                                | Data source                                                     |
|----------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| SDG 4    | This variable represents the achievement of SDG Goal 4 in terms of access to secondary education, as measured by the | BPS <a href="https://www.bps.go.id/">https://www.bps.go.id/</a> |

| Variable       | Operational Variables                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Data source                                                                                                            |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
|                | Gross Enrollment Rate (GER) for senior high schools (SMA/SMK) and equivalent schools across provinces. The GER is used as a proxy because it broadly reflects the level of access and participation in education without limiting the age of students. The GER is considered more relevant than the Net Enrollment Rate (NER) because it reflects the overall capacity of secondary education in a region. The unit of measurement is percentage (%) at the provincial level.                                                                                                                                                                                                                                 |                                                                                                                        |
| Accountability | Accountability is measured using the Audit Board of Indonesia (BPK) audit opinion on the Regional Government Financial Report (LKPD) with an ordinal scale of 1–4, namely: 1 = Disclaimer (TMP/Disclaimer), 2 = Unqualified (TW), 3 = Qualified with Exceptions (WDP), and 4 = Unqualified (WTP). The use of the BPK audit opinion as an indicator was chosen because the audit opinion is able to reflect the quality of regional government financial management and accountability, the level of compliance with government accounting standards, and the effectiveness of the internal control system. A higher score indicates a better level of accountability and quality of financial accountability. | Badan Pemeriksa Keuangan<br><a href="https://www.bpk.go.id/">https://www.bpk.go.id/</a>                                |
| Transparency   | Transparency is measured based on the availability of seven LKPD components published through official local government channels. This indicator was chosen because it reflects the level of openness of local government financial information to the public. Each component is assigned a dummy value of 1 if it is available and publicly accessible, and 0 if it is not. The components include: 1) LRA, 2) LPSAL, 3) Balance Sheet, 4) LO, 5) LAK, 6) LPE, and 7) CaLK. Furthermore, the transparency variable is classified as 1 if the local government meets the transparency criteria set out in the study and 0 if it does                                                                          | Official website of the Regional Government/PPID/JDIH/Open Data; archives of the Regional Financial Agency/Department. |

| Variable | Operational Variables    | Data source |
|----------|--------------------------|-------------|
|          | not meet these criteria. |             |

Source: Processed by Researchers, 2026

The empirical model used in this study is formulated as follows:

$$\text{Sdg4}_{it} = \beta_0 + \beta_1 \text{Accountability}_{it} + \beta_2 \text{Transparency}_{it} + \text{eit} \dots \dots (1)$$

## RESULTS AND DISCUSSION

### Descriptive Statistics

The distributional features of the research variables are elucidated through descriptive statistics, which encompass the mean values, standard deviations, and extreme limits. Table 2 presents the results of this preliminary data assessment.

**Table 2.** Descriptive Statistics

| Variable       | Obs | Mean   | Std. dev | Min   | Max   |
|----------------|-----|--------|----------|-------|-------|
| Sdg4           | 136 | 87.046 | 5.147    | 79.02 | 98.44 |
| Accountability | 136 | 3.566  | 0.497    | 3     | 4     |
| Transparency   | 136 | 0.588  | 0.493    | 0     | 1     |

Source: Secondary data, STATA-17 output, 2026

Descriptive analysis of the 136 data points reveals a high level of educational progress, with an average SDG 4 score of 87.046 and a relatively narrow dispersion (SD = 5.147). Although regional gaps exist—evidenced by a range from 79.02 to 98.44—the overall achievement remains substantial and stable. In terms of governance, provincial accountability is generally categorized as high (mean = 3.566), showing minimal variance. Conversely, transparency scores (mean = 0.588) highlight a more polarized landscape, where a significant number of regions have yet to fulfill the established disclosure benchmarks. These diverse governance profiles suggest a potential influence on the nationwide attainment of SDG 4 targets.

### Correlation Test

**Table 3.** Correlation

| Variable       | SDG 4          | Accountability  | Transparency |
|----------------|----------------|-----------------|--------------|
| SDG 4          | 1.000          |                 |              |
| Accountability | 0.103<br>0.228 | 1.000           |              |
| Transparency   | 0.242<br>0.004 | -0.129<br>0.133 | 1.000        |

Source: Secondary data, STATA-17 output, 2026

Based on the correlation results, the relationship between SDG4 and accountability shows a correlation value of 0.103 with a p-value of 0.228, which means the relationship between the two is positive but very weak and not statistically significant. Meanwhile, the relationship between SDG4 and transparency has a correlation value of 0.242 with a p-value of 0.004, which indicates a stronger positive relationship than accountability and is statistically significant, so that increased transparency tends to be followed by an increase in SDG4 achievements. On the other hand, the relationship between accountability and transparency

shows a correlation value of -0.129 with a p-value of 0.133, which indicates a weak and insignificant negative relationship, meaning that the two variables do not have a strong relationship in this study's data. Overall, these results indicate that transparency has a more relevant relationship to SDG4 than accountability, while the relationship between the independent variables does not show any indication of serious multicollinearity problems.

### Model Feasibility Test

**Table 4.** Model Feasibility Test

| Model Feasibility                                           | P > Value |
|-------------------------------------------------------------|-----------|
| <i>Fixed Effect Model (Chow Test) fem vs cem</i>            | 0.000     |
| <i>Random Effect Model (Hausman Test) fem vs rem</i>        | 0.423     |
| <i>Random Effect Model (Lagrange Multiplier) rem vs cem</i> | 0.000     |

Source: Secondary data, STATA-17 output, 2026

According to the statistical outputs in Table 4, the Random Effect Model (REM) was selected as the primary analytical framework for this study. This decision was based on a Chow test p-value of 0.000, which ruled out the Common Effect Model, and a Hausman test result of 0.423, which established statistical equivalence between the Fixed and Random Effect models. Given that the Lagrange Multiplier test also prioritized REM over the pooled model ( $p = 0.000$ ), the study concludes that REM provides the most consistent and efficient estimation for the dataset.

### Multicollinearity Test

**Table 5.** Multicollinearity Test

| Variable       | Vif  | 1/Vif |
|----------------|------|-------|
| Accountability | 2.27 | 0.440 |
| Transparency   | 2.27 | 0.440 |
| Mean Vif       | 2.27 |       |

Source: Secondary data, STATA-17 output, 2026

The absence of multicollinearity within the regression framework is confirmed by the metrics in Table 5, where Accountability and Transparency each recorded a VIF of 2.27 and a corresponding tolerance level of 0.440. These values satisfy the necessary classical assumptions, as the VIF is significantly lower than the standard limit of 10. Consequently, the Mean VIF of 2.27 demonstrates that the independent variables are not overly correlated, ensuring the model's eligibility for subsequent hypothesis testing.

### Normality Test

**Table 6.** Normality Test

| Skewness and Kurtosis | P > Value |
|-----------------------|-----------|
| Residual              | 0.000     |

Source: Secondary data, STATA-17 output, 2026

Based on the results of the Skewness and Kurtosis test, a p-value of 0.000 was obtained, indicating that the residuals are not normally distributed. This value indicates a deviation in the residual distribution, both in terms of skewness and kurtosis. However, this condition does not affect the feasibility of the research model because the estimation was carried out using the Generalized Least Squares (GLS) approach in the Random Effect Model (REM), which is relatively more robust against violations of the normality assumption than Ordinary Least Squares (OLS). Furthermore, in panel data analysis, residual normality is not a primary

requirement for obtaining a consistent and efficient estimator. Therefore, hypothesis testing can still be carried out and the estimation results can still be used to draw research conclusions.

### F Test (Simultaneous)

**Table 7.** F Test (Simultaneous)

| Variable | P > Value |
|----------|-----------|
| SDG4     | 0.000     |

Source: Secondary data, STATA-17 output, 2026

As demonstrated by the p-value of 0.000 in Table 7, the research model meets the criteria for high feasibility. Since this value is lower than 0.05, it can be inferred that Accountability and Transparency, when acting together, significantly impact SDG 4 achievement. This result underscores the robustness of the estimated regression framework in capturing the dynamics of the dependent variable.

### T Test (Partial)

**Table 8.** T (Partial)

| Variabel       | Coefficient | P > Value |
|----------------|-------------|-----------|
| Cons           | 80.401      | 0.000     |
| Accountability | 1.343       | 0.015     |
| Transparency   | 3.092       | 0.000     |

Source: Secondary data, STATA-17 output, 2026

As detailed in Table 8, the regression constant stands at 80.401, signifying a statistically robust starting point for SDG 4 outcomes. The results substantiate that regional accountability exerts a positive pressure on educational targets, where a single-unit increase facilitates a 1.343-point advancement in Gross Enrollment Rates. Moreover, fiscal transparency demonstrates a more pronounced impact compared to accountability, as evidenced by its higher coefficient of 3.092. This suggests that local governments with superior information disclosure mechanisms achieve significantly higher educational participation levels.

## Discussion

### The Influence of Accountability on SDG 4

The positive and significant correlation between accountability and SDG 4 attainment highlights the pivotal role of governance quality in broadening educational participation,. Grounded in Agency Theory, these mechanisms function to bridge the transparency gap between the state and the public, ensuring that resource management remains aligned with communal interests rather than opportunistic goals,. As noted by Barus et al. (2025), superior accountability standards allow for a more targeted distribution of the education budget, which is instrumental in harmonizing schooling access across diverse Indonesian regions,. Strengthening these frameworks is a strategic necessity for provinces currently struggling with low regional fiscal capacity and significant disparities in secondary education reach.

The correlation results indicate a positive but insignificant relationship between accountability and SDG 4. However, multivariate regression testing of accountability demonstrated a positive and significant effect on SDG 4. These differences indicate that the influence of accountability cannot be fully explained by a simple bivariate relationship. After the model simultaneously considered the influence of transparency, the partial effect of accountability on the achievement of SDG 4 became more clearly identified. These findings indicate that the relationship between accountability and SDG 4 achievement is more accurately interpreted based on

multivariate regression results, which are able to capture the partial effects of each variable compared to simple correlation analysis.

The empirical evidence confirms hypothesis (H1) and corroborates the findings of Barus et al. (2025), suggesting that robust accountability leads to more precise and efficient budget administration,. Furthermore, this study aligns with Aji & Wahyudin (2025), who posit that the caliber of fiscal governance is a primary driver for the successful execution of public policies,. In the Indonesian context, provincial accountability is benchmarked by Unqualified Opinions (WTP) from the Supreme Audit Agency (BPK), which signify high standards of internal control and strict adherence to accounting regulations,. Ultimately, fostering administrative integrity not only bolsters public confidence but also serves as a fundamental pillar for realizing SDG 4 by broadening access to secondary schooling across the nation.

### **The Influence of Transparency on SDG 4**

The test results indicate that transparency has a positive and significant impact on the achievement of SDG 4 in Indonesia. The good governance perspective explains that transparency is a crucial instrument in strengthening public oversight of local government budget utilization. When financial and planning data are made transparent, the public can better monitor how education funds are allocated and utilized. Such accessibility is crucial for enhancing the impact of community-led supervision and preventing budget mismanagement. Through more effective oversight, local governments are encouraged to allocate education budgets more precisely, thus supporting the provision of educational facilities, improving the quality of educational services, and expanding access to secondary education, as reflected in the increase in the GER. This phenomenon is relevant to the condition in Indonesia, which still has differences in the level of public information disclosure between provinces, especially local governments that have not optimally published financial reports through official government websites.

The findings of this inquiry validate hypothesis (H2) and reinforce the conclusions of Marinah et al. (2023), who argue that accessibility to public data is a primary catalyst for higher educational standards. Furthermore, the results corroborate the work of Sartika et al. (2025), suggesting that fiscal openness enhances program success by empowering community-led monitoring. By facilitating social oversight of budget allocations and facility distribution, transparency enables the public to hold regional authorities accountable, ultimately leading to more precise and effective educational policies. This evidence underscores that transparency transcends mere financial reporting; it is a critical instrument for optimizing provincial education governance to meet SDG 4 objectives.

### **The Impact of Accountability and Transparency on SDG 4**

Evidence from this study suggests that the simultaneous integration of fiscal transparency and accountability serves as a potent engine for propelling the education sector toward global sustainability benchmarks,. This highlights that the caliber of regional financial stewardship is a fundamental prerequisite for academic development. Drawing on Agency Theory, these governance pillars function as regulatory instruments that mitigate information imbalances between state authorities and the citizenry,. While accountability ensures that expenditures remain ethically and legally sound, transparency facilitates comprehensive public access to educational budget data. The convergence of these elements bolsters administrative efficacy, fiscal efficiency, and the precision of regional schooling initiatives, making them particularly vital for overcoming the persistent regional imbalances in Indonesian educational access.

The findings validate hypothesis (H3) and echo the scholarly work of Sumual et al. (2024) and Utama & Setiyani (2014), which underscores how the interplay between fiscal openness and responsibility optimizes the administration of public funds. By integrating these two pillars, regional authorities can manage academic budgets with greater precision while fostering active citizen engagement in policy oversight. Such

participatory monitoring is vital for curbing budget mismanagement and elevating the standard of educational delivery, which in turn drives up the Gross Enrollment Rate (GER) for various secondary institutions, including SMA, SMK, and MA. This confirms that the elevation of local governance standards is a decisive element in realizing the full potential of SDG 4 within Indonesia.

## CONCLUSION

The investigation concludes that the integrity and accessibility of provincial fiscal records are fundamental determinants for the successful realization of SDG 4 targets in Indonesia. These elements work in tandem to optimize the delivery of academic services and ensure that educational goals are met with greater efficiency. Specifically, superior accountability—benchmarked by BPK audit results—is directly linked to broader access to secondary schooling. Furthermore, the disclosure of financial data through transparent reporting enhances budgetary efficiency by facilitating rigorous public monitoring. These results highlight that reinforcing the dual pillars of governance is essential for advancing national educational equity and sustainability.

The findings suggest that regional authorities must prioritize the enhancement of their transparency and accountability frameworks by solidifying internal oversight and adhering strictly to national accounting benchmarks. Such improvements in financial stewardship are vital for optimizing educational spending and fostering the fair attainment of SDG 4 goals nationwide. However, the current model is constrained by its exclusive focus on two governance indicators as determinants of success. Factors such as provincial economic status, budgetary capacity, and demographic profiles—which were not modeled here—likely also sway Gross Enrollment Rates, potentially leading to omitted variable bias. Consequently, future investigations should incorporate these multidimensional control variables to yield a more holistic understanding of Indonesia's SDG 4 landscape.

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