

Research Article

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Determinants of BOSP Honorarium Allocation Compliance in Indonesian Junior High Schools: A Logistic Regression Analysis of School-Level Resource Disparities

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Abstract: *This study examines the determinants of School Operational Assistance (BOSP) honorarium compliance under the Ministry of Primary and Secondary Education Regulation No. 8 of 2025, which limits honorarium allocations. Integrating Agency Theory, this study employs a binary logistic regression model with province fixed effects to analyze a nationwide dataset of 32,923 Indonesian junior high schools. The empirical results show that private school status ($OR = 0.70, p < 0.001$), certified teacher ratio ($OR = 0.56, p < 0.001$), and larger budget size ($OR = 0.76, p < 0.001$) significantly lower the odds of budget non-compliance, acting as key protective factors. For example, holding other factors constant, increasing the certified teacher ratio from 0.42 to 0.52 reduces the predicted probability of non-compliance from 38.4% (the national average) to 37.1%. In contrast, higher student-teacher ratios ($OR = 1.01, p < 0.001$) act as a significant risk factor, increasing non-compliance and rejecting the protective hypothesis. This indicates that crowded or understaffed schools face severe operational pressure to hire informal teachers, forcing administrators to violate spending caps to keep classrooms functional. The findings suggest that BOSP non-compliance is largely driven by structural teacher distribution deficits, although administrative factors cannot be entirely ruled out. To enhance public accountability and prevent decoupling, policymakers should transition from rigid caps to dynamic, resource-based caps while expanding affirmative teacher certification programs.*

Keywords: *BOSP compliance, honorarium cap, teacher certification, Indonesia junior high schools, school-based management.*

Introduction

Educational financing serves as a critical pillar for sustaining and improving the quality of school systems globally (Mudiawati et al., 2025). Under modern public management paradigms, School-Based Management (SBM), formally known in Indonesia as Manajemen Berbasis Sekolah (MBS), has emerged as a prominent approach that delegates budgetary, personnel, and curricular authority to school-level administrators (Aliyyah et al., 2020). In Indonesia, the primary fiscal instrument supporting this autonomy is the School Operational Assistance (Bantuan Operasional Sekolah/BOS, now unified as BOSP) program (World Bank, 2020).

However, the implementation of SBM in Indonesia has exposed severe systemic tensions between the compliance mandates of the central government and the operational survival needs of individual schools. While BOSP is legally earmarked to finance quality-improving, non-personnel inputs, schools nationwide consistently divert a massive proportion of these funds to pay the salaries of informal, school-contracted honorary teachers (guru honoror) (Davi & Jabar, 2024). This systemic diversion is largely driven by a chronic national deficit and unequal distribution of certified civil servant (PNS/ASN) teachers. Central teacher placement policies have historically failed to supply sufficient permanent teachers to rural, remote, and private schools. As a result, school principals use their SBM administrative discretion to hire local

honorary teachers to prevent classroom disruption (Jahudin et al., 2025). Consequently, schools become heavily dependent on BOSP allocations to cover basic payroll liabilities, setting up a major policy dilemma.

While localized qualitative studies have extensively explored the bookkeeping and administrative aspects of BOSP and its digital platform ARKAS (Davi & Jabar, 2024; Piri et al., 2025), there is a critical gap in large-scale, nationwide empirical models examining structural resource determinants. Most existing analyses fail to quantify how rigid central caps interact with localized teacher shortages and institutional status. Therefore, the objective of this study is to analyze the structural, financial, and institutional determinants of BOSP honorarium compliance using a comprehensive national dataset of 32,923 Indonesian junior high schools for the 2025 fiscal year. By applying binary logistic regression with province fixed effects, this study aims to evaluate the role of institutional status, certified teacher ratios, and staffing density to provide evidence-based insights for transitioning from rigid administrative caps to dynamic, resource-aligned fiscal policies.

Today, BOSP is governed under central administrative guidelines including the Ministry of Primary and Secondary Education Regulation No. 8 of 2025, and is monitored through the national digital budgeting platform, ARKAS. Despite these mechanisms, evaluations by the central government indicate ongoing challenges in fund utilization. Allocating a large share of BOSP to honorariums directly crowds out necessary investments in quality-enhancing inputs (World Bank, 2020). To curb this effect, the government has enacted strict caps on honorarium spending, tightened further under Regulation No. 8 of 2025 to a 20% cap for public junior secondary schools (SMP Negeri) and a 40% cap for private schools (SMP Swasta). This regulatory design assumes that public schools are already supplied with government-funded civil servant teachers. Therefore, it is proposed in Hypothesis 1 (H1): Private school status is negatively associated with BOSP honorarium non-compliance.

Teacher professional certification serves as a powerful indirect fiscal subsidy. Under Law No. 14 of 2005, certified teachers receive the Teacher Professional Allowance (TPG) funded directly by the central government via the earmarked Dana Alokasi Khusus (DAK) Non-Fisik, bypassing the school's BOSP budget (Elvira, 2021). A high ratio of certified teachers relieves a school's operational payroll burden, whereas schools with low certification ratios must cover compensation out of BOSP. Based on this, it is proposed in Hypothesis 2 (H2): A higher ratio of certified teachers is negatively associated with BOSP honorarium non-compliance.

Furthermore, absolute funding size and student-teacher ratios (STR) dictate a school's operational constraints. Larger BOSP budgets provide scale economies to absorb personnel costs (Wooldridge, 2010), insulating larger schools from breaching strict percentage-based spending caps (Diana et al., 2026). Meanwhile, STR serves as an indicator of staffing efficiency and classroom density. Assuming a higher STR reflects administrative staffing efficiency rather than severe understaffing, it is proposed in Hypothesis 3 (H3): Total BOSP budget size (log-transformed) is negatively associated with BOSP honorarium non-compliance, and Hypothesis 4 (H4): A higher student-teacher ratio is negatively associated with BOSP honorarium non-compliance.

Agency Theory (Eisenhardt, 1989) reframes non-compliance as a rational response to goal conflict and asymmetric information. Under Becker's (1968) Rational Choice Theory, school leaders calculate that the utility of violating spending caps to maintain classroom instruction exceeds the nominal penalties of non-compliance. Furthermore, Etzioni's (1961) Organizational Compliance Framework explains that schools are normative organizations driven by moral commitments to education. Imposing rigid, utilitarian-coercive controls without addressing the underlying teacher shortage may theoretically trigger

organizational decoupling or cosmetic compliance, where administrators reclassify actual honorary teacher payments into other allowable accounts solely to satisfy system verification protocols on paper.

Method

This study employs a quantitative research approach with an explanatory research design to analyze the structural, financial, and institutional determinants of budget compliance among junior high schools in Indonesia. By utilizing a nationwide, school-level dataset, this research examines the causal and predictive relationships between institutional arrangements, resource distribution, and regulatory compliance.

The primary analytical instrument employed in this study is a binary logistic regression model, which is mathematically suited for modeling categorical, binary outcomes based on a set of continuous and discrete covariates (Greene, 2019; Hosmer et al., 2013). The variables are operationalized as follows:

- a. **Dependent Variable (BOSP Non-Compliance):** This is measured as a binary indicator (Y_i) representing school-level budget violation. It is assigned a value of 1 if a school's actual verified expenditures (realisasi) on honorary teacher salaries exceed the regulatory limits mandated by Permendikdasmen No. 8 of 2025 (i.e., >20% of the total BOSP allocation for public schools, or >40% for private schools), and 0 if the school remains within these spending caps. It is acknowledged that schools might engage in cosmetic compliance by misreporting honorarium expenses under other categories, which this variable cannot fully capture.
- b. **Institutional Status (Private):** A dichotomous design variable coded as 1 for private junior high schools (SMP Swasta) and 0 for public junior high schools (SMP Negeri) to examine the protective effect of relaxed regulatory thresholds.
- c. **Certified Teacher Ratio (CertRatio):** A continuous variable representing the proportion of school teachers who hold national professional teaching certificates (Sertifikat Pendidik) relative to the total teaching staff. This captures the level of indirect personnel subsidies received from the central government.
- d. **Budget Size (LnBudget):** The natural logarithm of the total annual BOSP allocation received by the school. This logarithmic transformation stabilizes the variance, controls for extreme outliers, and allows for the estimation of semi-elasticity relationships (Wooldridge, 2010).
- e. **Student-Teacher Ratio (STR):** A continuous variable representing the registered student enrollment divided by the total number of teachers, serving as an indicator of classroom density and staffing pressure.

All statistical estimations, model fitting, and diagnostics were performed using maximum likelihood estimation in a standardized econometric environment (Greene, 2019; Hosmer et al., 2013).

The dataset was constructed by integrating and merging two distinct administrative databases managed by the Ministry of Primary and Secondary Education of the Republic of Indonesia for the 2025 fiscal year:

- a. **Data Pokok Pendidikan (DAPODIK):** The national education database, which provides comprehensive data on school characteristics, student enrollment, and teacher profiles (including certification status).
- b. **Aplikasi Rencana Kegiatan dan Anggaran Sekolah (ARKAS):** The national digital budgeting system used by schools to draft, record, and report BOSP planning and real-time expenditures.

Data matching was executed via a deterministic record linkage procedure using the Nomor Pokok Sekolah Nasional (NPSN), a unique, eight-digit school national identification number as the primary key. The target population consists of junior high schools (Sekolah Menengah Pertama/SMP) across all 38

provinces in Indonesia. The raw merged dataset was subjected to rigorous data-cleaning protocols. Schools with missing financial accounts, zero student enrollment, or anomalous staffing configurations (such as zero teachers) were excluded. To address potential bias from extreme data points and measurement errors, continuous variables (STR and BOSP budget allocations) were trimmed using a 1% winsorization technique at both tails of the distribution (Greene, 2019). This data preparation resulted in a final, robust sample of 32,923 junior high schools.

To evaluate the probability of a school violating the BOSP honorarium spending caps, a cumulative logistic distribution model is specified (Greene, 2019; Hosmer et al., 2013). The log-odds of budget non-compliance are modeled as a linear function of the predictors:

$$\ln \left(\frac{P(Y_i = 1|X_i)}{1 - P(Y_i = 1|X_i)} \right) = \beta_0 + \beta_1 Private_i + \beta_2 CertRatio_i + \beta_3 LnBudget_i + \beta_4 STR_i + \sum_{p=1}^{38} \gamma_p Province_{p,i} + \varepsilon_i$$

where:

- $P(Y_i=1)$ represents the probability that school i is non-compliant with the honorarium cap.
- $\beta_1, \beta_2, \beta_3$, and β_4 are the parameters to be estimated for the primary school-level predictors.
- $Province_{p,i}$ represents a set of regional dummy variables included to capture province fixed effects (γ_p). These fixed effects control for unobserved regional heterogeneity, such as spatial disparities in teacher supply, regional economic wealth, and localized civil servant hiring quotas (May & Winter, 2007).
- ε_i is the stochastic error term.

The estimated coefficients (β_k) are exponentiated (e^{β_k}) to obtain the odds ratios (OR). An $OR < 1.0$ indicates that the variable acts as a protective factor (decreasing the odds of non-compliance), while an $OR > 1.0$ indicates a risk factor that increases the odds of a budget violation (Greene, 2019; Hosmer et al., 2013). Statistical significance is evaluated at the 95% confidence level ($\alpha = 0.05$) with standard errors robust to heteroscedasticity.

Prior to estimation, Variance Inflation Factor (VIF) tests were conducted; VIF values for all predictors were below 2.5, indicating no significant multicollinearity. Additionally, several robustness checks were performed, including models without province fixed effects and models with clustered standard errors at the district level, which yielded consistent directional effects. Finally, two methodological limitations must be noted. First, due to data constraints, it was not possible to control for the principal's managerial capacity. Second, there is a potential endogeneity (reverse causality) concern between teacher certification and budget compliance, meaning the findings should be interpreted as strong associative relationships rather than strict causal effects.

Results and Discussion

Univariate Descriptive Statistics and Institutional Disparities

Before examining the multivariate econometric outputs, this study analyzes the baseline, school-level characteristics of the 32,923 junior high schools (*Sekolah Menengah Pertama/SMP*) comprising the national sample. These descriptive statistics, categorized by sector, are presented in Table 1. The baseline statistics in Table 1 reveal profound structural resource disparities and divergent compliance patterns within the Indonesian junior secondary education sector. A critical baseline finding is the national non-compliance rate of 38.40% (comprising 12,642 schools), representing institutions that exceeded their respective statutory honorarium spending caps under *Permendikdasmen* No. 8 of 2025. Strikingly, public schools exhibit a substantially higher non-compliance rate (42.28% violating the 20% cap) compared to

private schools (31.46% violating the 40% cap). This univariate evidence directly challenges the common administrative assumption that budget violations are predominantly concentrated in the private sector, indicating instead that the 20% cap for public schools may be structurally unfeasible under current staffing conditions.

Furthermore, the mean certified teacher ratio exposes a massive sector gap: public schools maintain a mean certified teacher ratio of 0.551 ($SD = 0.21$), whereas private schools suffer from a severely depressed ratio of 0.182 ($SD = 0.16$). Public schools also receive significantly larger average annual BOSP allocations (Rp 724.1 million) than private schools (Rp 287.5 million), driven directly by their larger average student enrollments. In contrast, the student-teacher ratio (STR) remains relatively comparable across the public (16.12) and private (15.02) SMP sectors.

Table 1. Descriptive Statistics of School Characteristics ($N = 32,923$)

Variable	Full Sample (Mean/SD)	Public Schools (Mean/SD)	Private Schools (Mean/SD)	Median	Min-Max	Data Source
Sample Size (N)	32,923 (100%)	21,115 (64.13%)	11,862 (35.87%)	-	-	DAPODIK
Non-Compliance Rate	12,642 (38.40%)	8,927 (42.28%)	3,715 (31.46%)	-	-	ARKAS
Certified Teacher Ratio	0.419 ($SD=0.28$)	0.551 ($SD=0.21$)	0.182 ($SD=0.16$)	0.380	0.00-1.00	DAPODIK
Total BOSP (Rp Million)	567.4 ($SD=210.0$)	724.1 ($SD=180.0$)	287.5 ($SD=140.0$)	520.0	15.0-1,800.0	ARKAS
Student-Teacher Ratio	15.72 ($SD=4.2$)	16.12 ($SD=3.8$)	15.02 ($SD=4.8$)	15.10	2.5-45.0	DAPODIK

Table 2. Logistic Regression Estimates for Honorarium Non-Compliance ($N = 32,923$)

Variable	Coefficient (β)	Std. Error	P-Value	Odds Ratio (OR)	95% CI OR
Intercept	2.1245	0.245	<0.001	8.3680	—
Private Status (X_1)	-0.3518	0.042	<0.001	0.7034	0.662 – 0.748
Certified Ratio (X_2)	-0.5774	0.058	<0.001	0.5614	0.521 – 0.605
Ln_Budget (X_3)	-0.2726	0.015	<0.001	0.7614	0.732 – 0.792
Student-Teacher Ratio (X_4)	0.0097	0.003	<0.001	1.0098	1.004 – 1.015

Variable	Coefficient (β)	Std. Error	P-Value	Odds Ratio (OR)	95% CI OR
Province Fixed Effects	Included				

Note. McFadden Pseudo $R^2 = 0.234$. Full province fixed effects coefficients are omitted for brevity.

Multivariate Estimation Results

To examine the relative influence of these institutional and resource characteristics on budget compliance, the specified binary logistic regression model was estimated. The maximum likelihood estimates converged cleanly, demonstrating robust statistical properties. The Hosmer-Lemeshow goodness-of-fit test yielded a chi-square value of 8.92 with a p -value of 0.349, indicating that the model fit is highly consistent with the observed data (Hosmer et al., 2013). The model achieved a classification accuracy of 76.8% (Greene, 2019), and a McFadden Pseudo R^2 of 0.234, which represents a highly robust fit for large-scale, cross-sectional micro-level datasets (Wooldridge, 2010). The detailed multivariate parameter estimates are presented in Table 2.

The Institutional Autonomy Effect: Private School Autonomy (H_1 Supported)

The multivariate estimates reveal a significant, protective effect of private institutional status (X_1) on budget compliance, supporting H_1 . Controlling for other school-level covariates and regional fixed effects, private schools have 29.7% lower odds of violating the BOSP honorarium spending caps compared to public schools ($OR = 0.7034$; $p < 0.001$). In predicted probability terms, this translates to a reduction from 42.3% (public schools) to 34.0% (private schools), an 8.3 percentage-point absolute decrease or a 19.6% relative reduction in the probability of non-compliance.

This finding directly challenges the regulatory assumption underlying *Permendikdasmen* No. 8 of 2025, which presumes that private schools by virtue of operating under foundations and lacking civil servant teachers require more lenient caps (40%) than public schools (20%). The results suggest the reverse: the more permissive cap actually facilitates higher compliance among private schools by providing sufficient fiscal breathing room to cover staff payroll without breaching regulatory thresholds (Mudiawati et al., 2025). Conversely, the restrictive 20% cap for public schools, combined with chronic civil servant teacher shortages, renders compliance structurally difficult even for well-managed public schools.

Under Etzioni's (1961) Organizational Compliance Framework and May and Winter's (2007) policy implementation model, this compliance disparity reflects rational regulatory alignment rather than administrative capacity differences. When regulatory thresholds are misaligned with operational realities, as is the case for public schools facing the 20% cap, non-compliance becomes a structural inevitability rather than a reflection of poor financial management (Becker, 1968).

While these findings are statistically robust, readers should note the cross-sectional nature of our data precludes causal attribution. The observed association between private status and compliance may reflect unobserved school-level characteristics, such as foundation financial capacity, parental fee contributions, or survivorship bias (i.e., financially unsustainable private schools may have exited the market). Future research employing panel data or quasi-experimental designs is needed to establish causality.

The Teacher Certification “Hidden Subsidy” Effect (H_2 Supported)

The certified teacher ratio (X_2) emerges as the most powerful protective factor in the econometric model, supporting H_2 . A one-unit increase in the certified teacher ratio reduces the odds of non-compliance by 43.9% ($OR = 0.5614$; $p < 0.001$). To illustrate the practical significance: holding other factors constant at their means (including province fixed effects), increasing the certified teacher ratio from 0.42 to 0.52 reduces the predicted probability of non-compliance from 38.4% (the national average) to 37.1%, a 1.3 percentage-point absolute reduction. While this effect is smaller than initially calculated without province fixed effects, it remains substantively meaningful given the large number of schools affected.

Within Indonesia’s educational financing structure, teacher professional certification acts as a massive “hidden subsidy” from the central government. Under Law No. 14 of 2005 on Teachers and Lecturers, certified teachers are entitled to the Teacher Professional Allowance (TPG) equivalent to their base salary (Rosser, 2018). Crucially, the TPG is funded directly by the national government through earmarked fiscal transfers, such as the Non-Physical Special Allocation Fund (DAK *Non-Fisik*), completely bypassing the school’s individual, operational BOSP budget (Elvira, 2021). Consequently, when a school has a high ratio of certified teachers, the central government effectively takes over a substantial portion of the school’s total payroll liabilities through direct TPG transfers (Diana et al., 2026). This direct fiscal relief structurally reduces the school’s direct payroll burden on its BOSP funds, enabling the principal to easily remain compliant with the 20% or 40% regulatory caps. Conversely, schools with low certification ratios must cover compensation out of BOSP, making compliance structurally difficult.

The Scale of Funding and Absorption Capacity (H_3 Supported)

Total BOSP budget size (X_3) is also protective against non-compliance, supporting H_3 . A one-unit increase in log-transformed BOSP allocation (equivalent to a 171.8% increase in the original budget amount) is associated with a 23.9% decrease in the odds of a budget violation ($OR = 0.7614$; $p < 0.001$). In more practical terms, a 10% increase in a school’s BOSP allocation reduces the odds of non-compliance by approximately 2.7%.

This result directly debunks the “budget slack” hypothesis, which suggests that larger budgets facilitate administrative waste and the creation of redundant honorarium posts (Wooldridge, 2010). Instead, in resource-constrained contexts, financial adequacy is a critical prerequisite for compliance. Muhaemin and Warta (2026), in their comparative study of public and private school financial management, found that private schools face chronic funding limitations that compel them to prioritize operational survival and basic maintenance over comprehensive development. Their research demonstrates that financial adequacy directly shapes managerial priorities: public schools with more stable funding can plan for infrastructure, learning resources, and teacher training, while private schools must adopt adaptive, community-driven strategies to sustain basic operations. This suggests that larger BOSP allocations provide the fiscal stability necessary for schools to allocate funds without breaching regulatory caps. Schools with larger, student-capita-based BOSP pools possess sufficient absolute funding to satisfy both non-personnel operational needs and personnel liabilities without breaching the narrow percentage caps (Diana et al., 2026).

The Staffing Density and Understaffing Pressure (H_4 Rejected)

A highly critical econometric finding of this study is the behavior of the student-teacher ratio (STR) (X_4). The model yields a statistically significant coefficient of 0.0097 with a corresponding OR of 1.0098 ($CI: 1.004 - 1.015$; $p < 0.001$). Because the Odds Ratio is strictly greater than 1.0, STR acts as a significant

risk factor, thereby rejecting H_4 . This finding aligns with Priyadi et al. (2026), who analyzed student-teacher ratios across 38 Indonesian provinces from 2021 to 2024 and found that three provinces (DKI Jakarta, West Java, and Banten) consistently exceeded the national ideal standard, indicating persistent teacher distribution deficits in high-density regions. However, the substantive effect is modest: every 1-unit increase in STR is associated with a 0.98% increase in the odds of budget violation. In practical terms, increasing STR from the mean (15.72) to 20, a common staffing pressure scenario in under-resourced schools, would increase the odds of non-compliance by approximately 4.3% ($OR = (1.0098)^{4.28} = 1.043$). While this finding confirms that staffing density is a contributing factor, its effect size is substantially smaller than structural determinants such as certified teacher ratios ($OR = 0.5614$) and private school status ($OR = 0.7034$). The primary mechanism, it is argued, is that high STR reflects severe, localized understaffing (Badan Pusat Statistik, 2025), which forces school principals to hire informal, school-contracted teachers to prevent classrooms from being left without instructors. This survival-driven hiring, rather than the STR itself, directly increases the probability of exceeding the rigid 20% or 40% honorarium caps.

Digital Governance, Decoupling, and Cosmetic Compliance

Placing these econometric results in the broader digital governance context of modern Indonesian education, the implementation of digital financial systems like ARKAS has significantly improved administrative accuracy and standardized accounting classifications (Davi & Jabar, 2024; Diana et al., 2026). However, as qualitative evidence from Piri et al. (2025) and Haryati et al. (2025) suggests, digital reporting systems alone cannot resolve systemic structural deficits.

Instead, when schools face severe staffing shortages but are forced to comply with highly restrictive percentage caps, they may have a structural incentive to engage in what organizational compliance frameworks define as ‘decoupling’ or ‘cosmetic compliance’. Under this conceptual framework of decoupling, school administrators are theoretically incentivized to administratively reclassify actual honorary teacher payments into other allowable ARKAS expenditure accounts, such as professional development or office supplies, solely to satisfy the automated verification protocols of the digital system on paper. Concerns regarding ‘cosmetic compliance’ are empirically substantiated. Modi and Dhaked (2026), in a study conducted in Gujarat, India, found that the introduction of stringent digital reporting systems compelled school principals to allocate up to 58% of their working hours to data entry tasks, effectively redirecting their focus from academic leadership and instructional supervision. This evidence highlights a critical design flaw in digital governance platforms: when implemented without due consideration of school-level administrative capacity and operational realities, such systems can inadvertently create new bureaucratic burdens that paradoxically exacerbate, rather than resolve, the underlying structural deficits they are intended to address. In empirical practice, digital budgeting systems like ARKAS have successfully enforced formal procedural compliance by automatically blocking off-plan expenditures, and encouraging schools to redirect funds toward instructional needs. However, as qualitative evidence indicates, these systems remain restricted to internal administrative reporting and fail to resolve the underlying qualitative realities of localized teacher shortages. Ultimately, sustainable compliance and educational quality cannot be achieved through digital oversight platforms alone; as argued by Rosser (2018), addressing such systemic failures requires shifting beyond technical-administrative controls toward resolving deep-seated political and structural deficits in teacher distribution and professional certification. This argument is reinforced by Nurhafni et al. (2026), who demonstrated that optimized fund management

has a positive impact on improving learning facilities and the quality of the teaching-learning process. Their study found that systematic fund optimization strategies directed at enhancing stakeholder participation, management transparency, and budget allocation based on school priority needs can improve educational quality. However, when schools are forced to prioritize compliance with rigid caps over strategic fund allocation, due to disbursement delays, staffing shortages, or low community participation, the very purpose of educational funding is compromised. This underscores the need for regulatory frameworks that support, rather than hinder, schools' capacity to allocate funds toward quality-enhancing inputs.

Conclusion

This study successfully achieves its objective of identifying the structural, financial, and institutional determinants of School Operational Assistance compliance in Indonesian junior high schools. By analyzing a comprehensive national dataset, the findings suggest that budget non-compliance is largely driven by deep-seated resource disparities, although administrative bookkeeping failures cannot be entirely ruled out. The findings reveal that private school status, larger school budgets, and higher ratios of certified teachers significantly increase budget compliance. Certified teachers act as a crucial indirect subsidy because their professional allowances are funded directly by the central government, thereby relieving local school budgets of heavy payroll liabilities. In contrast, higher student-teacher ratios serve as a significant risk factor for non-compliance. This highlights that schools facing severe understaffing and crowded classrooms are under immense pressure to hire local contract teachers, forcing administrators to exceed rigid honorarium spending caps to ensure instructional continuity. Under these restrictive conditions, digital budgeting platforms can inadvertently trigger cosmetic compliance and accounting decoupling, where actual payroll expenses are administratively hidden under other non-personnel categories.

Limitations and Future Research

Several limitations should be acknowledged. First, the cross-sectional design precludes causal inference. While province fixed effects were controlled for, unobserved school-level heterogeneity (e.g., principal leadership, parental involvement) may confound the estimates. Second, the dependent variable relies on verified ARKAS expenditure data, which may not capture misclassification of honorarium expenses under other budget lines (cosmetic compliance). Third, data on teacher distribution by subject area is lacking, which may be more informative than overall STR. Fourth, the sample is limited to junior high schools; findings may not generalize to primary or senior secondary levels. Future research should: (1) employ panel data to track compliance trends over time following policy changes; (2) use randomized audits to detect and measure cosmetic compliance; (3) conduct comparative studies across education levels (SD, SMP, SMA) and school types (public, private, religious); and (4) adopt mixed-methods designs combining survey, interview, and observational data to understand principal decision-making under fiscal constraints.

Policy Implications

To resolve this systemic issue, policymakers must move away from rigid, uniform expenditure caps. Instead, several policy adjustments are recommended. First, dynamic spending caps based on the PNS/ASN teacher ratio could be introduced, recognizing that private schools and under-resourced public schools require different fiscal thresholds. Second, affirmative certification pathways for honorary teachers should be expanded, as the certified ratio acts as the strongest hidden subsidy. Third, targeted teacher deployment

must prioritize 3T regions (Terdepan, Terluar, Tertinggal; frontier, outermost, and disadvantaged regions) where high STR and understaffing compound compliance risks. Finally, specialized audits and verification of ARKAS data should be enhanced to identify and mitigate potential cosmetic compliance.

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