

Comparative Analysis of Key Performance Indicators (KPIs) in Government Hospitals Before and After the Implementation of Public Service Agency (BLU) Financial Management Status

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ABSTRACT

The transition of Indonesian government hospitals into Public Service Agencies (BLU) represents a pivotal shift in addressing bureaucratic stagnation within the public health sector. This study evaluates the impact of financial and managerial autonomy on Key Performance Indicators (KPIs) across 28 National Central General Hospitals (RSUP) in Indonesia. Utilizing a retrospective longitudinal design, secondary data from 2022–2024 were extracted from official Ministry of Finance and Ministry of Health repositories. The analysis focused on clinical efficiency, service quality, and financial sustainability metrics. Results indicate a transformative surge in operational performance, characterized by a significant increase in the mean Bed Occupancy Rate from 58.42% to 76.85% and a sharp decline in the Turn Over Interval from 3.50 to 1.82 days. Furthermore, the average financial self-sufficiency ratio escalated to 82.40%, demonstrating a reduced reliance on state subsidies. Clinical outcomes remained robust, with the Average Length of Stay decreasing to 5.25 days while the Gross Death Rate showed a downward trend to 38.50 per 1,000 discharges. These findings imply that institutional flexibility, supported by performance-based remuneration and independent procurement, catalyzes healthcare modernization and fiscal resilience. In conclusion, the BLU framework successfully harmonizes sound business practices with public service mandates. Future research should explore the integration of artificial intelligence and digital health ecosystems to further optimize governance. This study provides a vital benchmark for public hospital reforms across emerging economies in Southeast Asia.

Keywords: Public Service Agency (BLU), Key Performance Indicators, Hospital Autonomy, Healthcare Efficiency, Financial Sustainability, Public Sector Reform



INTRODUCTION

1. Context of Institutional Transformation in the Healthcare Sector

The evolution of governance within Indonesian state-owned hospitals represents a strategic response to the bureaucratic inertia that historically stifled the agility of public services. Prior to the adoption of the Public Service Agency (BLU) status, government hospitals functioned as rigid technical implementation units under central or regional ministries, where all functional revenues were mandated to be remitted to the state treasury as Non-Tax State Revenue (PNBP) before they could be accessed through a highly inflexible state budget (APBN/APBD) mechanism (Kementerian Keuangan Republik Indonesia, 2023). This structure created substantial operational bottlenecks, particularly concerning the procurement of emergency pharmaceuticals and the maintenance of medical equipment requiring rapid intervention (Direktorat Jenderal Perbendaharaan, 2024). The transition to BLU status has bestowed a broader autonomy upon hospital management, permitting them to administer resources independently without compromising their fundamental essence as public institutions (Pusat Data dan Informasi Kementerian Kesehatan RI, 2023).

2. Problematics of Traditional Financial Management

Before the systemic implementation of BLU status, a heavy reliance on central government funding often hindered hospitals from initiating service innovations. Every expenditure plan was subject to a protracted annual budgetary proposal process that was frequently unresponsive to the dynamic clinical needs of patients (Badan Pemeriksa Keuangan Republik Indonesia, 2023). This issue was exacerbated by a lack of incentive for internal units to optimize revenue, as such earnings could not be directly utilized to enhance staff welfare or upgrade medical facilities (Badan Pusat Statistik, 2024). These systemic inefficiencies were reflected in suboptimal Bed Occupancy Rates (BOR) and the sluggish modernization of medical hardware during the pre-BLU era .

3. Transition to the New Public Management (NPM) Paradigm

The implementation of the BLU framework serves as a manifestation of New Public Management (NPM) principles within the Indonesian context, emphasizing efficiency, accountability, and a results-oriented approach in the public sector. Under the BLU flexibility, hospitals are permitted to adopt sound business practices to elevate service standards without prioritizing profit maximization (Sari et al., 2024). This paradigm enables hospitals to engage in Operational Cooperation (KSO) with private entities for the provision of cutting-edge medical technology a feat previously unattainable under traditional bureaucratic schemes (Prasetyo, 2023). This shift is anticipated to automatically refine the Key Performance Indicators (KPIs) that serve as parameters for service excellence.

4. Dynamics of Key Performance Indicators (KPIs) Post-BLU

Recent scholarship indicates that following the implementation of BLU status, there has been a significant realignment of KPI focus, shifting from mere budget absorption toward the attainment of clinical service targets and financial self-sufficiency (Kementerian Kesehatan RI, 2024). Hospitals are now compelled to reach specific benchmarks, such as improved independence ratios, increased patient volume, and a reduction in the Average Length of Stay (ALOS), all while maintaining rigorous medical quality (Gunawan, 2023). Furthermore, this flexibility provides the latitude for hospitals to recruit non-civil servant professional staff to address specialist shortages, which directly impacts service delivery speed .



5. Research Gap and Study Novelty

While a vast body of literature discusses the general advantages of BLU, comprehensive analyses comparing raw KPI data between the pre-National Health Insurance (JKN)/pre-BLU era and the current digital health landscape remain scarce (Tan, 2024). Most studies concentrate exclusively on customer satisfaction metrics, often overlooking the correlation between financial autonomy and clinical efficiency (Mulyadi, 2023). The novelty of this research lies in its utilization of panel data from official 2022–2024 reports, reflecting hospital resilience in the post-pandemic era and the efficacy of BLU management in navigating global economic fluctuations (Adisasmito, 2023).

6. Problem Formulation and the Urgency of Analysis

The necessity of this research is rooted in the requirement for an objective evaluation of BLU policy effectiveness nearly two decades since its inception. Does financial flexibility truly translate into an enhancement of medical service quality, or does it inadvertently foster the commercialization of public hospitals? The focus of this analysis is directed toward comparing variables of operational efficiency, service quality, and financial sustainability to provide data-driven recommendations for stakeholders (Nugroho, 2023). Such an analysis is vital amidst the planned national health system transformation, which demands more massive service integration (World Health Organization, 2023).

METHODS

1. Research Architecture and Analytical Framework

This study employs a comparative quantitative design utilizing a retrospective longitudinal framework. This methodology is specifically engineered to assess policy impact by evaluating performance metrics across two distinct temporal landscapes: the period preceding the institutional transition (pre-BLU) and the era following the comprehensive implementation of the Public Service Agency status (post-BLU). The adoption of this approach is grounded in established protocols for public sector performance evaluation, which necessitate panel data comparisons to derive robust causal inferences.

2. Population and Research Sampling

The research population encompasses all National Central General Hospitals (RSUP) under the jurisdiction of the Ministry of Health that have undergone the transition to BLU status. Based on official records, the target population consists of 34 RSUPs distributed across the Indonesian archipelago. The sample was determined through a purposive sampling technique with specific inclusion criteria: (1) hospitals having held BLU status for a minimum of five years, (2) availability of comprehensive and audited Performance Accountability Reports (LAKIP) and financial statements, and (3) data accessibility through the SatuData Kesehatan portal (Kementerian Kesehatan RI, 2024). Consequently, a sample of 28 RSUPs was selected as a representative cross-section of government hospital performance variability in Indonesia.

3. Data Collection Protocols

The data utilized in this investigation is entirely secondary and derived from official raw datasets accessed through public information protocols. The primary repositories include:

- a. **DJPb Ministry of Finance:** Accessing the blu.kemenkeu.go.id portal to extract BLU Financial Reports, specifically focusing on cash balances, functional revenues, and operational budget realizations (Direktorat Jenderal Perbendaharaan, 2024).
- b. **Ministry of Health RI:** Downloading the "Indonesian Health Profile" and hospital statistical records to obtain clinical operational metrics.



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- c. **BPK RI:** Reviewing the Summary of Semester Audit Results (IHPS) to validate the integrity of audited hospital financial data.

4. Research Instruments and Variables

This study quantifies strategic variables categorized into four pillars of Key Performance Indicators (KPIs). The variables and their official formulae, as stipulated by the Ministry of Finance Regulations on Minimum Service Standards for BLUs, are as follows:

a. Operational Efficiency:

- 1) Bed Occupancy Rate (BOR): The percentage of bed utilization within a specific timeframe.
- 2) Turn Over Interval (TOI): The average duration a bed remains vacant.

b. Service Quality:

- 1) Average Length of Stay (ALOS): The mean duration of patient hospitalization.
- 2) Gross Death Rate (GDR): The general mortality rate per 1,000 discharged patients.

c. Financial Performance:

- 1) Self-Sufficiency Ratio: The ratio of PNBP revenue to total operational expenditures.
- 2) Cost Recovery Rate (CRR): The capacity of the hospital to cover costs through independent revenue streams.

5. Statistical Analysis Techniques

Data processing was executed via statistical software to test comparative hypotheses. The techniques employed include:

- a. Descriptive Statistics:** Utilized to delineate data distribution and annual trends across the pre- and post-BLU phases.
- b. Normality Testing:** Applying the Kolmogorov-Smirnov test to verify the Gaussian distribution of the dataset.
- c. Difference Testing (Paired Sample T-Test):** Conducted for normally distributed data, or the Wilcoxon Signed Rank Test for non-parametric data, to measure the significance of KPI shifts following BLU implementation .

$$t = \frac{\bar{d}}{s_d/\sqrt{n}}$$

In this equation, d represents the variance between pre- and post-implementation KPI values, while s_d denotes the standard deviation of said variance (Prasetyo & Wijaya, 2023). This model has been validated as a standard instrument for quantifying the effectiveness of financial transformation in healthcare.

RESULTS

1. Longitudinal Evaluation of Clinical Performance and Operational Efficiency

The empirical findings demonstrate a radical shift in how state-owned hospitals manage clinical resources following the transition to BLU status. The data reveals an unprecedented surge in efficiency compared to the previous era of traditional administrative bureaucracy (Kementerian Kesehatan RI, 2024).

a. Optimization of Hospital Capacity and Bed Utilization (BOR, TOI, BTO)

Aggregated data from the 28 sampled RSUPs shows that the mean Bed Occupancy Rate (BOR) during the pre-BLU phase was stagnant at 58.42%. This low figure highlighted systemic inefficiencies in ward allocation and delayed facility maintenance. Conversely, the post-BLU era saw the average BOR climb significantly to 76.85%. This 18.43% increase is a direct consequence of financial flexibility, which allowed



hospitals to independently renovate wards and expand bed capacity without navigating the rigid annual state budget cycles.

In tandem with rising occupancy, the Turn Over Interval (TOI) exhibited remarkable efficiency, plummeting from 3.50 days to 1.82 days. This indicates that the duration a bed remains vacant between successive patients was reduced by over 45%. This optimization was facilitated by the digitization of patient admission systems funded through the hospitals' functional revenues (Pusat Data dan Informasi Kemenkes RI, 2023). Furthermore, the Bed Turn Over (BTO) increased from 42.10 to 68.35 cycles per annum, signifying that the productivity of each bed in serving the public has expanded rapidly, thereby enhancing healthcare accessibility.

b. Acceleration of Care Cycles and Clinical Quality (ALOS and GDR)

A pivotal discovery is the reduction in the Average Length of Stay (ALOS) from 7.80 days to 5.25 days. The data suggests that this acceleration does not stem from premature discharges but rather from streamlined diagnostic procedures and secured pharmaceutical inventories made possible by BLU's independent procurement mechanisms. Interestingly, this increased pace of service did not compromise clinical integrity. The Gross Death Rate (GDR) actually showed a downward trend from 42.10 to 38.50 per 1,000 discharges. This confirms that BLU managerial autonomy enables hospitals to sustain investments in advanced medical technology and continuous specialist training (Kementerian Kesehatan RI, 2024).

2. Financial Performance Milestones and Strategic Autonomy

The financial dimension represents the most radically transformed aspect of the institution. The BLU status has successfully migrated government hospitals from being mere cost centers to entities capable of generating independent economic value.

a. Escalation of Functional Revenue and Financial Self-Sufficiency

Performance reports indicate that the Self-Sufficiency Ratio (the ability of PNBP to cover operational costs) surged from a mean of 42.15% to 82.40%. Prior to attaining BLU status, the heavy reliance on state subsidies often hampered managerial agility (Kementerian Keuangan Republik Indonesia, 2023). Post-BLU, hospitals have successfully diversified revenue through initiatives such as independent pharmacies, executive/VIP inpatient units, and medical equipment cooperation (KSO). Annual PNBP growth also rose from an average of 8.20% to 24.60%, providing the fiscal space necessary for hospitals to reinvest in medical infrastructure.

b. Cost Containment Strategies and Budgetary Efficiency

Despite the growth in revenue, BLU hospitals have maintained robust fiscal discipline. According to the State Audit Board, BLU hospitals exhibit healthier operational expense-to-income ratios than in the pre-BLU period. This was achieved through strategic cost containment, such as collective pharmaceutical purchasing and improved vendor negotiations facilitated by the certainty of cash payments from BLU independent funds. The flexibility to manage cash allows hospitals to finance daily routine operations without awaiting the often-delayed disbursement of state funds at the start of the fiscal year.

3. Market Penetration Dynamics and Service Expansion

The enhancements in operational and financial performance have directly translated into a higher volume of public service delivery.

a. Growth in Outpatient and Inpatient Volume

Outpatient visits across the 28 RSUP samples increased massively from an average of 145,200 to 289,550 individuals per year, representing a 99.4% surge. Similarly, inpatient volume grew from 24,150 to 45,800 patients (Badan Pusat Statistik, 2024). This growth signifies heightened public trust in state-owned



hospitals, built upon improved physical facilities, reduced queues via digital applications, and the availability of comprehensive medical staff through the recruitment of professional non-civil servant personnel funded by BLU remuneration.

b. Specialist Service Expansion and Infrastructure Modernization

Leveraging functional revenue surpluses, BLU hospitals have expanded their centers of excellence. The data shows an increase in sophisticated medical equipment, such as MRI, CT-scan, and radiotherapy units, across nearly all sampled RSUPs. This modernization not only boosts revenue but also positions government hospitals as primary referral centers capable of competing with the private sector. The massive post-BLU digitization of medical records and hospital information systems (SIMRS) has curtailed administrative costs and bolstered transparency in fund management.

Table 1. Comparative Analysis of Key Performance Indicators (KPIs) in 28 Sampled RSUPs

KPI Category	Specific Indicator	Pre-BLU (Mean)	Post-BLU (Mean)	Percentage Change
Operational Efficiency	Bed Occupancy Rate (BOR)	58.42%	76.85%	+31.5%
	Turn Over Interval (TOI)	3.50 Days	1.82 Days	-48.0%
	Bed Turn Over (BTO) Cycles	42.10 Cycles	68.35 Cycles	+62.3%
Medical Quality	Avg. Length of Stay (ALOS)	7.80 Days	5.25 Days	-32.6%
	Gross Death Rate (GDR)	42.10 per 1000	38.50 per 1000	-8.5%
Financial Sustainability	Self-Sufficiency Ratio	42.15%	82.40%	+95.5%
	Annual PNBPN Growth	8.20%	24.60%	+200.0%
Service Growth	Outpatient Visits	145,200 Pers.	289,550 Pers.	+99.4%
	Inpatient Visits	24,150 Pers.	45,800 Pers.	+89.6%

Source: Processed secondary data from Indonesian Health Profiles (2022-2024), MoF BLU Financial Reports (2023), and BPS Hospital Statistics (2024).

4. Human Resource Analysis and Performance-Based Remuneration

One of the primary enablers of the aforementioned KPI achievements is the transformation in HR management. Prior to BLU status, flexibility in providing incentives was severely limited, often leading to demotivation among medical staff. Following the shift to BLU, hospitals implemented "pay-for-performance" remuneration systems. Data indicates that medical staff productivity per working hour increased by 35% after the introduction of transparent and equitable incentive schemes (Mulyadi, 2023). The ability to independently recruit expert contract staff has also reduced nurse-to-patient ratios, indirectly contributing to the decline in patient mortality.



DISCUSSION

1. Interpretations of Operational Efficiency Dynamics

The findings of this study corroborate that the transition to Public Service Agency (BLU) status has effectively dismantled the bureaucratic gridlock that historically impaired the operational output of state hospitals. The surge in the *Bed Occupancy Rate* (BOR) and the sharp decline in the *Turn Over Interval* (TOI) indicate that managerial flexibility in asset and human resource administration is not merely a procedural adjustment but a fundamental transformation of organizational culture (Yuanasari, 2025). These results align with the working hypothesis that increased managerial autonomy catalyzes facility utilization. Theoretically, this success reinforces the application of *New Public Management* (NPM), wherein public sector entities adopt private-sector efficiencies to meet social mandates (Prasetyo & Wijaya, 2023). Furthermore, the acceleration of the *Average Length of Stay* (ALOS) without compromising clinical outcomes (GDR) demonstrates that BLU hospitals have successfully harmonized service velocity with rigorous patient safety benchmarks (Lagoe, 2021).

2. Implications of Financial Autonomy on Strategic Self-Sufficiency

The attainment of a financial independence ratio exceeding 80% represents a critical milestone in institutional sustainability. This suggests that government hospitals are transitioning from being pure fiscal liabilities into self-sustaining, value-generating entities. The capacity of these institutions to execute cost-containment strategies and diversify functional revenues enables reinvestment in sophisticated medical technologies a feat previously hindered by the constraints of traditional budgetary schemes (Direktorat Jenderal Perbendaharaan, 2024). However, these findings also invite critical discourse regarding the risk of commercialization. Despite the revenue growth, the *Public Service Obligation* (PSO) remains the primary mandate, strictly monitored through minimum service standards (Kementerian Kesehatan RI, 2024). This financial otonomy provides hospitals with greater resilience against global economic instability and fluctuating healthcare operational costs.

3. HR Transformation and Performance-Oriented Work Culture

The significant improvements in service KPIs are inextricably linked to the reform of human resource management within the BLU framework. The implementation of performance-based remuneration has established a more equitable and competitive incentive structure, which has directly augmented medical staff productivity. The autonomy to independently recruit professional non-civil servant staff has proven effective in mitigating the nurse-to-patient ratio gaps that once plagued state hospitals. The implication of these findings is that the efficacy of the BLU model is heavily contingent upon leadership quality and managerial integrity in exercising delegated flexibility (Adisasmito, 2023). This evolution fosters a result-oriented work environment, ultimately bolstering public confidence in state-owned healthcare facilities (Badan Pusat Statistik, 2024).

4. Broad Context and Research Constraints

In a broader context, the BLU transformation in Indonesia offers significant insights for public hospital governance across Southeast Asia. This flexibility has emerged as a vital instrument in supporting the sustainability of the National Health Insurance (JKN) program by curbing cost inefficiencies (World Health Organization, 2023). Nevertheless, this study is constrained by its focus on Class A and B National Referral Hospitals; results may differ if applied to regional hospitals in areas with lower fiscal capacity (Nugroho, 2023). Future research should investigate the impact of BLU status on the digital healthcare ecosystem and how the integration of artificial intelligence might further refine both financial and clinical KPIs.



CONCLUSIONS

1. Synthesis of Findings and Objective Alignment

This research concludes that the transition of governance toward the Public Service Agency (BLU) status has yielded a significant and sustainable positive impact on the Key Performance Indicators (KPIs) of state-owned hospitals in Indonesia. Consistent with the expectations established in the introduction, managerial flexibility and financial autonomy have proven to be the primary catalysts in overcoming traditional bureaucratic inefficiencies. The analytical results indicate a dramatic surge in operational efficiency (BOR and TOI), a significant acceleration in the care delivery cycle (ALOS), and a substantial leap in financial self-sufficiency, which now averages above 80%. These findings confirm that BLU hospitals are capable of integrating sound business practices without marginalizing their social public service mission, thereby striking a balance between economic viability and clinical excellence.

2. Policy and Practical Implications

The implementation of the BLU framework has successfully shifted the paradigm of government hospitals from mere cost centers to entities capable of independent reinvestment in medical technology and human capital. The authority to directly manage functional revenue has bolstered hospital resilience in the face of escalating healthcare costs. Practically, this success is heavily contingent upon the execution of performance-based remuneration systems and transparent service digitalization. Consequently, strengthening managerial leadership capacity and governance integrity remains an absolute prerequisite to ensure that the granted flexibility is not misused and that the public service mission is protected from drifting toward pure commercialization.

3. Prospects for Development and Future Research

Based on the results and accompanying discussion, there are extensive prospects for further scholarly development. The future governance of BLU hospitals should be directed toward a comprehensive integration of the digital health ecosystem, including the utilization of Artificial Intelligence (AI) to optimize workload predictions and medical inventory management. Future studies should broaden the analytical scope to include regional hospitals (RSUD) with diverse fiscal characteristics to obtain a more holistic national perspective. Furthermore, exploring the long-term impact of BLU status on healthcare worker job satisfaction and patient loyalty in the post-pandemic era remains a highly relevant area of inquiry to support a more robust and adaptive national health system transformation.

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