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PERFORMANCE EVALUATION OF AIR PUTIH COMMUNITY HEALTH CENTER BLUD IN SAMARINDA USING THE BALANCED SCORECARD: A 2024 DESCRIPTIVE CASE STUDY

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ABSTRACT
Public healthcare reform in Indonesia has encouraged Puskesmas to adopt the Regional Public Service Agency (BLUD) financial management model, which provides greater financial flexibility while requiring stronger accountability and performance management. Evaluating BLUD performance through multiple dimensions is therefore important for identifying structural strengths and weaknesses that may not be reflected in financial indicators alone. This study aimed to evaluate the performance of BLUD Puskesmas Air Putih, Samarinda City, in 2024 using the four perspectives of the Balanced Scorecard. A descriptive quantitative approach with a single-case study design was employed. Secondary data were obtained from institutional documents, including the revised Business and Budget Plan, monthly financial realisation reports, Minimum Service Standards (SPM) records, the Application for Facilities, Infrastructure, and Medical Equipment (ASPAK), and workforce-needs data. Performance was analysed across the financial, customer, internal business process, and learning and growth perspectives. The financial perspective showed 97.08% effectiveness, 95.85% efficiency, and 25.35% independence. Five months experienced monthly deficits. The average SPM achievement was 61.4%, with strong maternal and child health performance but low non-communicable disease screening achievement, particularly hypertension at 11.31%. SPA completeness reached 83.96%, while only 1 of 193 mandatory-calibration medical devices had been calibrated. Workforce analysis showed that 66.3% of mapped positions were understaffed. BLUD Puskesmas Air Putih demonstrated uneven performance across the four Balanced Scorecard perspectives. Overall, the findings revealed financial dependence, service gaps, equipment quality risks, and workforce shortages across the four perspectives.

Keywords: balanced scorecard; BLUD; financial independence; puskesmas; service standards; workforce shortage

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INTRODUCTION

Public-sector financial management reform in Indonesia has encouraged local government service units, including Pusat Kesehatan Masyarakat (Puskesmas), to move from conventional budget-based management towards the Pola Pengelolaan Keuangan Badan Layanan Umum Daerah (PPK-BLUD). The BLUD framework provides greater flexibility in financial management while simultaneously requiring health service units to manage resources efficiently, transparently, and accountably. This transformation is particularly relevant to Puskesmas because performance cannot be adequately represented by financial achievement alone. As primary healthcare providers, Puskesmas are also expected to maintain service quality, operational readiness, and organisational capacity. The Ministry of Home Affairs has specifically developed a performance reporting and assessment framework for BLUDs in the health sector that emphasises the integration of financial and non-financial performance dimensions. This financial flexibility, however, is accompanied by

greater accountability for organisational performance and service outcomes (Kementerian Dalam Negeri Republik Indonesia, 2018).

The relevance of multidimensional performance measurement is supported by previous research on Puskesmas. (Mahardika & Supadmi, 2014) demonstrated that the Balanced Scorecard (BSC) could be applied to compare Puskesmas performance across financial, customer, internal business process, and learning and growth perspectives. Their study highlighted the importance of moving beyond conventional patient-oriented performance measurement towards a broader organisational assessment. More recent studies have similarly demonstrated that performance among Puskesmas may vary considerably across the four BSC perspectives. (Awalanty et al., 2024), for instance, found different performance patterns across financial and non-financial indicators at Puskesmas Prambon, while (Octavianty et al., 2024) used the BSC to examine the development of Puskesmas Tanah Sareal performance over 2019–2022.

The application of the BSC is particularly relevant for Puskesmas operating under the BLUD framework. (Mawarni & Wuryani, 2020) found that the performance of Puskesmas Krian, which implemented PPK-BLUD, could not be understood solely from financial indicators because non-financial dimensions, including customer acquisition and personnel commitment, also influenced overall organisational performance. Similarly, (Anggraini & Trisninawati, 2022) applied the BSC to BLUD Puskesmas Nagaswidak and demonstrated its usefulness as a multidimensional performance measurement instrument. More recently, (Pramaysella & Rahmanti, 2024) evaluated Puskesmas Morokrembangan following PPK-BLUD implementation and reported generally good performance across the four BSC perspectives, although weaknesses remained in specific financial and customer indicators. These studies suggest that BLUD status does not eliminate performance disparities; rather, financial flexibility must be accompanied by effective management of service delivery, internal processes, and organisational resources.

The financial dimension becomes increasingly important because Puskesmas operate within a health financing system in which JKN capitation constitutes an important source of primary healthcare financing. Research on the utilisation of JKN capitation funds has shown that the management of capitation financing involves challenges related to allocation, utilisation, planning, and accountability. (Parulian et al., 2024), for example, reported that capitation funds were an important mechanism for financing primary healthcare services but that their utilisation required careful management to avoid unutilised funds and inefficient allocation. Earlier research by Hasan and Adisasmito also identified disparities in capitation financing across Puskesmas and highlighted challenges involving staffing ratios, operational requirements, procurement, and budget flexibility. These findings indicate that the amount of capitation revenue alone does not necessarily reflect the financial resilience or managerial performance of a Puskesmas.

This issue is particularly relevant to BLUD Puskesmas Air Putih, Samarinda, in 2024. During the study period, JKN capitation contributed IDR 1,087,188,274, equivalent to 74.7% of total BLUD revenue of IDR 1,456,239,907, whereas other service revenue contributed IDR 369,051,633. The monthly financial pattern also revealed substantial variation in revenue and expenditure, including several months in which expenditure exceeded revenue. These conditions suggest that annual financial achievement may conceal short-term cash-flow vulnerability and that financial performance should therefore be assessed together with non-financial organisational dimensions. The financial data and performance framework are documented in the present study manuscript.

The Balanced Scorecard developed by Kaplan and Norton provides a suitable framework for addressing this multidimensional requirement. The BSC evaluates organisational performance through four interconnected perspectives: financial, customer, internal business process, and learning and growth. Rather than treating financial performance as an isolated outcome, the

framework assumes that sustainable organisational performance is supported by organisational capabilities and internal processes that ultimately create value for customers. Its application in Puskesmas research has consistently demonstrated that performance can be uneven across these perspectives. (Mahardika & Supadmi, 2014; Mawarni & Wuryani, 2020; Anggraini & Trisninawati, 2022; Awalanty et al., 2024; Pramaysella & Rahmanti, 2024) all demonstrate the relevance of multidimensional BSC assessment in primary healthcare settings.

The customer perspective is particularly important because the ultimate function of Puskesmas is to provide basic health services to the community. In Indonesia, the Health Sector Minimum Service Standards (Standar Pelayanan Minimal or SPM) provide an important basis for assessing the fulfilment of basic health services. For the 2024 reporting period, Minister of Health Regulation No. 6 of 2024 concerning Technical Standards for the Fulfilment of Health Minimum Service Standards (Kementerian Kesehatan Republik Indonesia, 2024) replaced Minister of Health Regulation No. 4 of 2019 (Kementerian Kesehatan Republik Indonesia, 2019). The new regulation came into force on 16 April 2024 and retained the framework of 12 basic health service types while updating the technical standards. National evidence also indicates that achievement among SPM indicators is uneven. The Ministry of Health reported that, in 2023, newborn health services had relatively high national achievement, whereas productive-age and hypertension services remained comparatively lower (Kementerian Kesehatan Republik Indonesia, 2024).

The low achievement of hypertension services is also supported by empirical research. (Renawati et al., 2025) found persistent difficulties in implementing the hypertension SPM at a Puskesmas in Malang Regency. Their study identified human-resource limitations, multiple programme responsibilities, and cross-sector coordination as important barriers to achieving the target. A literature review by Ramadhani et al. similarly identified several implementation barriers in hypertension SPM, demonstrating that achieving population-based screening targets requires organisational capacity beyond routine facility-based service delivery. These findings provide an important contextual basis for interpreting variations in SPM achievement at Puskesmas Air Putih.

The internal business process perspective is equally important because the availability of health facilities and medical equipment does not necessarily guarantee operational readiness or service quality. The BSC perspective requires organisations to examine the processes through which resources are transformed into reliable services. In healthcare settings, equipment availability should therefore be considered together with maintenance, calibration, and quality assurance. This distinction is particularly relevant to Puskesmas Air Putih because the present data show relatively high cumulative SPA completeness but extremely low medical-equipment calibration. The manuscript data indicate that 83.96% of SPA requirements were recorded as complete, while only 1 of 193 mandatory-calibration devices had been calibrated.

The learning and growth perspective provides another critical dimension because organisational capacity depends on the availability and adequacy of human resources. Previous Puskesmas studies have demonstrated that personnel-related indicators may represent an important source of organisational weakness even when other performance dimensions are relatively favourable. (Mawarni & Wuryani, 2020), for example, identified personnel commitment as one of the weaker non-financial aspects in the performance of a BLUD Puskesmas. More recent research by (Asri, 2026) further demonstrated that knowledge management was significantly associated with BLUD Puskesmas performance when assessed through the four BSC perspectives, highlighting the importance of organisational capabilities in improving performance.

Despite the growing literature on BSC-based Puskesmas performance evaluation, a research gap remains. Existing studies have generally evaluated the four perspectives as separate performance dimensions, often using combinations of financial reports, patient satisfaction, operational

indicators, and employee perceptions. Few studies have simultaneously integrated financial dependence on JKN capitation, SPM achievement, medical-equipment calibration, and workforce adequacy using institutional administrative data within a single BLUD Puskesmas case. The present study therefore extends the existing literature by examining not only whether each BSC perspective performs well or poorly but also how weaknesses identified in one perspective may provide contextual explanations for weaknesses observed in another.

Accordingly, this study aims to evaluate the performance of BLUD Puskesmas Air Putih, Samarinda City, in 2024 using the four perspectives of the Balanced Scorecard. The financial perspective is assessed through effectiveness, efficiency, and financial independence; the customer perspective through Health Sector Minimum Service Standard achievement; the internal business process perspective through facility, infrastructure, medical-equipment completeness, and calibration; and the learning and growth perspective through workforce adequacy. The study seeks to provide a comprehensive assessment of BLUD Puskesmas performance and identify structural performance gaps that may remain hidden when organisational performance is assessed solely through annual financial indicators. The specific objective of this study is therefore to evaluate the financial, customer, internal business process, and learning and growth performance of BLUD Puskesmas Air Putih and to identify structural performance gaps that may otherwise remain concealed within aggregate financial indicators.

METHOD

Research Design and Data Sources

This study employed a descriptive quantitative design using a single-case study approach at UPTD Puskesmas Air Putih, Samarinda City. All data were obtained from official institutional documents for the 2024 fiscal/reporting year, including the Revised BLUD Business and Budget Plan (*Rencana Bisnis dan Anggaran* [RBA]) as the basis for financial targets, monthly recapitulation of BLUD revenue and expenditure realization, the recapitulation of Health Sector Minimum Service Standard (*Standar Pelayanan Minimal* [SPM]) achievements, the individual report from the Healthcare Facilities, Infrastructure, and Medical Equipment Application (*Aplikasi Sarana Prasarana dan Alat Kesehatan* [ASPAK]), and the 2024 Staffing Needs Plan (*Rencana Kebutuhan* [Renbut]). Because each document has different measurement units, formats, and reporting periods, the analytical procedures for each *Balanced Scorecard* (BSC) perspective were adjusted to the structure and characteristics of the available source data. The revised BLUD Business and Budget Plan, monthly financial records, SPM achievement records, ASPAK individual report, and Staffing Needs Plan served as the primary institutional sources for the analysis (UPTD Puskesmas Air Putih, 2024a, 2024b, 2024c, 2024d).

Financial Perspective

Financial data were obtained from the 2024 Revised RBA, which provided the targeted revenue, and the monthly recapitulation of actual BLUD revenue and expenditure realization. Three *Value for Money* ratios were calculated with reference to the Minister of Home Affairs Regulation No. 79 of 2018. Effectiveness was calculated as the ratio of realized revenue to targeted revenue, while efficiency was calculated as the ratio of realized expenditure to realized revenue. Financial independence was measured as the proportion of non-capitation revenue to total revenue, with JKN capitation funds treated as external transfers. The calculations were performed at both annual and monthly levels to capture fluctuations in financial performance and identify potential monthly cash-flow vulnerabilities that might not be apparent from the annual aggregate results.

Customer Perspective

Customer-perspective data were obtained from the 2024 recapitulation of Health Sector Minimum Service Standard (*Standar Pelayanan Minimal* [SPM]) achievements based on Minister of Health Regulation No. 4 of 2019. The document covered 12 types of health services, each with specified

target populations and monthly cumulative coverage. The achievement percentage for each service was calculated by dividing the cumulative January–December coverage by the corresponding annual target and multiplying the result by 100%.

Internal Business Process Perspective

Data for the internal business process perspective were obtained from the individual ASPAK report. The level of healthcare facility and equipment completeness was calculated using the standard ASPAK composite formula:

Cumulative Completeness = (50 × % Facilities) + (10 × % Infrastructure) + (40 × % Medical Equipment)

In addition, the calibration rate was calculated as the proportion of mandatory-calibration equipment that had been calibrated relative to the total number of equipment items requiring mandatory calibration. In 2024, the total number of mandatory-calibration equipment items recorded in the source data was 193 units.

Learning and Growth Perspective

Data for the learning and growth perspective were obtained from the 2024 Staffing Needs Plan (*Rencana Kebutuhan* [Renbut]). The document contained the actual number of employees, including civil servants and non-civil-service personnel, by position and qualification level, which was compared with the ideal staffing requirements. Staffing gaps were categorized into three statuses: Insufficient (K), Adequate (S), and Excess (L). The analysis was conducted by calculating the proportion of positions classified as K, S, and L relative to the total number of mapped positions.

Data Analysis Procedure

Numerical data were manually extracted from the four institutional source documents according to the values reported in the original records, without estimation or interpolation. Each indicator was subsequently converted into a percentage or ratio and classified according to the applicable performance criteria of Good, Moderate, or Poor, based on the threshold applicable to each indicator. The results from the financial, customer, internal business process, and learning and growth perspectives were then synthesized descriptively to provide an integrated assessment of the performance of BLUD Puskesmas Air Putih in 2024 and to address the objectives of the study.

RESULT

Financial Perspective

The financial performance of BLUD Puskesmas Air Putih in 2024 was assessed using three *Value for Money* indicators: effectiveness, efficiency, and financial independence. Based on the 2024 Revised Business and Budget Plan, the revenue target was IDR 1,500,000,000, while actual total revenue reached IDR 1,456,239,907 and total expenditure amounted to IDR 1,395,855,438. The monthly distribution of revenue and expenditure is presented in table 1.

The data indicate that JKN capitation was the dominant source of BLUD revenue throughout 2024. Of the total revenue of IDR 1,456,239,907, IDR 1,087,188,274, or 74.7%, originated from capitation funds, whereas other revenue contributed only IDR 369,051,633. The monthly proportion of capitation ranged from 62.3% in July to 86.1% in February. This pattern demonstrates that the financial structure of the BLUD remained highly dependent on capitation revenue.

The monthly comparison between revenue and expenditure also reveals financial fluctuations that are not apparent from the annual aggregate. Five months recorded expenditure exceeding revenue: February, March, May, July, and December. The largest monthly deficit occurred in December, amounting to IDR 29,604,012, followed by March with IDR 14,983,429 and February with IDR

17,286,214. Conversely, several months generated positive balances, particularly June. Thus, although annual revenue exceeded annual expenditure, the monthly pattern indicates the existence of short-term cash-flow pressures.

Table 1.
Monthly Revenue and Expenditure

Month	Capitation (IDR)	Other Revenue (IDR)	Total Revenue (IDR)	Capitation (%)	Total Expenditure (IDR)
January	89,983,980	21,722,852	111,706,832	80.6	108,356,000
February	86,772,428	13,976,500	100,748,928	86.1	118,035,142
March	86,828,526	29,169,505	115,998,031	74.9	130,981,460
April	86,892,804	30,349,730	117,242,534	74.1	110,958,489
May	86,843,288	24,891,491	111,734,779	77.7	122,353,829
June	92,461,646	30,448,727	122,910,373	75.2	83,717,645
July	91,589,677	55,398,500	146,988,177	62.3	156,251,069
August	93,306,540	45,841,926	139,148,466	67.1	104,833,213
September	93,982,556	21,533,003	115,515,559	81.4	101,237,522
October	93,021,180	32,449,208	125,470,388	74.1	92,997,119
November	92,822,272	20,900,226	113,722,498	81.6	101,476,596
December	92,683,377	42,369,965	135,053,342	68.6	164,657,354
Total	1,087,188,274	369,051,633	1,456,239,907	74.7	1,395,855,438

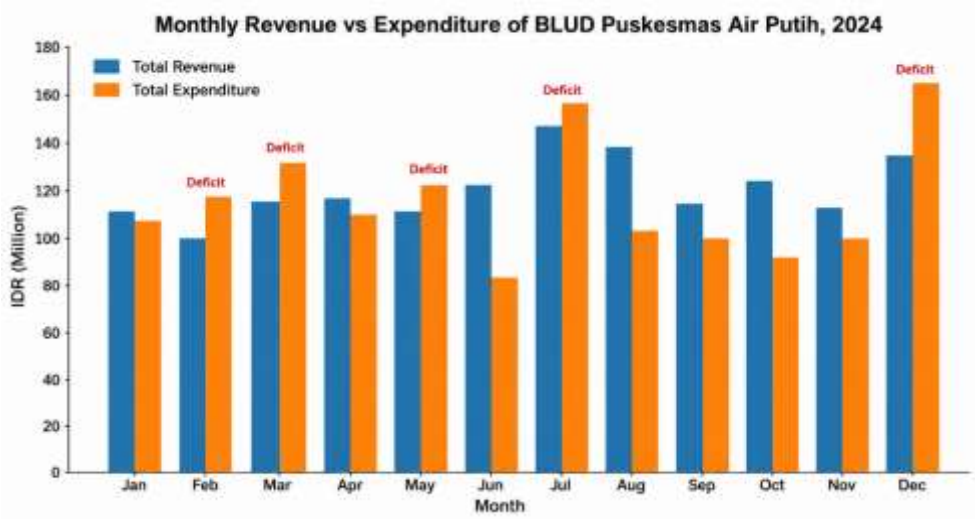

Figure 1. Monthly Revenue and Expenditure of BLUD Puskesmas Air Putih, 2024

The *Value for Money* analysis is presented in table 2.

Table 2.
Value for Money Ratios of BLUD Puskesmas Air Putih, 2024

Indicator	Formula	Result	Category
Effectiveness	Actual revenue ÷ Revenue target	97.08%	Effective
Efficiency	Actual expenditure ÷ Actual revenue	95.85%	Efficient
Financial independence	Non-capitation revenue ÷ Total revenue	25.35%	Low

Source: Authors' calculations based on BLUD Puskesmas Air Putih financial records.

The effectiveness ratio of 97.08% indicates that the Puskesmas was able to achieve most of its targeted revenue during 2024. The efficiency ratio of 95.85% indicates that expenditure represented a substantial proportion of realized revenue. Meanwhile, the financial independence ratio was only 25.35%, demonstrating that non-capitation revenue accounted for approximately one-quarter of total BLUD revenue. Therefore, the financial perspective presents a mixed performance: revenue realization was relatively effective, but financial independence remained low because of the dominant contribution of JKN capitation.

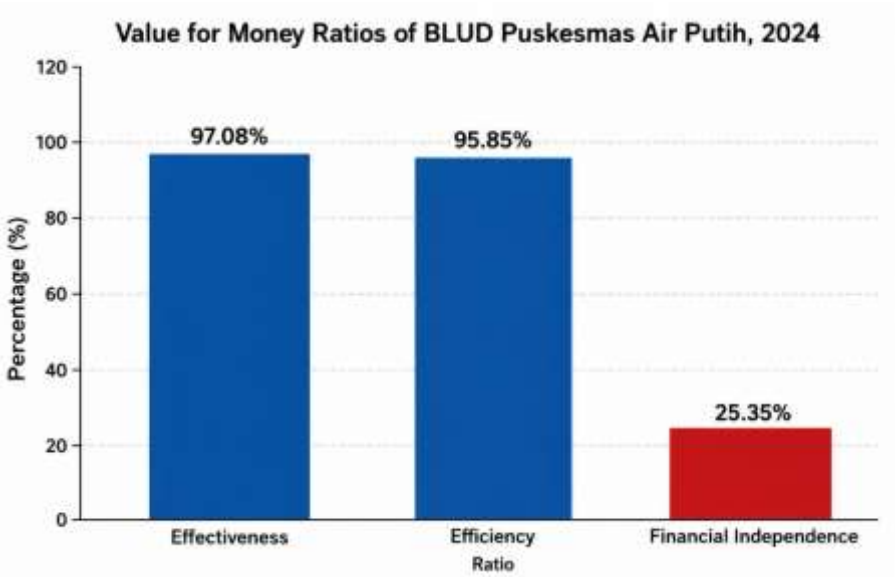

Figure 2. Value for Money Ratios of BLUD Puskesmas Air Putih, 2024

Customer Perspective

The customer perspective was evaluated using the achievement of the 12 Health Sector Minimum Service Standards (SPM) indicators in 2024. The results show substantial variation among service indicators, as presented in Table 3.

Table 3.
Achievement of the 12 Health Sector Minimum Service Standard Indicators, 2024

No.	SPM Indicator	Target	Achievement	Achievement (%)
1	Maternal health services during pregnancy	895	613	88.20
2	Maternal health services during childbirth	664	624	93.98
3	Newborn health services	633	625	98.74
4	Under-five child health services	2,776	2,739	98.67
5	School-age child health services	7,219	6,984	96.74
6	Productive-age health services	27,090	4,559	16.83
7	Older-person health services	1,129	383	33.92
8	Hypertension health services	10,581	1,197	11.31
9	Diabetes mellitus health services	1,204	313	26.00
10	Severe mental disorder health services	53	51	96.23
11	Tuberculosis-suspect health services	1,144	470	41.08
12	HIV-risk population health services	1,392	483	34.70

Source: SPM Health Sector achievement records of Puskesmas Air Putih, 2024.

The results demonstrate a marked disparity between service groups. Maternal, newborn, under-five, school-age, and severe mental disorder services achieved relatively high performance, with achievement rates exceeding 88%. The highest achievement was recorded for newborn health services at 98.74%, followed by under-five health services at 98.67%.

In contrast, services targeting productive-age and older populations showed considerably lower achievement. Hypertension services recorded the lowest achievement at only 11.31%, followed by productive-age health services at 16.83% and diabetes mellitus services at 26.00%. This pattern suggests that the main challenge in the customer perspective was not the overall availability of health services but the ability to reach specific target populations, particularly those requiring screening and management of chronic and infectious diseases.

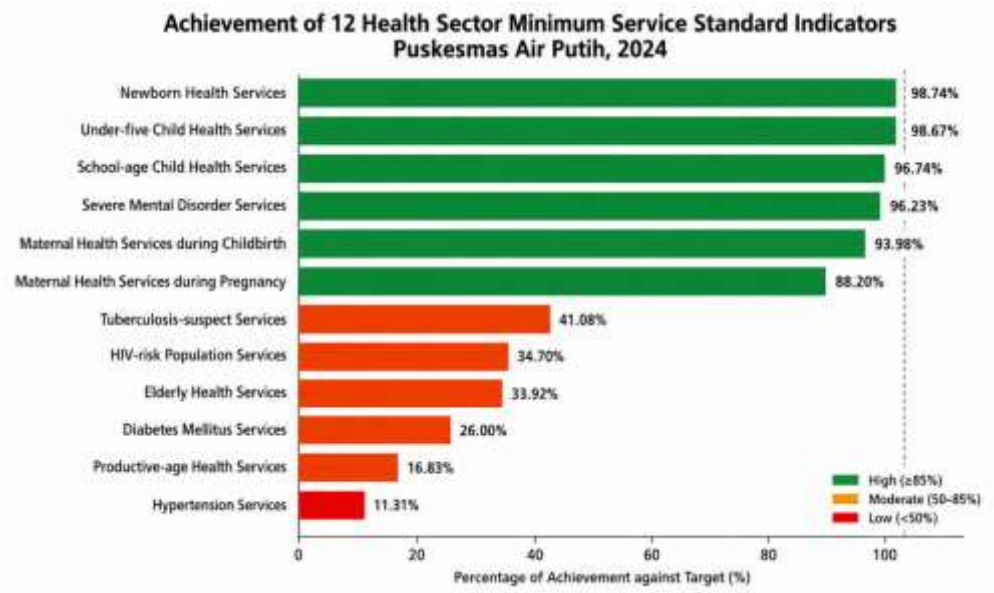

Figure 3. Achievement of the 12 Health Sector Minimum Service Standard Indicators at Puskesmas Air Putih, 2024

The results therefore indicate that customer-oriented performance was uneven across service domains. High achievement in maternal and child health services indicates relatively strong coverage in these areas, whereas the substantially lower achievement of non-communicable disease and infectious disease indicators points to an area requiring managerial attention.

Internal Business Process Perspective

The internal business process perspective was assessed based on the completeness of facilities, infrastructure, and medical equipment recorded in ASPAK, as well as the calibration status of medical equipment. The results are presented in Table 4.

Table 4.
Completeness and Calibration of Facilities, Infrastructure, and Medical Equipment Based on ASPAK, 2024

Component	Value
Facility completeness	100.00%
Infrastructure completeness	40.74%
Medical equipment completeness	74.71%
Cumulative completeness	83.96%
Equipment requiring mandatory calibration	193 units
Equipment calibrated	1 unit (0.52%)

Source: ASPAK individual report, 2024.

The cumulative completeness score of facilities, infrastructure, and medical equipment reached 83.96%. However, this aggregate score conceals considerable variation among its components. Facility completeness reached 100%, whereas infrastructure completeness was substantially lower at 40.74%. Medical equipment completeness reached 74.71%.

A more critical finding concerns equipment calibration. Of the 193 medical equipment units requiring mandatory calibration, only one unit, equivalent to 0.52%, was recorded as calibrated. Consequently, although the overall SPA completeness score appears relatively high, the extremely low calibration rate represents an important weakness in the internal business process perspective. Equipment availability alone does not guarantee service quality when the accuracy and reliability of equipment have not been adequately verified.

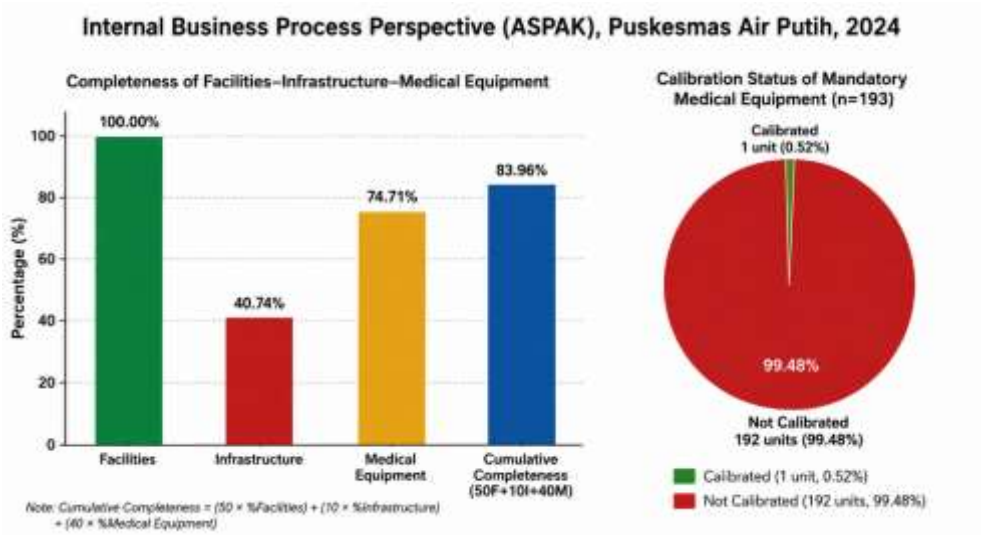

Figure 4. Completeness of Facilities, Infrastructure, and Medical Equipment and Calibration Status, 2024

The findings indicate that internal process performance should therefore be interpreted beyond physical availability. The gap between equipment completeness and calibration status suggests that strengthening maintenance and calibration systems should become an important managerial priority.

Learning and Growth Perspective

The learning and growth perspective was assessed using the 2024 Staffing Needs Plan, which compared the actual workforce with the ideal staffing requirements across 86 mapped position-level combinations. The distribution of staffing gaps is presented in table 5.

Table 5.
Staffing Gap Status at Puskesmas Air Putih, 2024

Status	Number of Position Levels	Percentage
Insufficient (K)	57	66.3%
Adequate (S)	28	32.6%
Excess (L)	1	1.2%

Source: 2024 Staffing Needs Plan of Puskesmas Air Putih.

The results show that staffing adequacy was a substantial challenge. Of the 86 mapped position-level combinations, 57 (66.3%) were categorized as insufficient, while only 28 (32.6%) met the required staffing level. One position-level combination (1.2%) was classified as having excess personnel. The net staffing gap reached −104 personnel, indicating a considerable discrepancy between actual staffing capacity and identified workforce requirements. The largest shortages were concentrated among midwifery and nursing positions. Midwifery positions showed an accumulated shortage of 15 personnel across levels, including a shortage of seven skilled midwives, while nursing positions showed an accumulated shortage of 10 personnel, including five skilled nurses.

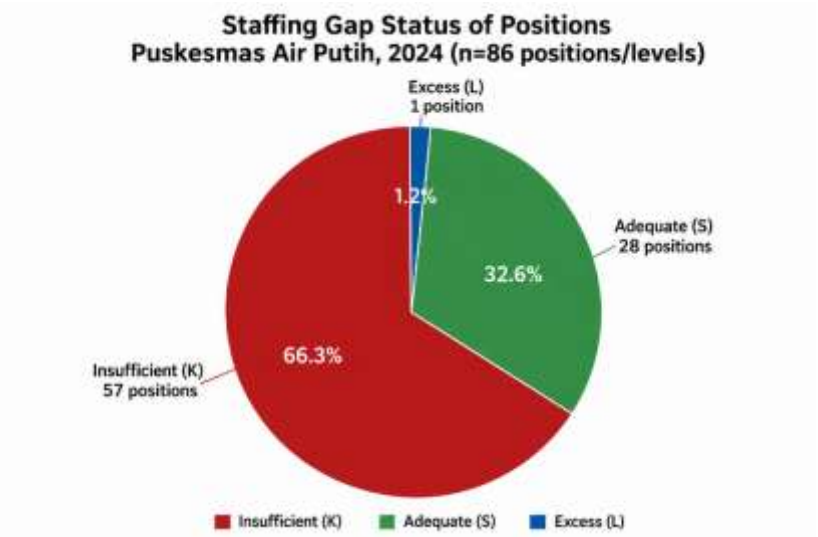

Figure 5. Distribution of Staffing Gap Status at Puskesmas Air Putih, 2024

The predominance of insufficient staffing suggests that the learning and growth perspective represents another important area requiring managerial attention. The shortage is particularly relevant because midwives and nurses constitute key frontline personnel in primary healthcare delivery. Thus, workforce adequacy is not only an administrative issue but also has potential implications for service capacity, workload distribution, and the ability of the Puskesmas to sustain improvements in other BSC perspectives.

Integrated Balanced Scorecard Findings

The four perspectives reveal a multidimensional performance profile of BLUD Puskesmas Air Putih in 2024. The financial perspective demonstrates relatively effective revenue realization but low financial independence, primarily because of the dominant contribution of JKN capitation. The customer perspective shows strong performance in maternal and child health services but substantial gaps in productive-age, elderly, hypertension, diabetes, tuberculosis, and HIV-related services. The internal business process perspective indicates relatively high overall SPA completeness but a critical weakness in medical equipment calibration. Meanwhile, the learning and growth perspective reveals substantial staffing shortages, with 66.3% of mapped position-level combinations classified as insufficient.

Taken together, the findings indicate that the annual financial surplus alone does not fully represent the overall performance of the BLUD. The integrated BSC assessment reveals structural weaknesses in financial independence, selected health-service coverage, equipment calibration, and workforce adequacy. These findings demonstrate the importance of evaluating Puskesmas BLUD performance through multiple interrelated perspectives rather than relying solely on financial achievement.

DISCUSSION

Financial Performance: Aggregate Effectiveness versus Financial Vulnerability

The financial perspective demonstrates a distinction between favourable annual performance and underlying financial vulnerability. The effectiveness ratio of 97.08% indicates that actual revenue was close to the annual target, while the efficiency ratio of 95.85% indicates that expenditure represented a substantial but still manageable proportion of realised revenue. At the aggregate level, these results suggest relatively favourable financial performance. However, five of the twelve months recorded expenditure exceeding revenue, demonstrating that annual financial indicators alone do not fully describe the financial condition of the BLUD. The results are consistent with the financial data presented in the manuscript, which show deficits in February, March, May, July, and December.

The monthly pattern is important because Puskesmas financial management occurs within a financing system involving several funding streams and different expenditure requirements. Recent research has shown that JKN capitation funds remain an important source of financing for Puskesmas, but their utilisation and allocation require effective planning and management. (Parulian et al., 2024) found that the utilisation of capitation funds can be affected by concerns regarding unutilised funds and allocation efficiency. Similarly, Hasan and Adisasmito (2017) reported disparities in capitation resources and operational requirements across Puskesmas and highlighted the importance of greater budget flexibility under PPK-BLUD. This is consistent with more recent evidence that BLUD status itself is associated with the broader organisational capacity of Puskesmas, including accreditation attainment (Mawarni et al., 2022).

The financial independence ratio of 25.35% represents the most important weakness in this perspective. Approximately three-quarters of total revenue originated from JKN capitation, whereas non-capitation revenue accounted for only about one-quarter. This finding indicates that the BLUD has achieved relatively effective management of its existing revenue but remains substantially dependent on a dominant external financing source. This result is important from the BSC perspective because a high effectiveness ratio should not automatically be interpreted as evidence of sustainable financial performance. The BSC emphasises the relationship between current financial outcomes and the organisational capabilities required to create sustainable value (Kaplan & Norton, 2000). Evidence from BLUD Puskesmas research also supports this interpretation. (Pramaysella & Rahmanti, 2024) found generally good performance at Puskesmas Morokrembangan after PPK-BLUD implementation, but several specific financial indicators remained problematic. Likewise, (Awalanty et al., 2024) found that the financial perspective at Puskesmas Prambon varied across economic, efficiency, and effectiveness indicators rather than producing a uniformly favourable result.

Therefore, the financial performance of Puskesmas Air Putih can be characterised as effective but relatively dependent. The managerial implication is not that JKN capitation should be reduced, because it remains a fundamental financing mechanism for primary healthcare. Instead, the finding indicates the need to strengthen financial planning, monitor monthly cash-flow conditions, improve utilisation of available resources, and explore legitimate opportunities for increasing non-capitation BLUD revenue.

Polarisation of Minimum Service Standard Achievement

The customer perspective reveals substantial differences across the 12 SPM indicators. Maternal and child health services demonstrated high achievement, while productive-age health, elderly health, hypertension, diabetes mellitus, tuberculosis, and HIV-risk services recorded substantially lower achievement. Hypertension was the weakest indicator, with achievement of only 11.31%. This pattern is consistent with national evidence showing that SPM achievement is not uniform across health-service categories. The Ministry of Health reported that newborn health services had relatively high achievement nationally, whereas productive-age and hypertension services remained comparatively lower (Kementerian Kesehatan Republik Indonesia, 2024). Thus, the pattern observed at Puskesmas Air Putih appears to reflect a broader challenge in population-based preventive services rather than an isolated problem.

The findings are also consistent with (Renawati et al., 2025), who reported difficulties in achieving hypertension SPM at a Puskesmas in Malang Regency. Their study identified limited human resources, multiple responsibilities among programme personnel, and weak cross-sector coordination as important barriers. Ramadhani et al. (2023) also identified organisational and implementation barriers in hypertension SPM, reinforcing the view that achieving hypertension targets requires more than the availability of routine clinical services.

One possible explanation for the observed polarisation is the difference between scheduled facility-based services and proactive population-based screening. Maternal and child health programmes are often supported by established schedules and identifiable target groups, whereas hypertension and diabetes services require active identification of eligible populations. Consequently, these programmes depend more heavily on outreach, screening, follow-up, and community participation. This interpretation is particularly relevant because the learning and growth perspective of Puskesmas Air Putih simultaneously reveals substantial workforce shortages. However, because the present study is descriptive and does not test causal relationships statistically, the staffing shortage should not be interpreted as a demonstrated cause of low SPM achievement. Instead, the two findings should be interpreted as interrelated organisational signals that warrant further investigation.

Physical Completeness Does Not Guarantee Quality Readiness

The internal business process perspective demonstrates an important distinction between physical availability and functional readiness. The cumulative SPA completeness score reached 83.96%, but this figure concealed substantial differences between facilities, infrastructure, and medical equipment. Most importantly, only 1 of 193 mandatory-calibration medical devices had been calibrated, corresponding to 0.52%. This result is important because an inventory-based indicator may create an overly favourable impression of internal process readiness if it does not include functional and quality-assurance indicators. In a healthcare organisation, equipment is not merely an asset; it is an instrument used to support diagnosis, monitoring, treatment, and decision-making. Therefore, the reliability of equipment is directly relevant to service processes. This concern is corroborated by recent evidence that calibration of mandatory medical equipment at Puskesmas remains poorly implemented nationally, largely due to budgetary constraints and weak compliance oversight (Amini et al., 2026).

The finding also extends previous applications of the BSC in Puskesmas. Studies such as (Mahardika & Supadmi, 2014; Mawarni & Wuryani, 2020; Octavianty et al., 2024) demonstrate the value of using internal business-process indicators in Puskesmas performance evaluation. However, the present study shows that the selection of indicators within this perspective is equally important. A composite score can conceal a critical weakness when components with different implications for service quality are aggregated into one value. Accordingly, equipment completeness and calibration should be treated as complementary but distinct indicators. The completeness indicator answers whether the required resources are available, whereas calibration answers whether certain equipment has undergone the necessary quality-assurance process. This distinction improves the diagnostic value of the BSC and prevents a high aggregate score from masking a critical operational risk.

Human Resource Shortage as a Structural Weakness

The learning and growth perspective indicates that human resources constitute one of the most substantial weaknesses at Puskesmas Air Putih. Of 86 mapped position-level combinations, 57 (66.3%) were categorised as insufficient, while only 28 (32.6%) were adequate. The net staffing gap reached 104 personnel, with the largest shortages concentrated among midwives and nurses. This finding is consistent with previous BSC research in Puskesmas settings. (Mawarni & Wuryani, 2020) found that personnel commitment was among the weaker non-financial indicators at a BLUD Puskesmas, while (Putri, 2019) reported weaknesses in the learning and growth perspective despite more favourable performance in other BSC dimensions. These findings suggest that human-resource capacity may represent a recurring challenge in Puskesmas performance management.

The recent study by (Asri, 2026) further strengthens the importance of organisational capability. Using a BSC framework among BLUD Puskesmas in Ternate, Asri found a significant positive relationship between knowledge management and organisational performance. The findings suggest

that organisational capability, knowledge sharing, and information management can contribute to improved financial, customer, internal-process, and learning-and-growth performance.

In the context of Puskesmas Air Putih, the shortage of midwives and nurses is particularly important because these personnel are directly involved in both routine and preventive health services. The simultaneous occurrence of substantial workforce shortages and low achievement of several population-based screening indicators suggests a plausible organisational linkage. Nevertheless, the relationship should be interpreted cautiously because the present study does not statistically test whether staffing shortages cause low SPM achievement.

Interconnection among the Four Balanced Scorecard Perspectives

The main contribution of this study emerges from the integration of the four perspectives rather than from the individual indicators. The results demonstrate that Puskesmas Air Putih does not have uniformly strong or weak performance. Instead, it presents a mixed performance profile, with relatively favourable annual financial effectiveness, strong maternal-child health service achievement, relatively high physical asset completeness, but simultaneously low financial independence, weak achievement of several screening indicators, extremely low equipment calibration, and substantial workforce shortages.

This pattern is consistent with previous research showing that Puskesmas performance varies among BSC perspectives. (Mahardika & Supadmi, 2014) demonstrated differences in performance between Puskesmas across financial, customer, internal process, and learning-and-growth dimensions. (Awalanty et al., 2024) likewise found that the performance of Puskesmas Prambon differed among financial and non-financial indicators. (Octavianty et al., 2024) also used the four perspectives to provide a broader assessment of Puskesmas performance rather than relying on financial indicators alone. More recently, Hasnur (2023) similarly found uneven performance across the four BSC perspectives at a government-run FKTP in the JKN era, further reinforcing the relevance of cross-perspective evaluation.

The present study extends this literature by emphasising cross-perspective interpretation. For example, the shortage of health workers may limit the organisational capacity required for proactive screening; the low calibration rate represents an internal-process weakness that may affect service reliability; and financial dependence on JKN capitation may constrain the flexibility available to address workforce and operational requirements. These should be regarded as plausible organisational linkages rather than statistically demonstrated causal relationships. This interpretation is also supported by the recent application of BSC in BLUD Puskesmas Morokrembangan. (Pramaysella & Rahmanti, 2024) concluded that overall performance could be categorised as good, but specific weaknesses remained in financial and customer-related indicators. Thus, an overall favourable assessment does not necessarily mean that all strategic components are equally strong.

Implications for BLUD Puskesmas Performance Management

The findings have several managerial implications. First, financial monitoring should incorporate monthly cash-flow analysis in addition to annual effectiveness and efficiency ratios. Second, the customer perspective should prioritise low-performing SPM indicators, particularly hypertension, diabetes mellitus, and productive-age health services. Third, internal business-process monitoring should distinguish asset completeness from functional quality assurance, particularly medical-equipment calibration. Fourth, workforce planning should prioritise critical shortages among frontline health professionals. The implications are consistent with recent evidence that effective management of capitation funds requires attention to planning, utilisation, and operational efficiency. The findings also reinforce the importance of organisational capability in BLUD

Puskesmas performance, as demonstrated by recent research on knowledge management and BSC performance.

Therefore, management interventions should not be designed separately according to each BSC perspective. Improving hypertension SPM achievement, for example, may require workforce strengthening and better outreach planning. Similarly, improving equipment availability without improving calibration would not necessarily improve service reliability. Likewise, maintaining high annual financial effectiveness without reducing dependence on a dominant revenue source may leave the organisation vulnerable to financial fluctuations. Overall, the results support the use of the BSC as not merely a performance measurement tool but also a diagnostic management framework. This interpretation is particularly relevant for BLUD Puskesmas because the purpose of financial flexibility is ultimately to support sustainable, accountable, and high-quality public healthcare delivery.

CONCLUSION

The evaluation of BLUD Puskesmas Air Putih, Samarinda City, in 2024 using the four perspectives of the Balanced Scorecard revealed heterogeneous performance across the dimensions. From the financial perspective, annual effectiveness and efficiency were relatively favorable; however, financial independence remained low due to the dominant contribution of JKN capitation funds, while monthly deficits indicated underlying cash-flow vulnerability. From the customer perspective, the achievement of Minimum Service Standards was highly polarized, with strong performance in maternal and child health services but substantially lower achievement in non-communicable disease screening services. From the internal business process perspective, the overall completeness of facilities, infrastructure, and medical equipment was relatively adequate, but the extremely low calibration rate of mandatory-calibration equipment indicated a critical quality-assurance gap that was not reflected in the aggregate completeness score. From the learning and growth perspective, substantial staffing shortages were identified, particularly among midwives and nurses who constitute key frontline healthcare personnel.

The integrated findings demonstrate that the performance of BLUD Puskesmas Air Putih cannot be adequately represented by a single BSC perspective or by aggregate performance indicators alone. The four perspectives are interconnected within a broader organizational performance chain. Workforce shortages may constrain the capacity to conduct proactive non-communicable disease screening, while high dependence on JKN capitation may limit the financial flexibility required to address operational and human-resource needs. The main contribution of this study is the identification of cross-perspective performance gaps that may remain hidden when each BSC dimension is interpreted independently.

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