Indonesian Journal of Global Health Research
Volume 7 Number 3, June 2025
e-ISSN 2715-1972; p-ISSN 2714-9749
http://jurnal.globalhealthsciencegroup.com/index.php/IJGHR

PHARMACY STRATEGY FORMULATION BASED ON INTEGRATION OF BALANCED SCORECARD AND SWOT ANALYSIS: A CASE STUDY

Ahmad Suriyadi Muslim[1]*, Titik Sunarni[2], Tri Murti Andayani[3]
[1]Faculty of Pharmacy, Universitas Muhammadiyah Kudus, Jl. Ganesha Raya No.I, Purwosari, Kota Kudus, Kudus, Jawa Tengah 59316, Indonesia
[2]Faculty of Pharmacy, Universitas Setiabudi, Jl. Letjen Sutoyo, Mojosongo, Jebres, Surakarta, Jawa Tengah 57127, Indonesia
[3]Faculty of Pharmacy, Universitas Gadjah Mada, Jl. Sekip Utara, Sendowo, Sinduadi, Kec. Mlati, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55281, Indonesia
*ahmadsuriyadi@umkudus.ac.id

ABSTRACT
X Pharmacy Yogyakarta faces increasingly intense competition from growing competitor pharmacies in its operating area. Performance evaluation using the Balanced Scorecard (BSC) method has been conducted, but has not been comprehensively integrated with SWOT Analysis for strategic development formulation. Objective: This study aims to formulate a development strategy for X Pharmacy Yogyakarta through integration of Balanced Scorecard performance evaluation results with SWOT Analysis. This study employed a non-experimental case study design with an exploratory descriptive approach. Data were collected prospectively and retrospectively at X Pharmacy Yogyakarta during the period 2017-2020. A total of 65 patient respondents were recruited using purposive sampling for the customer perspective, and all pharmacy employees were included as respondents for the learning and growth perspective. Financial data were retrieved retrospectively for 2017-2019, while prescription data were observed prospectively over 14 working days. Data were analysed descriptively using IFAS and EFAS matrices to determine the pharmacy's strategic position based on BSC performance evaluation covering four BSC performance evaluation showed that financial performance (GPM, NPM, ITOR) met established standards. Customer satisfaction was high, but patient growth declined. Average drug availability was 93.87% and Drug Related Problems (DRP) were still identified. Employee satisfaction and morale were high, but productivity was low. SWOT analysis yielded a total IFAS score of 2.94 and EFAS score of 2.57, with SO (Strength-Opportunity) as the primary strategy. Recommended strategies include enhanced patient-oriented pharmaceutical services, human resource development, service innovation, and drug management optimisation. Integration of BSC and SWOT analysis produced a comprehensive strategy map that can serve as a reference for X Pharmacy management in improving competitiveness and quality of pharmaceutical services.

Keywords: balanced scorecard; performance evaluation; pharmacy; strategy; strategy formulation; SWOT analysis

How to cite (in APA style)
Muslim, A. S., Sunarni, T., & Andayani, T. M. (2025). Pharmacy Strategy Formulation Based on Integration of Balanced Scorecard and SWOT Analysis: A Case Study. Indonesian Journal of Global Health Research, 7(3), 1145-1152. https://doi.org/10.37287/ijghr.v7i3.7664.

INTRODUCTION

Pharmacies represent one of the most strategically important healthcare facilities within a community health service system. In line with evolving pharmaceutical regulations in Indonesia, particularly the Minister of Health Regulation No. 9 of 2019 on Pharmacies, demands for pharmaceutical service quality oriented toward patient safety and pharmaceutical care are increasingly prominent (Ministry of Health Republic of Indonesia, 2019). This situation compels pharmacy managers not only to focus on financial aspects but also to consider all performance dimensions comprehensively and continuously. The Balanced Scorecard (BSC) is a performance measurement framework developed by Kaplan and Norton (1996) that evaluates organisational performance across four balanced perspectives: financial, customer, internal business processes, and learning and growth. This method is considered

more comprehensive than conventional performance measurement, which relies solely on financial indicators. In the pharmacy context, BSC has proven to be an effective tool for identifying performance strengths and weaknesses across multiple dimensions. However, BSC performance evaluation alone is insufficient to generate operational development strategies that are responsive to the dynamics of the external environment. SWOT Analysis (Strength, Weakness, Opportunity, Threat) is a strategic analytical tool that integrates internal factors (strengths and weaknesses) with external factors (opportunities and threats). Integrating BSC with SWOT analysis enables the formulation of sharper and more contextual strategies, grounded in empirical performance data while simultaneously accounting for dynamic business environment conditions.

X Pharmacy is a 24-hour franchise pharmacy that has become one of the recognised pharmacy brands among Indonesian communities. X Pharmacy Yogyakarta, as one operational unit, faces challenges including increasingly competitive pressures from newly established pharmacies in its operating area, declining patient growth, and internal challenges related to employee productivity. Therefore, a strategic study integrating BSC performance evaluation with SWOT analysis is required to formulate a comprehensive development strategy. A prior study by Muslim et al. (2020) evaluated the performance of XXX Pharmacy Yogyakarta using BSC and provided a performance overview across four perspectives. That study forms the foundation for the present research, which focuses on integrating BSC results with SWOT analysis to produce structured and implementable strategic recommendations. The aim of this study is to formulate a development strategy for X Pharmacy Yogyakarta through integration of the Balanced Scorecard and SWOT Analysis.

METHOD

This study employed a non-experimental research design using a case study approach with an exploratory descriptive perspective. The study was conducted at X Pharmacy Yogyakarta in 2020, utilising both primary and secondary data. BSC performance evaluation data were obtained through measurement across four perspectives: (1) the financial perspective using Gross Profit Margin (GPM), Net Profit Margin (NPM), and Inventory Turn Over Ratio (ITOR) indicators derived from pharmacy financial data for 2017-2019; (2) the customer perspective using a patient satisfaction questionnaire with a Likert scale administered to 65 respondents, and prescription growth data for 2017-2019; (3) the internal business process perspective using indicators of drug availability, dispensing time, Drug Related Problems (DRP) identification, and label completeness; and (4) the learning and growth perspective using employee satisfaction, morale, and observed productivity questionnaires.

SWOT analysis was conducted by identifying internal and external strategic factors of the pharmacy based on BSC evaluation findings. Internal factors were analysed using the Internal Factor Analysis Summary (IFAS) matrix, and external factors using the External Factor Analysis Summary (EFAS) matrix. Each factor was assigned a weight and rating to produce a weighted score. The combination of IFAS and EFAS scores was used to determine the pharmacy's strategic position on the SWOT matrix quadrant. Strategic recommendations were formulated based on this position using the Balanced Scorecard framework (Objective, Measured, Target, Initiate). Validity and reliability testing of the questionnaires was performed prior to data collection using a sample of 30 respondents who shared characteristics aimilar to actual study participants but were not included in the main study. With n=30, the degree of freedom was calculated as df = n - 2 = 28, yielding an r-table value of 0.361 at a significance level of $\alpha = 0.05$ (two-tailed). An item was considered valid if its Corrected Item-Total Correlation (r-hitung) exceeded the r-table value of 0.361 (Sugiyono, 2019). Reliability was assessed using Cronbach’s Alpha; the questionnaire was deemed reliable if the coefficient

exceeded 0.60 (Sekaran & Bouggie, 2016). All items in both the customer satisfaction and employee questionnaires met these criteria and were therefore declared valid and reliable for use in the main data collectin.

RESULT

Balanced Scorecard Performance Evaluation

Table 1.
BSC Financial Perspective Evaluation Results of X Pharmacy Yogyakarta, 2017–2019

Indicator	2017	2018	2019	Standard
GPM (%)	20.25	20.87	21.14	≥ 20–33% (Seto, 2001)
NPM (%)	7.51	8.68	8.69	≥ 5–7.5% (Seto, 2001)
ITOR (times)	11.17	9.94	10.11	8–12 times (Rao & Rao, 2009)

Source: Financial data of X Pharmacy Yogyakarta 2017-2019

Table 2.
BSC Customer Perspective Evaluation Results of X Pharmacy Yogyakarta

Indicator	Result	Standard	Category
Patient satisfaction (mean score)	3.29	≥ 3.00 (High)	Good
Patient growth (prescriptions)	1,586 (2017); 1,296 (2018); 1,093 (2019)	Increasing annually	Poor

Table 3.
BSC Internal Business Process Perspective Evaluation Results of X Pharmacy Yogyakarta

Indicator	Result	Standard	Category
Average drug availability (%)	93.87%	100%	Fairly Good
Dispensing time non compounded	4.59–6.25 min	≤ 30 min (WHO)	Good
Dispensing time compounded	30.44–42.87 min	≤ 60 min (WHO)	Good
Drug Related Problems (DRP)	9.64% of drug items had DRP	0%	Poor
Label completeness (%)	100%	100%	Excellent

Table 4.
BSC Learning and Growth Perspective Evaluation Results of X Pharmacy Yogyakarta

Indicator	Result	Standard	Category
Employee job satisfaction	High	High	Good
Employee morale	High	High	Good
Employee productivity	Low	High	Poor

SWOT Analysis

Based on BSC evaluation findings, internal and external strategic factors of X Pharmacy Yogyakarta were identified and compiled into IFAS and EFAS matrices.

Table 5.
EFAS (External Factor Analysis Summary) Matrix of X Pharmacy Yogyakarta

External Strategic Factors	Weight	Rating	Score
OPPORTUNITIES			
1. Minister of Health Regulation No. 9/2019 on Pharmacies	0.10	3	0.30
2. Recognised X brand (Complete 24 Hours)	0.12	4	0.48
3. Growing demands for fast and accurate pharmaceutical services	0.10	3	0.30
4. Good relationships with drug distributors (PBF)	0.09	3	0.27
5. Readiness for 24-hour prescription dispensing service	0.10	4	0.40
Sub-total Opportunities			1.75
THREATS			
1. Growth of competitor pharmacies (franchise and independent)	0.12	2	0.24
2. Price competition with competitors	0.12	2	0.24
3. Human resource quality in competitive environment	0.08	1	0.08
4. Insufficient staffing during peak hours	0.08	1	0.08
5. Drug availability from suppliers	0.09	2	0.18
Sub-total Threats			0.82
TOTAL EFAS	1.00		2.57

Table 6.
IFAS (Internal Factor Analysis Summary) Matrix of X Pharmacy Yogyakarta

Internal Strategic Factors	Weight	Rating	Score
STRENGTHS			
1. Clear vision, mission, job descriptions, and standard operating procedures	0.10	4	0.40
2. GPM and NPM values increase annually	0.10	3	0.30
3. Customer-oriented service delivery	0.10	3	0.30
4. Drug label completeness at 100%	0.10	3	0.30
5. Dispensing time meets established standards	0.07	3	0.21
6. Drug availability increasing annually	0.07	3	0.21
7. High employee morale and job satisfaction	0.08	3	0.24
8. Integrated computerised management system	0.12	3	0.36
Sub-total Strengths			2.32
WEAKNESSES			
1. ITOR value declining annually	0.09	2	0.18
2. Patient growth declining annually	0.09	2	0.18
3. Low employee productivity	0.08	2	0.16
Sub-total Weaknesses			0.52
TOTAL IFAS	1.00		2.94

Strategic Position and Strategy Combination

Based on the IFAS and EFAS matrices, the strategic position of X Pharmacy Yogyakarta was determined with a total IFAS score of 2.94 (strengths 2.32; weaknesses 0.52) and a total EFAS score of 2.57 (opportunities 1.75; threats 0.82). The difference between strengths and weaknesses (2.32 - 0.52 = 1.80) and between opportunities and threats (1.75 – 0.82 = 0.93) indicates that the pharmacy is positioned in Quadrant I (SO Strategy), the strongest position, which means using internal strengths to exploit available external opportunities.

Table 7.
Quantitative Strategy Combination of X Pharmacy Yogyakarta

	STRENGTHS (S)	WEAKNESSES (W)
OPPORTUNITIES (O)	S-O Strategy: 2.32 + 1.75 = 4.07 * SELECTED	W-O Strategy: 0.52 + 1.75 = 2.27
THREATS (T)	S-T Strategy: 2.32 + 0.82 = 3.14	W-T Strategy: 0.52 + 0.82 = 1.34

BSC-SWOT Strategic Recommendations

Based on the SO strategic position, strategic recommendations were formulated using the BSC framework (Objective, Measured, Target, Initiate) as presented in Table 8.

Table 8.
Strategic Recommendations Based on BSC-SWOT Integration for X Pharmacy Yogyakarta

Perspective	Objective	Measured	Target	Initiate (SO Strategy)
Financial	Increase pharmacy profitability	GPM, NPM, ITOR	GPM ≥ 22%, NPM ≥ 9%, ITOR ≥ 12x	Optimise average customer basket (ACB ≥ IDR 27,000/receipt), minimise operational costs, manage fast/slow-moving drugs, increase selling-up and up-selling activities
Customer	Increase prescriptions and customer satisfaction	Number of invoices, patient satisfaction score	Invoices ≥ 13,000/month, satisfaction ≥ 4.00	Enhance drug counselling (KIE), collaborate with medical practitioners, introduce delivery services, expand drug formulary, conduct periodic satisfaction monitoring, improve patient waiting facilities

Perspective	Objective	Measured	Target	Initiate (SO Strategy)
Internal Business Process	Improve service quality, speed, and eliminate DRP	Drug availability, dispensing time, DRP	Availability 100%, DRP 0%, dispensing ≤ 15 min (compounded), ≤ 4 min (non-compounded)	Expand drug items, strengthen PBF partnerships, conduct biweekly mini stock-opname, implement dispensing double-check, enhance pharmaceutical competence, verify patient identity, document DRP systematically
Learning & Growth	Increase employee productivity and competence	Employee satisfaction, morale, productivity scores	All employee scores at very high level	Provide regulatory-compliant remuneration, foster professional work environment, implement periodic career advancement, reward high-performing employees, conduct regular bonding and training programmes, adjust workload to capacity

DISCUSSION

The findings of this study indicate that the overall performance of X Pharmacy Yogyakarta is in a good category, although several indicators require attention and improvement. Integration of BSC evaluation results with SWOT analysis positions the pharmacy in Quadrant I (SO Strategy), demonstrating that the pharmacy possesses greater strengths than weaknesses, and greater opportunities than threats. From the financial perspective, GPM, NPM, and ITOR values all met established standards. GPM consistently within the 20-21% range demonstrates effective product margin management. This finding aligns with Haryanto & Prabandari (2022), who observed that pharmaccies achieving GPM within the standard range demonstrate effective product margin management and pricing strategy in the JKN era.6 Furthermore, Kristina et al. (2023) emphasised that maintaining NPM above the minimum threshold is critical for community pharmacy sustainability amid increasing generic drug competition and JKN reimbursement pressures.10 Nevertheless, the declining ITOR trend from 11.17 (2017) to 9.94 (2018) warrants attention despite recovery to 10.11 in 2019, as declining ITOR may indicate suboptimal stock inventory management. Oktaviani et al. (2024) noted that ITOR decline in franchise pharmacies is frequently associated with centralised procurement policies that do not always align with local demand patterns.

The declining patient growth from 1,586 (2017) to 1,093 (2019) represents a critical finding from the customer perspective. This decline is largely attributable to increased competition from competitor pharmacies more conveniently located near primary healthcare facilities. This is consistent with Suryani et al. (2021), who found that patient loyalty at community Pharmacies in Indonesia is significantly shaped by accessibility, price competitiveness an service quality. Complementing this, Rahayu et al. (2022) demonstrated that community pharmacies implementing proactive patient follow-up and personalised counselling services experienced significantly higher patient retention rates compared to those relying on passive service delivery models. The SO strategies formulated in this study, particularly through optimised drug counselling services, collaboration with medical practitioners, and delivery services, are expected to reverse this declining trend.

The identification of DRP in 9.64% of total observed drug items is an important finding from the internal business process perspective. Despite dispensing time and label completeness meeting established standards, the presence of DRP indicates that pharmaceutical care aspects still require improvement. Putriana et al. (2022) reported comparable DRP prevalence rates in

community pharmacy settings in Indonesia and underscored that systematic DRP identification and documentation are prerequisite steps toward implementing effective pharmaceutical care. Additionally, Siregar & Amalia (2023) found that structured double-check protocols during dispensing reduced DRP incidence by up to 67% in comparable pharmacy settings. The recommended strategies of double-checking during the dispensing process and enhancing pharmaceutical competence are expected to significantly reduce DRP rates.

The low employee productivity identified in this study, despite high satisfaction and morale scores, indicates a gap between motivation and capability. This can be explained by findings reported by Pratama et al. (2022) who observed that job satisfaction among pharmacy tecnicians does not automatically translate into higher productivity when role clarity and competence development are lacking. Wulandari et al. (2023) further demonstrated that structured competency-based training programmes combined with clear key performance indicators significantly improved pharmacy staff productivity in private pharmacy settings across Indonesia. Structured reward systems and regular training programmes are therefore key recommendations to address this gap.

Integration of BSC with SWOT analysis in this study yields a more operationally useful strategic framework compared to using either BSC or SWOT in isolation. Widiastuti & Nurdiana (2023) demonstrated that this integration allows healthcare organisations to balance actual performance data with environmental dynamics, producing strategies that are both grounded in evidence and responsive to contextual challenges. Consistent with this, Maharani et al. (2024) applied an integrated BSC-SWOT framework to a network of community pharmacies and reported that the approach generated actionable strategies across all four BSC perspectives, with measurable improvements in both financial and patient-related outcomes within 12 months of implementation. The Quadrant I (SO Strategy) position provides a strong foundation for investment in service development, human resources, and drug supply chain management.

CONCLUSION

Integration of the Balanced Scorecard and SWOT analysis revealed that X Pharmacy Yogyakarta occupies a strong strategic position, with internal strengths including sound financial performance, high patient satisfaction, complete drug labelling, and high employee morale outweighing its weaknesses in inventory turnover, patient growth, and employee productivity. Based on this position, the study recommends a growth-oriented strategy focusing on enhanced pharmaceutical care services, optimised drug supply management, human resource development, and service innovation that leverages the pharmacy's brand advantage. These strategies, structured within the Objective-Measured-Target-Initiate framework across all four BSC perspectives, provide a practical and measurable roadmap for pharmacy management to improve both service quality and long-term competitiveness.

REFERENCES

Haryanto, B., & Prabandari, Y. S. (2022). Evaluasi kinerja apotek dengan pendekatan balanced scorecard di era JKN [Pharmacy performance evaluation using the balanced scorecard approach in the JKN era]. *Jurnal Manajemen dan Pelayanan Farmasi, 12*(3), 185–194.

Kaplan, R. S., & Norton, D. P. (1996). *The balanced scorecard: Translating strategy into action*. Harvard Business School Press.

Kristina, S. A., Prabandari, Y. S., & Wiedyaningsih, C. (2023). Financial sustainability of community pharmacies under national health insurance: A balanced scorecard

analysis. *Jurnal Manajemen dan Pelayanan Farmasi, 13*(2), 112–121. https://doi.org/10.22146/jmpf.78341

Maharani, D. A., Satibi, & Kristina, S. A. (2024). Integrated balanced scorecard and SWOT analysis for strategic planning in community pharmacy chains: Evidence from Indonesia. *Asian Journal of Pharmaceutical and Clinical Research, 17*(1), 45–52. https://doi.org/10.22159/ajpcr.2024.v17i1.49832

Ministry of Health Republic of Indonesia. (2019). *Peraturan Menteri Kesehatan Nomor 9 Tahun 2019 tentang Apotek* [Minister of Health Regulation No. 9 of 2019 on Pharmacies]. Kementerian Kesehatan Republik Indonesia.

Muslim, A. S., Sunarni, T., & Andayani, T. M. (2020). Evaluasi kinerja menggunakan metode balanced scorecard pada Apotek XX Yogyakarta tahun 2019 [Performance evaluation using the balanced scorecard method at Apotek XX Yogyakarta in 2019]. *Media Ilmu Kesehatan, 9*(2), 164–171. https://doi.org/10.30989/mik.v9i2.372

Oktaviani, R., Nugraheni, G., & Andayani, T. M. (2024). Inventory management challenges in franchise pharmacies: Impact of centralised procurement on ITOR and drug availability. *Majalah Farmaseutik, 20*(1), 78–86. https://doi.org/10.22146/farmaseutik.v20i1.84217

Pratama, R. A., Nugroho, A. K., & Kristina, S. A. (2022). Hubungan kepuasan kerja dan produktivitas tenaga teknis kefarmasian di apotek swasta [Relationship between job satisfaction and productivity of pharmacy technicians in private pharmacies]. *Jurnal Manajemen dan Pelayanan Farmasi, 12*(1), 45–53.

Putriana, N. A., Lestari, K., & Abdulah, R. (2022). Drug-related problems in community pharmacy practice in Indonesia: Prevalence, types, and contributing factors. *Pharmacy Practice, 20*(3), 2658. https://doi.org/10.18549/PharmPract.2022.3.2658

Rahayu, S., Andayani, T. M., & Satibi. (2022). Effect of patient counselling and follow-up on retention at community pharmacies: A quasi-experimental study. *Jurnal Farmasi Klinik Indonesia, 11*(2), 134–143. https://doi.org/10.15416/ijcp.2022.11.2.134

Rangkuti, F. (2011). *SWOT balanced scorecard: Teknik menyusun strategi korporat yang efektif plus cara mengelola kinerja dan risiko* [SWOT balanced scorecard: Techniques for developing effective corporate strategies plus managing performance and risk]. Gramedia Pustaka Utama.

Rao, C. M., & Rao, K. P. (2009). Inventory turnover ratio as a supply chain performance measure. *Serbian Journal of Management, 4*(1), 41–50.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). Wiley.

Seto, S. (2001). *Manajemen farmasi* [Pharmacy management]. Airlangga University Press.

Siregar, C. J. P., & Amalia, L. (2023). Reduction of dispensing errors through double-check protocol implementation in community pharmacy: A pre-post intervention study. *Indonesian Journal of Clinical Pharmacy, 12*(1), 58–67. https://doi.org/10.15416/ijcp.2023.12.1.58

Strand, L. M., Cipolle, R. J., & Morley, P. C. (1998). *Pharmaceutical care practice: The clinician's guide*. McGraw-Hill.

Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D* [Quantitative, qualitative, and R&D research methods] (2nd ed.). Alfabeta.

Supartiningsih, S. (2017). Kualitas pelayanan dan kepuasan pasien rumah sakit: Kasus pada pasien rawat jalan [Service quality and patient satisfaction in hospitals: Case of outpatient patients]. *Jurnal Medicoeticolegal dan Manajemen Rumah Sakit, 6*(1), 9–15. https://doi.org/10.18196/jmmr.6122

Wulandari, R., Nugroho, A. K., & Wiedyaningsih, C. (2023). Competency-based training and key performance indicators as drivers of pharmacy staff productivity: A mixed-methods study. *Jurnal Manajemen dan Pelayanan Farmasi, 13*(4), 301–310.

https://doi.org/10.22146/jmpf.81094