

Development Strategy of Perumda Tirta Musi in Serving Palembang City's Drinking Water Needs

Juliando Saragih

*Manajemen Pembangunan Daerah, Fakultas Ekonomi dan Manajemen; Institut
Pertanian Bogor; Bogor, Indonesia*

E-mail: juliandosaragih@apps.ipb.ac.id

Yusman Syaukat

Fakultas Ekonomi dan Manajemen; Institut Pertanian Bogor; Bogor, Indonesia

Hendro Sasongko

Fakultas Ekonomi dan Bisnis; Universitas Pakuan; Bogor, Indonesia

2067

Submitted:
MARCH 2025

Accepted:
JUNE 2025

ABSTRACT

Perumda Tirta Musi, as a Regional-Owned Enterprise (BUMD) representing the Palembang City Government, plays a crucial role in meeting the city's drinking water needs. However, the company has not yet achieved the drinking water service coverage and profit targets outlined in its business plan and Regional Medium-Term Development Plan. This study aims to: (1) analyze the trend of Perumda Tirta Musi's drinking water service performance in Palembang City, and (2) formulate a development strategy for Perumda Tirta Musi to serve water needs in Palembang City. This research uses trend analysis to evaluate the performance of Perumda Tirta Musi and uses the IFE, EFE, IE, SWOT, and QSPM matrices to formulate the development strategy of Perumda Tirta Musi. The results indicated that Perumda Tirta Musi needs to pay attention to the achievement of the cash ratio, customer water flow hours, customer water pressure, water meter turnover, and the increasing trend of water loss. The company development strategy that can be carried out by Perumda Tirta Musi is to improve the distribution network connectivity/integration between service areas. The next priority strategy that can be carried out is to increase production/service capacity in potential areas of residential growth. These prioritized strategies offer actionable considerations for Perumda Tirta Musi's management as they strive to enhance drinking water services in Palembang City.

Keywords: *Strategic Management, Performance, Drinking Water, SWOT, QSPM*

INTRODUCTION

Water is one of the basic human needs required in daily life activities. Water is an important resource for better sanitation and livelihoods, as it has multiple uses and impacts on household income (Sesabo, 2023). The United Nations established water provision as one of the agenda items in the Sustainable Development Goals. The target set in the agenda is "achieving universal and equitable access to safe and affordable drinking water for all". One of the development programs implemented by the Government of Indonesia to realize the target of access to drinking water is the Development and Management of SPAM (*Sistem Penyediaan Air Minum - Drinking Water Supply Systems*). *Undang-Undang Nomor 23 Tahun 2014 tentang Pemerintahan Daerah* (Law Number 23 of 2014 concerning Regional Government) regulates the development and management of SPAM as the responsibility of every local government in Indonesia. Local governments, with autonomy status, have the flexibility to design development mechanisms, including the development of SPAM in each region according to their needs.

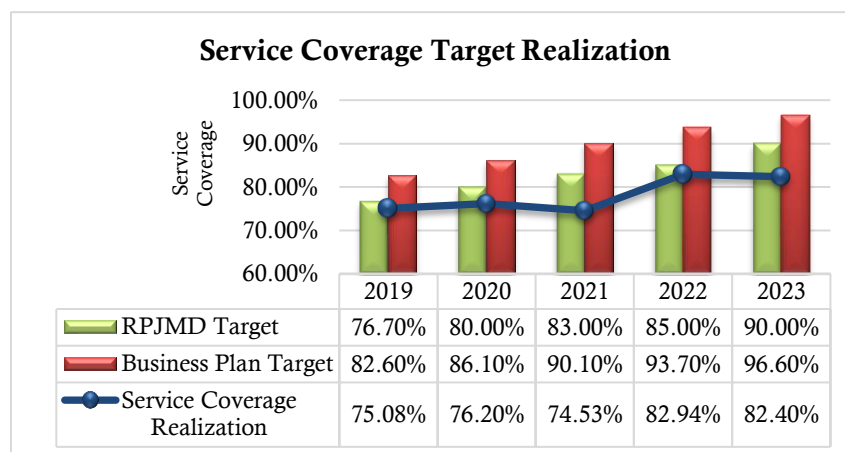
JIMKES

Jurnal Ilmiah Manajemen
Kesatuan
Vol. 13 No. 4, 2025
pp. 2067 - 2078
IBI Kesatuan
ISSN 2337 - 7860
E-ISSN 2721 - 169X
DOI: 10.37641/jimkes.v13i4.3652

In most regions of Indonesia, SPAM management is carried out through the assignment of BUMD (*Badan Usaha Milik Daerah* - Regional-Owned Enterprises). These assignments are generally implemented through piping-based water services. As of 2023, 393 BUMDs were recorded as playing a role in organizing SPAM across Indonesia (*Kementerian Pekerjaan Umum dan Perumahan Rakyat* - Ministry of Public Works and Public Housing, 2023). With this mechanism, BUMDs represent local governments to provide access to drinking water. The performance of BUMDs is a crucial factor that influences the success of local governments in achieving a reliable water supply. As Wijoyo & Mashuri (2021) stated, the role of BUMD is highly important in regional development. BUMDs hold a strategic position, not only supporting PAD (*Pendapatan Asli Daerah* - Regional Original Revenue) but also assisting and accelerating economic development within their respective regions.

Palembang City is one of the metropolitan cities on the island of Sumatra, with Perumda Tirta Musi serving as the BUMD that manages SPAM. *Peraturan Daerah Kota Palembang Nomor 10 Tahun 2022 tentang Perusahaan Umum Daerah Tirta Musi Palembang* (Palembang City Regional Regulation No. 10 of 2022 concerning Regional Public Company Tirta Musi Palembang) stipulates the company's objectives. These include: (1) to provide quality drinking water services at affordable prices for the community effectively and efficiently, and (2) to increase revenue that generates profits and is beneficial for the development of the city's economy based on the principles of good corporate governance. According to Hartati et al. (2022), a public organization that provides or sells goods and/or services with the main purpose of serving the community and obtaining profit (surplus) is referred to as a quasi-non-profit organization.

Perumda Tirta Musi carries the vision of "becoming a *smart happy* company that excels in providing drinking water and managing wastewater in Indonesia in 2028". However, the realization of Perumda Tirta Musi's service performance during 2019-2023 has not met the service coverage target set in the company's business plan or the service target set by the Palembang City Government in the RPJMD (*Rencana Pembangunan Jangka Menengah Daerah* - Regional Medium-Term Development Plan). Figure 1 presents the realization of service coverage of the Palembang City population as of 2023 at 82.40%, still below the business plan target of 96.60% and below the RPJMD target of 90%. This means that Perumda Tirta Musi still has a potential market of 17.60% of the total population of Palembang City.



Source: Processed from Perumda Tirta Musi Performance Evaluation Report (2019-2023)

Figure 1 Achievement of Perumda Tirta Musi Service Coverage Target

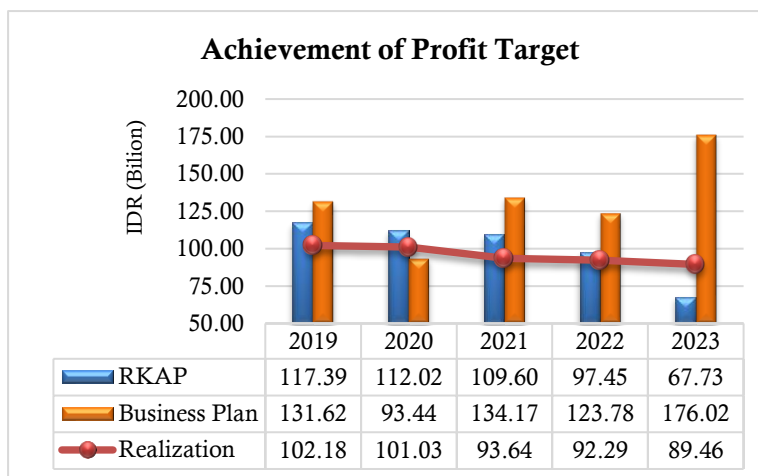
The potential market continues to grow due to increased water demand from population growth. The Palembang City Government Agency Performance Report 2023 recorded the total population of Palembang City as 1,772,492 people, with an average growth during 2019-2023 of 1.39% (*Pemerintah Kota Palembang* - Palembang City

Government, 2024). Research by Kurniawan et al. (2021) in the PDAM (*Perusahaan Daerah Air Minum* - Regional Drinking Water Company) Tirta Musi Palembang City stated that one of the constraints of Perumda Tirta Musi's services is the limited water balance or capacity deficit. The capacity deficit affects the company's ability to serve clean water/drinking water needs in Palembang City.

The limited fulfillment of service targets was also followed by the Company's declining profit during 2019-2023. Figure 2 presents the value of Perumda Tirta Musi's profit not reaching the target set in the business plan. The decline in profit has an impact on the amount of dividend contribution that can be given to the Palembang City Government. Perumda Tirta Musi has renewed the annual profit target so that it is no longer relevant to the business plan that has been set.

Perumda Tirta Musi, as a quasi non-profit organization, receives demands to realize dual functions, namely, quality drinking water services and increasing revenue to generate profits. Rosmayasari & Iqbal (2018) state that the PDAM maintains a balance of the company's dual functions (profit-oriented and public service) because these two functions are closely related in maintaining business existence.

Perumda Tirta Musi, as a representation of the Palembang City Government serving drinking water needs, must have the right strategy to achieve its business targets and long-term goals. Achieving organizational goals can be realized using a process called strategic management (Sukmiridiyanto et al., 2024). Strategic management is the art and science of formulating, implementing, and evaluating cross-functional decisions that enable organizations to achieve their goals. Achieving goals can be done through designing strategies that are decided by considering the internal and external factors faced by the company (David & David, 2017). Strategic planning is one of the main elements in improving organizational performance. Strategic planning is also useful as a comprehensive guide to achieving the vision, mission, and goals of the organization



Source: processed from Business Plan, Company Annual Work Plan and Budget (RKAP), Financial Statements Perumda Tirta Musi 2019-2023

Figure 2 Trends in Profit Realization of Perumda Tirta Musi

(Aisyah et al., 2024). The application of strategic management has a close relationship with the achievement of organizational performance (Genc & Şengul, 2015), including the application in public organizations (Sukmiridiyanto et al., 2024).

Considering both performance achievements and the need to attain Perumda Tirta Musi's objectives, this study aims to evaluate performance trends and formulate development strategies for the organization. The strategy formulation analysis will be conducted by considering the company's internal and external factors, its strategic position, a SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis for the formulation of alternative strategies, and a QSPM (Quantitative Strategic Planning Matrix) analysis to obtain priority strategies. This strategy prioritization is expected to

support Perumda Tirta Musi in achieving its objectives for drinking water services in Palembang City.

LITERATURE REVIEW

Drinking Water Service through BUMD

Regional-owned enterprises that organize SPAM are business entities formed specifically to carry out SPAM activities, with all or most of their capital owned by the region. A piped SPAM network is organized to ensure the certainty of the quantity and quality of drinking water produced and the continuity of drinking water supply (*Peraturan Pemerintah Republik Indonesia Nomor 122 Tahun 2015 Tentang Sistem Penyediaan Air Minum* - Government Regulation of the Republic of Indonesia Number 122 of 2015 concerning Drinking Water Supply Systems), 2015). Ramadanti et al. (2023), in a study in Surakarta City, stated that the provision of piped clean water by PDAM is influenced by primary factors (water source pollution, water quantity, water continuity, and water loss rate), secondary factors (institutional, basic water tariffs, operational financing, and technology), and tertiary factors (clean water provider services). According to (Napitupulu & Zefri, 2022), the limitations of PDAM services are generally influenced by the availability of funds. PDAMs need to conduct cooperation programs with the private sector to improve funding issues. The PDAMs also need strong support from the local government, especially in terms of promoting a clean and unpolluted environment.

Evaluation/Measurement of BUMD Performance

Performance evaluation aims to ensure the achievement of company goals and objectives. It's useful for understanding the company's current position and its level of goal attainment, especially for identifying any delays or deviations. Deviations can be corrected immediately to ensure that goals or objectives are achieved (Nursam, 2017). The achievement of safe drinking water access targets can be assessed from four aspects: quality, quantity, continuity, and affordability (Sujarwo et al., 2024). Assessment of the performance of BUMDs organizing SPAM can be carried out based on the technical guidelines of the BPPSPAM (*Badan Pendukung Pengembangan Sistem Penyediaan Air Minum* - Supporting Agency for the Development of Drinking Water Supply Systems) of the *Kementerian Pekerjaan Umum dan Perumahan Rakyat* (PUPR). The technical guidelines are prepared using a balanced scorecard approach with four observation perspectives, namely financial perspective, customer perspective, internal business process perspective, and learning and growth perspective (BPPSPAM, 2019).

Strategic Management of BUMDs

Strategic management is defined as a series of decisions and actions that guide an organization's long-term direction and scope, aiming to achieve competitive advantages in a changing environment through the configuration of its resources and competencies, ultimately meeting stakeholder expectations (Phiri et al., 2019). The stages of strategic management include analyzing the external and internal environment, setting vision, mission, and goals, formulating strategies, implementing strategies, and finally evaluating and controlling achievement (Muhsin et al., 2024; Phiri et al., 2019). This strategic management process is cyclical and continuously repeats itself to achieve the established goals (Muhsin et al., 2024).

Strategy is a way to achieve long-term goals. Strategy requires top management decisions and large organizational resources. Strategy affects the long-term well-being of the organization and has multifunctional or multidimensional consequences, thus requiring consideration of both internal and external factors (David & David, 2017). Strategies are developed basically to form a 'response' to relevant external changes in an organization. These external changes will certainly be addressed by paying attention to the internal capabilities of an organization. Organizations can take advantage of opportunities and minimize external threats to obtain maximum benefits by leveraging the advantages of the organization (Sudiantini & Hadita, 2022). Strategy formulation can be done with three decision-making frameworks: namely the "input" stage, which

summarizes the basic input information to formulate a strategy; the “matching” stage, which focuses on compiling feasible alternative strategies; and the “decision” stage, which uses information from the input stage to objectively evaluate the strategies identified in the matching stage. The input stage can be done with the EFE (External Factor Evaluation) matrix, the IFE (Internal Factor Evaluation) matrix, and the Competitive Profile Matrix (CPM). Furthermore, the matching stage can be done with the SWOT (Strengths-Weaknesses-Opportunities-Threats) matrix, the SPACE (Strategic Position and Action Evaluation) Matrix, the BCG (Boston Consulting Group) Matrix, the Internal-External Matrix, and the Grand Strategy Matrix. Finally, the decision stage can be done with the QSPM (Quantitative Strategic Planning Matrix) (David & David, 2017).

METHODS

The research was conducted in Palembang City (South Sumatra Province) with Perumda Tirta Musi as the primary object. The research took place for four months starting from February to May 2025.

The data collected in this study consisted of primary data and secondary data. Primary data of this research was obtained through semi-structured interviews with expert informants, using a guide to identify internal and external factors affecting the development of Perumda Tirta Musi, and to formulate alternative development strategies. Primary data was also obtained from expert informants using a questionnaire. The questionnaire was used to determine the perception of internal and external factors affecting the performance/development of Perumda Tirta Musi. The questionnaire was also used to determine the priority strategy for the development of Perumda Tirta Musi. Secondary data was obtained from several sources, including financial reports and management reports from internal Perumda Tirta Musi, performance evaluation reports from BPKP (*Badan Pengawasan Keuangan dan Pembangunan* – Financial and Development Supervisory Agency) or the Ministry of PUPR, and other necessary data acquired through literature reviews.

Table 1. Data Analysis Framework

No	Research Objectives	Data		Analysis Method	Output
		Type	Source		
1	Evaluate the performance trend of Perumda Tirta Musi	- Performance Evaluation Report of Perumda Tirta Musi 2019-2023	- Perumda Tirta Musi Kota Palembang	- Quantitative descriptive analysis of water supply performance trend	Trend of Perumda Tirta Musi's performance achievement during 2019-2023
2	Formulating the development strategy of Perumda Tirta Musi to serve the water needs of Palembang City	- Secondary data (performance reports, management reports, literature studies, and policy studies) - Primary data (semi-structured interviews and questionnaire completion)	- Perumda Tirta Musi - Expert Informants (Management of Perumda Tirta Musi, Bappedalitbang Palembang City, BUMD Affairs Section of Palembang City Regional Secretariat, PUPR Office Palembang City, BPKP Representative of South Sumatra Province)	- IFE dan EFE Matrix - IE Matrix - SWOT Matrix - QSPM Matrix	Internal and external factors, the strategic position of the company, formulation and prioritization strategy of Perumda Tirta Musi development

The selection of expert informants was determined using a non-probability sampling approach with a purposive sampling method. The selected expert informants are personnel from specific agencies, chosen for their expertise in fields related to the research objectives. This research involved nine expert informants: five from the Management of Perumda Tirta Musi, one from the Regional Development Planning Research and Development Agency (Bappedalitbang) of Palembang City, one from the BUMD

Development Bureau at the Palembang City Regional Secretariat, one from the PUPR Department of Palembang City, and one from the BPKP Representative of South Sumatra Province.

The stages of the analytical framework include: (1) Analysis of Perumda Tirta Musi's performance trends using quantitative descriptive analysis based on the performance indicators of the BPPSPAM; (2) Formulation of Perumda Tirta Musi's development strategy which encompasses, (a) assessment of internal and external factors that affect the performance/development of Perumda Tirta Musi using the Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) matrices; (b) determination of the company's position using the Internal-External (IE) matrix; (c) formulation of alternative strategies for the development of Perumda Tirta Musi using the SWOT (Strength-Opportunity-Weakness-Threat) matrix; (d) determination of priority strategies for the development of Perumda Tirta Musi using the QSPM (Quantitative Strategic Planning Matrix). The framework stages are outlined in Table 1.

RESULTS and DISCUSSION

Table 2. Performance Achievement Trends of Perumda Tirta Musi from 2019 to 2023

No.	Indicators	Performance Achievements					Ideal Standard (BPPSPAM)
		2019	2020	2021	2022	2023	
I. FINANCIAL ASPECTS							
1a.	ROE	14,73%	14,05%	13,83%	10,91%	10,91%	≥10%
1b.	Operating Ratio	0,71	0,72	0,74	0,76	0,78	≤0,5
2a	Cash Ratio	257,37%	139,02%	30,34%	107,62%	72,26%	≥100%
2b	Effectiveness of Collection	99,02%	96,99%	98,02%	97,96%	97,99%	≥90%
3	Solvency	2894,91%	2027,86%	574,27%	874,19%	612,04%	≥200%
II. SERVICE ASPECTS							
1	Technical Service Coverage	75,08%	76,20%	74,53%	79,73%	81,17%	≥80%
2	Customer Growth	3,14%	3,47%	-3,46%	4,02%	3,35%	N/A
3	Complaint Resolution Rate	99,77%	99,75%	99,83%	99,82%	99,80%	≥80%
4	Customer Water Quality	90,02%	51,22%	53,73%	67,31%	91,87%	≥80%
5	Domestic Water Consumption	27,61	28,25	27,61	26,74	26,19	≥80 m ³ /month
III OPERATIONAL ASPECTS							
1	Production Efficiency	84,94%	95,64%	96,24%	91,18%	90,11%	≥90%
2	Water Loss Rate	18,84%	20,91%	20,45%	22,57%	23,38%	≤25%
3	Service Hours	12,81	13,32	16,04	15,68	17,03	21-24 hours
4	Customer Water Pressure	62,09%	21,68%	42,41%	56,79%	55,59%	≥80%
5	Water Meter Replacement	9,75%	7,93%	16,89%	16,38%	18,61%	≥20%
IV HUMAN RESOURCES ASPECTS							
1	Employee-to-1000 customer ratio	2,02	1,91	1,93	1,85	1,77	≤6 people
2	Employee Training Ratio	96,67%	26,49%	66,00%	95,67%	98,15%	≥80%
3	Training Costs to Employee Costs	1,95%	0,26%	1,10%	1,60%	1,26%	≥10%

Source: Performance Evaluation Report of Perumda Tirta Musi (data processed, 2024)

The performance of Regional-Owned Enterprises serving piped drinking water can be measured by indicators set by BPPSPAM. The assessed indicators include financial aspects, service, operational, and human resources (HR) aspects. The performance of financial aspects uses indicators such as profitability (Return on Equity (ROE) and operating ratio), liquidity (cash ratio and billing effectiveness), and solvency. Service aspect performance is measured by indicators of technical service coverage, customer

growth, complaint resolution rate, customer water quality, and domestic water consumption. The operations aspect performance uses indicators of production efficiency, water loss rate, service operating hours, customer connection water pressure, and water meter turnover. Human resources aspects performance includes the ratio of employees to customers, the ratio of employee competency improvement, and the ratio of competency improvement costs to employee costs.

The results of the analysis of performance during 2019-2023 in Table 2 show that Perumda Tirta Musi's performance has met most of the drinking water service standards set by BPPSPAM. Some performance indicators that need attention include the cash ratio, which is below the ideal standard by 2023, customer service operating hours, customer water pressure, and customer water meter turnover, whose achievements have not met the ideal standard. Regarding performance trends during 2019-2023, Perumda Tirta Musi also needs to pay attention to the percentage of water loss that tends to increase, as well as a decrease in ROE and an increase in the operating ratio as a result of a decrease in company profits. The results of the performance trend analysis are taken into consideration when analyzing the internal factors affecting Perumda Tirta Musi's development. This internal factor analysis assesses Perumda Tirta Musi's strengths and weaknesses in improving drinking water services in Palembang City. It's conducted through observations of the company's internal conditions, including its financial, service, operational, human resources, and information technology utilization aspects, along with other influential factors.

Based on the results of the performance trend analysis, interviews with expert informants, and literature/policy studies, eleven internal factors influencing Perumda Tirta Musi's development were identified. These factors consist of six strengths and five weaknesses (Table 3). According to expert informants' perceptions, the main internal factor with the most influence on Perumda Tirta Musi's performance and development is "good (internal) financial capability". This factor has a weight score of 0.364, making it the highest among all factors. This strength is particularly relevant as Perumda Tirta's financial performance has met BPPSPAM's ideal standards. The company consistently earns profits, with an average of Rp95,719,069,369.8 during 2019-2023.

The strength factor weighted score of 1.993 is higher than the weakness factor weighted score of 0.763. The comparison of these weights means that Perumda Tirta Musi has greater strengths than weaknesses in efforts to develop company performance.

Table 3. IFE Matrix

No	Internal Factors	Weight	Rating	Weighted Score
Strengths				
1	BUMD with the largest PAD contribution	0,072	3,778	0,273
2	Good financial (internal) capability	0,091	4	0,364
3	Efficient production cost	0,088	3,778	0,334
4	Service units cover the administrative area of Palembang City	0,092	3,778	0,347
5	Competent and experienced human resources	0,087	4	0,347
6	Implementing customer service digitization	0,087	3,778	0,328
SubTotal Strength				1,993
Weaknesses				
1	Water flow continuity is inadequate/uneven	0,102	1,556	0,158
2	Water loss control has a negative trend (Non-Revenue Water is increasing)	0,094	1,444	0,136
3	The distribution network is old and has not been rehabilitated	0,094	1,333	0,125
4	Limitations on drinking water quality assurance for customers	0,096	1,667	0,160
5	Negative water balance in some service areas	0,097	1,889	0,183
SubTotal Weaknesses				0,763
Total		1		2,756

External factor analysis assesses the opportunities and threats Perumda Tirta Musi faces as a regional water supply company in meeting Palembang City's water needs. This analysis involves observing external conditions that impact the company, including

economic, socio-cultural, demographic, environmental, political, governmental, legal, technological, and competitive aspects. In total, ten external factors (five opportunity factors and five threat factors) influence Perumda Tirta Musi's development (Table 4).

Table 4. EFE Matrix

No	External Factors	Weight	Rating	Weighted Score
Opportunities				
1	Potential market growth of water demand in Palembang City	0,111	3,111	0,346
2	Limited access to piped drinking water in neighboring districts	0,075	2,444	0,183
3	Abundant raw water quantity/supply	0,111	3,333	0,370
4	Tariff adjustment policy support (<i>Permendagri</i> 71/2016 and 21/2020)	0,107	3,222	0,344
5	Funding Commitment/Support from Central and Local Governments	0,111	3	0,333
SubTotal Opportunities				1,576
Threats				
1	Influence of inflation on rising production costs	0,099	2,667	0,265
2	Decrease in raw water quality	0,110	2,778	0,305
3	Resistance to changes in water tariffs by the Government/Legislature/Community	0,099	2,889	0,285
4	Drinking water companies (piped, bottled) competitors in Palembang City	0,075	1,889	0,142
5	Continuity of PLN electricity as the main energy source	0,102	3	0,306
Threat SubTotal				1,303
Total		1		2,879

Note: *Permendagri* = *Peraturan Menteri Dalam Negeri* (Regulations of the Minister of Home Affairs)
 PLN = *Perusahaan Listrik Negara* (State Electricity Company of Indonesia)

Based on expert informants' perceptions, the "abundant raw water quantity/supply" is the primary factor most influencing Perumda Tirta Musi's performance and development. This factor holds the highest weight score at 0.370. This finding is relevant given Palembang City's significant raw water sources, recorded at 2122.8 m³/second as of 2023 (Perumda Tirta Musi, 2023). This raw water availability far exceeds the city's population water needs, representing a crucial potential for Perumda Tirta Musi's drinking water service development. Furthermore, the opportunity factor's weighted score of 1.576 is higher than the threat factor's weighted score of 1.303. This comparison suggests that Perumda Tirta Musi possesses an effective strategy to capitalize on existing opportunities and minimize the potential negative impact of external threats.

Based on the identified internal and external factors, the company's strategic position was determined using the IE Matrix. This matrix places the company within one of nine available position blocks by matching the weighted scores of both internal and external factors. The company's position on the IE Matrix is crucial for defining its strategic direction and achieving its objectives. The weighted score for internal factors is 2.756, classifying it as an average internal position.

Conversely, the weighted score for external factors is 2.879, indicating a moderate external position. Consequently, the IE Matrix places the company in strategy cell V, specifically the "Hold and Maintain" strategy cell, as illustrated in Figure 3. This placement suggests the company is best managed by focusing on maintaining business continuity. According to David and David (2017), companies in the "Hold and Maintain" strategy cell typically utilize market penetration and product development strategies

Based on the company's strategic position in Cell V of the IE Matrix, the SWOT matrix becomes instrumental in strategy formulation. This involves matching the identified strengths and weaknesses (internal factors) with opportunities and threats (external factors). According to Gurel & Tat (2017), a thorough understanding of strengths and weaknesses minimizes the pursuit of unworthy opportunities. Furthermore, viable opportunities can be leveraged to address threats, and weaknesses can be overcome by capitalizing on strengths. Strengths can also be utilized to respond to threats. David & David (2017) revealed four combinations that can be done in the

process of formulating strategies using the SWOT matrix. These combinations are SO strategy (combines strengths with opportunities), ST strategy (combines strengths and weaknesses), WO strategy (combines weaknesses and opportunities), and WT strategy (combines weaknesses and threats). Drawing from interview findings with expert informants and a literature review of SPAM development policies/regulations, ten alternative development strategies for Perumda Tirta Musi have been formulated and are detailed in Table 5.

Table 5. SWOT Matrix

Internal Factors	Strengths	Weaknesses
SWOT Matrix	1. BUMD with the largest PAD contribution	1. Water flow continuity is inadequate/uneven
	2. Good financial (internal) capability	2. Water loss control has a negative trend (Non-Revenue Water is increasing)
	3. Efficient production cost	3. The Distribution network is old and has not been rehabilitated
	4. Service units cover the administrative area of Palembang City	4. Limitations on drinking water quality assurance for customers
	5. Competent and experienced human resources	5. Negative water balance in some service areas
	6. Implementing customer service digitalization	
External Factors		
Opportunities	SO Strategies	WO Strategies
1. Potential market growth of water demand in Palembang City	1. Establish cross-regional bulk water sales cooperation (S3,S4,S6-O2,O3,O5)	1. Improve distribution network connectivity/integration between service areas (W1,W5 - O1,O5)
2. Limited access to piped drinking water in neighboring districts	2. Increase production/service capacity in potential settlement growth areas (S1,S2,S3,S5-O1,O3,O5)	2. Carry out risk-based piping network rehabilitation/usage life (W2, W3, W4 - O5)
3. Abundant raw water quantity/supply	3. Evaluate/submit periodic tariff changes through a persuasive approach (S5-O4,O5)	
4. Tariff adjustment policy support (<i>Permendagri</i> 71/2016 and 21/2020)		
5. Funding Commitment/Support from Central and Local Government		
Threats	ST Strategies	WT Strategies
1. Influence of inflation on rising production costs	1. Establish business/service cooperation scheme with water companies (competitors) (S3,S4,S5,S6-T3,T4)	1. Establish "Prima" Drinking Water Zones (ready to drink) periodically (W3, W4-T4)
2. Decrease in raw water quality	2. Optimize/Socialize domestic wastewater management (S1,S5,S6-T2)	2. Conduct tariff restructuring based on service quality (W1, W4-T1, T3)
3. Resistance to changes in water tariffs by the Government/Legislature/Community	3. Assess the provision of alternative electricity reserves (S1,S2,S5-T5)	
4. Drinking water companies (piped, bottled) competitors in Palembang City		
5. Continuity of PLN electricity as the main energy source		

The alternative strategies derived from the SWOT analysis are feasible for implementation, but it's essential to select the most critical or priority strategies. The selection of priority strategies is determined by using the QSPM matrix. QSPM uses inputs from the IFE and EFE analysis and matches the results of the SWOT analysis. The results of the QSPM analysis decide objectively among various alternative strategies. As David and David (2017) note, QSPM decisions are based on the relative attractiveness of various strategies, specifically how well they leverage or enhance key internal and external success factors. In this study, the QSPM assesses the attractiveness relationship between 21 strategic factors of Perumda Tirta Musi and ten strategic alternatives formulated using the SWOT matrix. The Sum Total Attractiveness Score (STAS) for each alternative strategy is calculated by multiplying the weights of the key

internal or external factors (derived from IFE/EFE analysis) by the attractiveness scores obtained from expert informant responses.

Based on the expert informants' assessments, the analysis reveals that the top priority alternative strategy for Perumda Tirta Musi's development is "Improve distribution network connectivity/integration between service areas," with a total STAS score of 5.639. The second priority strategy for Perumda Tirta Musi to consider is "Increase production/service capacity in potential residential growth areas," which has a total STAS score of 5.587. The complete order of priority strategies, based on their STAS scores, is outlined in Table 6.

Table 6. Prioritization of Alternative Strategies for the Development of Perumda Tirta Musi

No	Strategy	STAS	Rank
1	Establish cross-regional bulk water sales cooperation	5,183	8
2	Increase production/service capacity in potential settlement growth areas	5,587	2
3	Evaluate/submit periodic tariff changes through a persuasive approach	5,148	9
4	Improve distribution network connectivity/integration between service areas	5,639	1
5	Carry out risk-based piping network rehabilitation/usage life	5,458	5
6	Establish business/service cooperation scheme with water companies (competitors)	5,442	6
7	Optimizing/socializing domestic wastewater management	5,002	10
8	Assess the provision of alternative electricity reserves	5,299	7
9	Establish "Prima" Drinking Water Zone (ready to drink) periodically	5,522	3
10	Conduct tariff restructuring based on service quality	5,466	4

The strategy to "Improve distribution network connectivity/integration between service areas" is a WO (Weaknesses-Opportunities) strategy, highly relevant as it allows existing weaknesses to be overcome by leveraging available opportunities. This approach to network connectivity and integration directly supports equitable service delivery to customers. It facilitates the sharing of service capacity among units, meaning that excess capacity in some areas can alleviate shortages in others. The negative water balance in certain service areas, a current company weakness, impacts the limited capacity for customer service. However, network connectivity and integration enable the transfer of idle capacity, thereby reducing these constraints across service units. This strategy can also accommodate the uneven growth of service demand across different units. Its implementation is feasible given Palembang City's very high population density (over 5,001 people per km²) and the relatively short network distances between service units. Furthermore, Perumda Tirta Musi benefits from strong funding support from both local and central governments to realize this strategy.

The second priority strategy, "Increase production/service capacity in potential residential growth areas," is an SO (Strengths-Opportunities) strategy. This approach is highly relevant for Perumda Tirta Musi, particularly as it allows the company to capitalize on opportunities to expand its market potential for water demand in Palembang City. Given Perumda Tirta Musi's current service coverage of 82.40%, the increasing demand for services aligns directly with the growth of settlements, which mirrors population growth. Therefore, the company must align with the regional spatial plan by understanding the direction of settlement expansion to effectively focus its efforts on increasing production and service capacity in these potential growth areas.

CONCLUSION

Perumda Tirta Musi has generally met most of BPPSPAM's performance standards. However, several indicators still require attention, including cash ratio, service operation hours, customer water pressure, and customer water meter turnover. Additionally, the water loss rate has shown a downward trend in quality control from 2019 to 2023. The most crucial internal factor for Perumda Tirta Musi is "good (internal) financial capability," while the most influential external factor impacting its development is "abundant raw water debit quantity".

Positioned in Quadrant V of the External-Internal (IE) Matrix, Perumda Tirta Musi should focus on a strategy of maintaining and sustaining existing business continuity. This can be achieved through product development and market penetration. The top priority strategy for Perumda Tirta Musi is to "Improve distribution network connectivity/integration between service areas." The second priority strategy for the company to consider is "Increase production/service capacity in potential residential growth areas".

This study's limitations include the exclusion of an analysis of investment needs and customer perceptions of Perumda Tirta Musi, which are crucial for fully determining optimal development strategies. Future research could therefore benefit from adopting a strategy approach driven by customer or community needs. Nevertheless, the prioritized strategies identified in this study offer valuable considerations for Perumda Tirta Musi's management in their ongoing efforts to enhance drinking water services in Palembang City.

Acknowledgment

The authors extend their sincere gratitude to the Center for Planner Development, Education and Training (Pusbindiklatren) of Bappenas Republik Indonesia for its financial support of this research. We also thank all expert informants for their valuable contributions.

REFERENCES

- [1] Aisyah, J. N., Aulia, M. A., Ayuni, Q., & Mualimin, M. (2024). Perencanaan Strategis Dalam Meningkatkan Kinerja Organisasi. *Jurnal Manajemen Dan Pendidikan Agama Islam*, 2(4), 147–155. <https://doi.org/10.61132/jmpai.v2i4.392>
- [2] BPPSPAM Kementerian Pekerjaan Umum dan Perumahan Rakyat. (2019). *Petunjuk Teknis Penilaian Kinerja PDAM*.
- [3] David, F. R., & David, F. R. (2017). *Strategic Management : A Competitive Advantage Approach, Concept and Cases (sixteenth)*. Pearson Education Limited. www.ebook3000.com
- [4] Genc, E., & Şengul, R. (2015). A Review on the Relationship Between Strategic Management and Performance: The Role of Internal and External Contexts. *Strategic Public Management Journal*, 1(2), 56–56. <https://doi.org/10.25069/spmj.290425>
- [5] Gurel, E., & Tat, M. (2017). SWOT Analysis : A Theoretical Review. *Journal of International Social Research*, 10(51), 994–1006. <https://doi.org/10.17719/jisr.2017.1832>
- [6] Hartati, A., Fanggal, H. C., Binawati, E., Aisyah, S., Fanggal, F. O., Ala, H. M., Rosari, R., Frits, I. L., Sitingjak, C., & Lerrick, Y. F. (2022). Pengukuran Kinerja Sektor Publik : Teori dan Aplikasi (M. W. N. Manafe, Ed.; Issue Pengukuran Kinerja Sektor Publik : Teori dan Aplikasi). *Media Sains Indonesia*. <https://www.researchgate.net/publication/361982611>
- [7] Kementerian Pekerjaan Umum dan Perumahan Rakyat. (2023). *Buku Kinerja BUMD Air Minum 2023*
- [8] Kurniawan, M. A., Fitriani, H., & Hadinata, F. (2021). *City Analisis Kebutuhan Penyediaan Air Bersih di Kota Palembang*. Saintis. [https://doi.org/10.25299/saintis2021.vol21\(02\).7611](https://doi.org/10.25299/saintis2021.vol21(02).7611)
- [9] Muhsin, Daryanto, E., Dewi, R., & Rosnelli. (2024). Pengembangan Model Manajemen Strategik pada Universitas Jabal Ghafur. 7(1), 266–277. <https://doi.org/10.47647/jsh.v7i1.2413>
- [10] Napitupulu, D., & Zefri. (2022). Pengaruh Penyediaan Air Bersih Secara Individu Terhadap Keberlanjutan Pengelolaan Air Bersih Di Kawasan Perumahan Perkotaan. 1(1), 61–78. <https://doi.org/https://doi.org/10.61488/jkwk.v1i1>
- [11] Nursam, N. (2017). Manajemen Kinerja. *Journal of Islamic Education Management*, 2(2), 167–175. <https://doi.org/10.24256/kelola.v2i2.438>

- [12] Pemerintah Kota Palembang. (2024). LKJIP Kota Palembang Tahun 2023
- [13] Peraturan Daerah Kota Palembang Nomor 10 Tahun 2022 Tentang Perusahaan Umum Daerah Tirta Musi Palembang (2022)
- [14] Peraturan Pemerintah Republik Indonesia Nomor 122 Tahun 2015 Tentang Sistem Penyediaan Air Minum, Pub. L. No. 122 (2015). www.peraturan.go.id
- [15] Perumda Tirta Musi. (2023). Rencana Bisnis Perumda Tirta Musi Periode Tahun 2024-2028
- [16] Phiri, W., Ng'andwe, E., Mukutu, I., Moono, D. M., Moono, D., & Kapapi, P. (2019). A critical analysis of strategic management process. *International Journal of Commerce and Management Research*, 5(1), 138–142. <https://www.researchgate.net/publication/338006578>
- [17] Ramadanti, L., Yudhana, G., & Rini, E. F. (2023). Identifikasi faktor penyediaan air bersih perpipaan (Studi Kasus: Kota Surakarta). *Region : Jurnal Pembangunan Wilayah Dan Perencanaan Partisipatif*, 18(1), 179. <https://doi.org/10.20961/region.v18i1.47459>
- [18] Rosmayasari, M., & Iqbal, D. R. (2018). Optimasi Pelayanan Dan Peningkatan Pendapatan PDAM Melalui Pengembangan Kapasitas Distribusi Air Bersih Pada Wilayah Berdaya Beli Tinggi. *Jurnal Teknik Lingkungan*, 24(2), 29–42. <https://journals.itb.ac.id/index.php/jtl/article/view/13265/4603>
- [19] Sesabo, J. K. (2023). Understanding the Impact of Water Accessibility and Sanitation-Related Diseases on Livelihoods in Tanzania. *African Journal of Empirical Research*, 4, 231–240. <https://ajernet.net>
- [20] Sudiantini, D., & Hadita. (2022). *Manajemen Strategi* (Muh. R. Naim, Ed.; 1st ed.). CV Pena Persada
- [21] Sujarwo, S., Nurjazuli, N., & Raharjo, M. (2024). Evaluasi Implementasi Rencana Pengamanan Air Minum (RPAM): Literatur Review. 8(3), 6325–6335. <https://doi.org/https://doi.org/10.35971/jjhsr.v7i1.29522>
- [22] Sukmiridiyanto, Budiono, P., & Mukhlis, M. (2024). Peran Krusial Manajemen Strategi Dalam Meningkatkan Kinerja Organisasi Publik. *Journal Publicuho*, 7(3), 1183–1189. <https://doi.org/10.35817/publicuho.v7i3.476>
- [23] Undang Undang Republik Indonesia Nomor 23 Tahun 2014 tentang Pemerintahan Daerah (2014)
- [24] Wijoyo, S., & Mashuri, M. A. (2021). Peningkatan kinerja bumd provinsi jawa timur dalam perspektif ability, motivation, oportunity. 17(1), 10–18. <http://journal.feb.unmul.ac.id/index.php/INOVASI>