

FORMULATION OF BUSINESS DEVELOPMENT STRATEGY FOR DIAGNOSTIC LABORATORY INSTRUMENT AT PT XYZ

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Abstract:

Background: The healthcare industry, particularly the diagnostic sector, is experiencing fast growth. PT XYZ along with similar companies, is competing for market share, but PT XYZ only captures a very small share. Furthermore, annual performance in three years has stagnated with poor achievement. Therefore, a business development strategy is needed to increase market share and company performance.

Purpose: This research aims to formulate a laboratory instrument business development strategy by identifying external and internal factors and formulating alternative strategies to develop PT XYZ's laboratory instrument business.

Design/methodology/approach: The research employs a combination of PESTEL and Porter's Five Forces for external environmental analysis, while internal factors are analyzed using the VRIO framework and Value Chain Analysis. Data collection involved in-depth interviews and structured questionnaires, synthesizing insights from both internal and external experts to ensure a comprehensive understanding of the current strategic position.

Findings/Result: PT XYZ is positioned in the "Grow and Build" quadrant based on the IE Matrix, with an EFE score of 3.27 and an IFE score of 2.23. This indicates that PT XYZ is able to respond effectively to key external factors and adequately leverage its internal strengths. Therefore, future strategy formulation should be directed toward business growth and development. Based on the SWOT analysis, seven strategic initiatives for the development of the diagnostic laboratory equipment business are recommended for PT XYZ.

Conclusion: PT XYZ is very strong in responding to external factors. Although PT XYZ is quite sufficient in maximizing internal factors. The formulation of a strategy for PT XYZ is to grow and build with seven alternative business development strategies.

Originality/value (State of the art): This study adopts a distinctive and application-oriented approach to business strategy formulation within the in vitro diagnostic sector, thereby providing strategic recommendations that support companies in enhancing their competitiveness in the market.

Keywords: laboratory diagnostic instrument, strategy formulation, business development, healthcare industry, business strategy

How to Cite:

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INTRODUCTION

World health governance has undergone major changes after the Covid-19 pandemic. The changes that occurred were improvements focused on public health such as the allocation of power for vaccination programs, epidemiological surveillance, and campaigns to raise awareness and prevention of diseases (CDC, 2023). Along with global health transformation, Indonesia has also launched a six-pillar health transformation program, namely the transformation of primary services, referrals, national health resilience, health funding systems, human resources, and to be smart-health cities (Jahroh et al. 2025). Therefore, the healthcare sector is expected to become a major focus at both the global and national levels, particularly in the diagnostic sector, which requires appropriate equipment to support preventive healthcare measures.

Indonesia's health budget has steadily increased over the past four years, reaching IDR 186.4 trillion in 2024 (5.6% of the state budget), reflecting strong government commitment to health system transformation (Ministry of Health, 2023a). The restructuring of health laboratories is also an effort to transform Indonesia's health, namely improving facilities and infrastructure in public health laboratories. The number of health centers reached 10,374, General Hospitals and Special Hospitals reached 2,561 and 511 in 2022 (Ministry of Health, 2023b). In the future, the number of diagnostic laboratories is likely to increase, leading to a corresponding rise in demand for diagnostic testing. In addition, the government is prioritizing the development of the local manufacturing industry for the production of diagnostic laboratory equipment. Consequently, PT XYZ is expected to encounter increasing business opportunities in the laboratory sector, alongside intensifying competition driven by the emergence of domestically produced products and other market players.

Indonesia's diagnostic laboratory instrument industry is expanding significantly in tandem with the country's healthcare system's overall transformation. As of 2024, the Indonesian diagnostic market is estimated to be worth USD 0.38 billion, or roughly IDR 5.7 trillion. By 2029, it is expected to have grown to USD 0.47 billion, or IDR 7.24 trillion. The Indonesian diagnostic laboratory instrument market is experiencing significant growth, with a projected CAGR of 4.34% (Statista, 2024).

According to Maryadi and Damayanti (2024), the medical device industry as a whole is likewise growing quickly, with market estimates of USD 22 billion and yearly growth rates of 10–12%. Technology advancements, government health reforms, and rising health service demand are the main drivers of these trends.

The market share distribution is still incredibly unequal in this expanding environment. The diagnostic equipment market is still dominated by multinational corporations such as Abbott Laboratories (14%) and Roche Diagnostics (27%). Smaller distributors such as PT Indolab Utama (0.81%) and PT Genetika Science (0.79%) follow, while local businesses hold much smaller shares. For instance, PT Kimia Farma Diagnostika owns 8.77% and PT Enseval Putera Megatrading 10.53%. The study's subject, PT XYZ, has a meager 0.04% market share in diagnostics at the moment, underscoring its marginal position in a fiercely competitive and quickly changing industry.

Previous studies have predominantly focused on the application of various methods, such as the IE Matrix, SWOT analysis, and TOPSIS, in business strategy analysis within the diagnostic laboratory equipment industry, including publicly listed companies, hospitals, and local distributors (Anindya et al. 2023; Prayogi and Wandebori, 2020; Mulya and Aprianingsih, 2024). Although PT XYZ currently holds a small market share, it operates in a sector with significant growth potential. The current market environment presents both opportunities and challenges for local distributors seeking to compete with larger and more established players. However, there is limited strategic literature that examines how smaller companies can strengthen their market position in Indonesia's healthcare diagnostic industry by effectively leveraging internal capabilities and external opportunities. This study seeks to address this gap by providing strategic insights tailored to small-scale diagnostic equipment distributors in Indonesia, thereby contributing to a deeper understanding of the industry.

Although PT XYZ operates in a growing sector, its diagnostic products category has shown limited growth, with contributions of only 1.48%, 1.91%, and 2.19% in the years 2021 to 2023, respectively. Despite an increase in overall revenue, the growth rate for diagnostic products has significantly decreased, dropping from 101% to 57% between 2021 and 2023.

This underperformance, resulting in a diagnostic product market share of only 0.017% of the total market volume in 2024, presents a critical challenge for PT XYZ. The company's inability to gain traction in this segment could hinder its long-term growth prospects and its ability to compete with larger, more established players in the market. This stagnant performance is attributed to PT XYZ's limited focus on developing its diagnostic laboratory equipment business, the absence of clearly prioritized business strategies, and insufficient readiness in terms of team capability, product-market fit, and core competencies as a new entrant in the diagnostic sector. This study aims to identify external and internal key factors and formulate the business development of PT XYZ.

METHODS

The data needed in this study were primary and secondary data. Primary data was used as the main data source through interviews with stakeholders involved in the preparation of business strategies at PT XYZ using questionnaire instruments (Canesi et al. 2024). Meanwhile, secondary data was used as an additional data source in the form of literature studies including internal company documents and other relevant literature sources.

This research was conducted at the PT XYZ office with the selection of the research location carried out deliberately with the consideration that PT XYZ is a local distributor company that runs a laboratory instrument business in Indonesia within October 2024 to June 2025.

Sampling uses purposive sampling techniques to select 11 respondents or experts (7 internal & 4 external) based on the selection of selected experts with consideration of special knowledge and experience in the field being studied (Palinkas et al. 2015). There were two categories of experts studied, namely internal and external experts. Internal experts were selected based on their level of authority in deciding on the company. The expert is in accordance with his field and experience to support the consistency of the answers given. Then external experts were laboratory instrument industry experts who have experience as researchers, lecturers, laboratory instrument company owners, and PT XYZ customers.

Data collected from respondents using external analysis tools (PESTEL and Porter's Five Forces) and internal analysis tools (Value Chain Analysis with the VRIO framework) were analyzed using the Delphi method approach (Chuenjitwongsa, 2017) to obtain consistency of expert answers in each of the facts of the analysis tool. Key factors both external and internal were selected with the highest consistency (lower Standard Deviation) and rating (higher median) results, then the weight of each factor from the analysis tool was found using the paired-wise comparison approach (Siekelova et al. 2020). Followed by a rating technique to obtain a weighted score from each factor (Hubeis, 2014). Subsequently, key factors related to external (opportunities and threats) and internal (strengths and weaknesses) were identified, enabling the development of an Internal-External Matrix and followed by SWOT matrix and the formulation of strategic recommendations.

Three stages of strategy formulation, namely input, matching, and decision (David & David, 2017) as Figure 1. The input stage begins with industry foresight analysis, followed by external and internal environmental analysis. External analysis was carried out by analyzing macro conditions using PESTEL and micro conditions using Porter's Five Forces (Prayogi & Wandebori, 2020). Internal analysis was carried out with VCA using the VRIO framework for the analysis of the company's internal resource capabilities of the company's business activities and processes (Mulya & Aprianingsih, 2024). Furthermore, the results of the external and internal environmental analysis were selected to determine each of the five key factors and then evaluated by EFE and IFE. After that, it was followed by matching using the IE matrix and the formulation of alternative strategies using SWOT (Anindya et al. 2023; Wibisono et al. 2024).

Integrated framework for formulating a business development strategy for PT XYZ in the laboratory diagnostics industry begins by identifying market growth opportunities alongside key challenges faced by PT XYZ, including a small market share, a limited diagnostic product portfolio, intense competition, and the absence of a clear business development strategy. An environmental scanning approach is then applied by analyzing external factors using PESTEL analysis and Porter's Five Forces to identify opportunities and threats, which are summarized in the External Factor Evaluation (EFE) Matrix. Simultaneously, internal

factors are assessed through Value Chain Analysis and the VRIO framework to identify strengths and weaknesses, which are consolidated in the Internal Factor Evaluation (IFE) Matrix. The results of the EFE and IFE matrices are combined in the Internal–External (IE) Matrix to determine the firm’s strategic position, followed by SWOT-based strategy formulation, ultimately leading to the development of appropriate business development strategies aligned with both internal capabilities and external market conditions.

RESULTS

External Factor of PT XYZ

Based on the results of PESTEL analysis of a total of forty factors, thirty-six factors became opportunities and only four factors became threats. It can be a concern that political, economic, social, technological, environmental, and legal conditions in general are good opportunities for PT XYZ to take advantage of

this. Although almost all factors are opportunities, there are four threat factors, namely in the political aspects related to product quality and certification policies and import product policies. Then from the economic side related to import duty facilities and from the legal aspect related to local production. These threats may significantly affect PT XYZ’s business, which still relies heavily on imported products, thereby intensifying competition with locally manufactured products. Furthermore, government policies that prioritize and support domestic products are expected to further heighten competitive pressure. Therefore, PT XYZ must adopt an agile approach to effectively respond to these evolving market dynamics.

This analysis has five forces that determined by the intensity of competition in similar competitors, threat of new entrants, and product substitute, bargaining power of buyers, suppliers, and. Based on the results of Porter’s Five Forces analysis, nineteen factors were found to be opportunities, and eleven factors became threats regarding to Table 1.

Table 1 External Factor Evaluation

Key Factor	Weightage	Rating	Score
Opportunity			
Increased investment in the health sector to increase capacity, innovation, and quality of products/services to meet market needs in the diagnostic laboratory instrument sector	0.10	3.00	0.29
Creating a variety of unique and innovative strategies in the face of competition in the diagnostic laboratory instrument industry	0.10	3.43	0.35
Providing diagnostic products and services that support the trend of increasing public awareness of health	0.09	3.14	0.27
Strengthen competitiveness by ensuring compliance with government regulations in the diagnostic laboratory instrument industry	0.17	3.71	0.64
Develop products and services that meet the needs of an aging population.	0.08	3.29	0.27
Subtotal			1.82
Threat			
Increasing number of diagnostic laboratory instrument distributor companies	0.03	2.29	0.07
High level of price sensitivity to consumers in the diagnostic laboratory instrument industry	0.06	2.57	0.16
Increasingly stringent quality policies and certification of diagnostic laboratory instrument products	0.16	3.43	0.56
Tax hike on imported goods including the diagnostic laboratory instrument industry	0.04	3.00	0.13
Regulations to increase the use of domestic products (P3DN) in the diagnostic laboratory instrument industry	0.16	3.29	0.54
Subtotal			1.45
Total	1.00		3.27

Based on the results of the EFE matrix, it was found that PT XYZ had a total weighted score of 3.27. These results show that the company is in a very strong condition (3.00 – 4.00) to manage all the opportunities and threats associated with the laboratory instrument business. Strengthening competitiveness with compliance with government regulations in the diagnostic laboratory instrument industry is a strategic element in the diagnostic laboratory instrument industry (Amaral et al. 2024) as the industry is under strict scrutiny regarding patient safety, diagnostic accuracy, and integrity of the national health system (Niemic, 2022; Romagnoli et al. 2024). Unlike other industries that may be more flexible towards regulations, the IVD industry must meet high technical and ethical standards because its products are used to detect medical conditions that can have a direct impact on treatment decisions and patients' lives (Hisan & Amri, 2023; El-Rashidy et al. 2021). Therefore, compliance with regulations is not only a legal obligation, but also a source of market trust and competitive advantage (Chettri & Ravi, 2024).

Companies that comply with regulations, both at the national level (such as distribution permits from the Ministry of Health/BPOM, ISO 13485 certification, and laboratory tests from the Medical Products Certification Institute) and internationally (such as CE Mark or FDA Approval) will have an easier time reaching the market of large hospitals, government facilities, and national medical device auctions such as the LKPP e-catalog. Compliance also reflects the readiness of the internal quality system, from staff training, product validation, to documentation and reporting of clinical trial results. All of this strengthens the company's credibility and minimizes the risk of litigation and reputational damage (Maci et al. 2024).

Internal Factor of PT XYZ

For this research to be more comprehensive, the VCA was combined with the VRIO framework to analyze the potential of the company's internal resources and capabilities as a source of competitive advantage. The VRIO concept provides an evaluation of four dimensions, namely value, rarity, imitability, and organization. All the company's resources and capabilities are identified and sorted so that the most value-added resources and capabilities are obtained. Therefore, VCA with the VRIO framework can provide a clearer picture of which part of the value chain is a source of sustainable competitive advantage.

PT XYZ has primary activities such as in-bound logistics including import legality (NIB), distribution permit (NIE), has a global supplier network, CDAKB Certification, goods inventory management system, and has an import partner with cold chain capabilities. From operational unit, PT XYZ has an order fulfillment information system, order tracking system, double-checking instrument quality, advanced protection for the packaging of diagnostic products, marketplace operations via e-commerce, have a variety of products based on applied diagnostic technology. Then, PT XYZ have out-bound logistics such as freight forwarding reporting system via mobile apps, incoming goods storage system based on storage temperature, goods entry and exit management system via web-based apps, next-day delivery management, have a qualified domestic freight forwarding vendor in the field of diagnostic products. Besides that, activity from sales and marketing like have a variety of online purchase channels such as LKPP E-Catalog, sub-distributor network throughout Indonesia, sales assignment based on customer segmentation (government, industry, academics, and health facilities), has search engine optimization, research collaboration with various government or private institutions, utilization of social media for commercial activities, have a network of Key Opinion Leaders (KOLs) throughout Indonesia, and product promotion via webinar with principal and domestic resource persons. And the last one is as the technical team (application & engineer) has certifications and competencies that are in accordance with the standards, provide regular maintenance programs, web-based technical team (application & engineer) service performance monitoring system, provide training and workshops to customers, provide 1-year repair warranty to customers, and have a customer satisfaction rating system.

Additionally, PT XYZ has several supporting activities like enterprise infrastructure such as bookkeeping system with cloud-based platform, terms of payment 30 days for existing customer, documentation of employee activities through a cloud-based platform, optimization of strategies using consultants, employee asset management system, and regular external and internal audits. Then from resource management, PT XYZ have improving the competence of the support team through training to principals, appraisal management system via cloud-based, internship program for employee recruitment effectiveness, regular training at the end of each month for the sales team, the sales team has a

background in biotech and science in the health sector, coordination meeting of all employees every morning, and flexible working arrangement system. Besides that, there is technological development like internal IT system development, the development of mobile apps for documentation and reporting, has a sequencing analysis platform for diagnostics, use of cloud-based data sharing, web-based document approval process. And the last one is procurement, PT XYZ registered as an exclusive distributor of principal, procurement monitoring system for diagnostic reagent stock, have good relationships with various suppliers

Regarding the fifty-one resources or capabilities analyzed, eighteen are classified as strengths (combined sustainable competitive and temporary competitive) and thirty-three are classified as weaknesses (parity

competitive). This shows that quite a lot of the resources or capabilities contained in PT XYZ are owned by other companies and only a few really provide a long-term competitive advantage. As for a small part of PT XYZ's resources or capabilities, it is classified as a temporary advantage, which other companies can immediately imitate and make PT XYZ's competitiveness decrease. Based on the results of the IFE matrix, it was found that PT XYZ had a total weighted score of 2.23 as shown at Table 2. These results show that the company has been in average or moderate internal conditions (2.00 – 2.99) to maximize the company's strengths and minimize the company's weaknesses. The factor with the highest weighted score of the company's strength is having a network of industrial KOLs of diagnostic laboratory instrument spread throughout Indonesia.

Table 2. Internal Factor Evaluation

Resources/Capability	Weightage	Rating	Score Weighted
Strength			
Has a global network of suppliers of diagnostic laboratory instrument	0.06	3.86	0.23
Diagnostic research collaboration with various government and private institutions	0.05	3.86	0.20
Team coordination through regular meetings of all employees every day	0.05	3.57	0.19
Has a network of diagnostic laboratory instrument industry KOLs spread throughout Indonesia	0.12	4.00	0.46
Product variations of diagnostic laboratory instruments based on applied diagnostic technology	0.06	3.57	0.22
Subtotal			1.30
Weakness			
Have legality or import certification and distribution permit which are also owned by industry competitors of diagnostic laboratory instrument	0.20	1.86	0.38
There is no standard for the storage system of incoming goods according to the storage temperature	0.11	1.29	0.14
Double-checking process of instrument quality of diagnostic laboratory instrument that is not yet effective	0.16	1.43	0.22
There has been no evaluation of training and workshops for customers	0.06	1.43	0.08
Not optimal use of various online purchase channels	0.08	1.29	0.10
Subtotal			0.92
Total			2.23

Having a network of KOLs is a strategic factor because in the diagnostic laboratory instrument industry, professional trust plays a key role in the adoption of new technologies and purchasing decisions (Cheng et al. 2025). KOLs typically consist of specialist doctors, laboratory heads, medical academics, and diagnostic experts who have a major influence on the preferences of healthcare institutions for a particular product or brand. With an extensive network of KOLs, PT XYZ not only gets access to primary information about market needs, but also secures scientific advocacy and credibility for the products they distribute or develop. Although PT XYZ has resources and capabilities that are strengths, it needs to be noted that resources and capabilities are also weaknesses that need to be anticipated. The weakness with the largest weighted score is the legality of NIB and NIE which are also owned by competitors so that having legality alone is not a differentiator (Saragih & Ong, 2024). PT XYZ needs to anticipate these weaknesses by building added value beyond legality or permits such as qualified technical services, supply speed, and innovation in products and after-sales services (Soong et al. 2023; Piia et al. 2020).

Strategy Formulation

The IE matrix describes the position of a company based on the two dimensions of EFE and IFE. With these two dimensions, nine areas are obtained consisting of three categories, namely Grow & Build (areas I, II, IV), Hold & Maintain (III, V, VII), and Harvest & Divest (VI, VIII, IX). Based on strengths and minimizing internal weaknesses so that to strengthen PT XYZ's position in the market, it is necessary to take several growth and development strategy approaches to win the market. the results of the analysis of the IFE (2.23) and EFE (3.27) matrix, PT XYZ is in area II, namely the Grow & Build category which has several strategies, namely Market Penetration (MP), Market Development (MD), Product Development (PD), and Backward Integration (BI) (David & David, 2017). PT XYZ has a very good response to strategic external factors so that the strategy with the direction of growth and development makes PT XYZ increasingly have a strategic position in the market.

The formulation of PT XYZ's diagnostic laboratory instrument business development strategy is to change the current condition of PT XYZ to what is desired, such as increasing market share and revenue. Here is

the strategy for business development for PT XYZ, firstly is SO Strategy that focuses on leveraging the company's internal strengths to optimize external opportunities. There are two strategies for PT XYZ that can be implemented to increase the company's competitiveness. First, market penetration strategy through adding a global supplier network that meets regulations to increase the variety of diagnostic products by utilizing KOLs for market purchase the product (Liu, 2024). Second, product development strategy through develops diagnostic products through research collaboration with government and private institutions to meet public health needs (Steuerwald et al. 2025; Gac et al. 2024). PT XYZ can implement the WO Strategy which focuses on minimizing weaknesses to take advantage of opportunities. The following strategies that can be implemented by PT XYZ are market development strategy through quality management certification by standardizing the distribution chain by implementing Smart Inventory Management System to reach a operational efficient and wider market (Alberto, 2024). Second, market penetration strategy through established IVD Clinical Support Hub service for after-sales service (Pratono & Mahara, 2024).

Additionally, PT XYZ also can consider ST Strategy that focuses on maximizing power to mitigate or address external threats. The following are strategies that can be implemented by PT XYZ. First, backward integration via utilizing a global supplier network through the development of local manufacturing (assembly) (Beihua et al. 2024). Second, market penetration strategy through optimizing KOLs (local & global) for diagnostic product quality education. And then WT Strategy that focuses on minimizing internal weaknesses to address external threats. The strategies that can be implemented are market penetration through building a One Stop Solution ecosystem through digital platforms (Ahmed et al. 2024).

Managerial Implications

PT XYZ is currently facing fierce competition with competitors, especially in the diagnostic laboratory equipment industry. The rapidly growing industry makes PT XYZ need to compete and develop diagnostic laboratory business in order to increase revenue and take a larger market share. Alternative strategies formulated from this study can be useful for decision making in the PT XYZ to increase competitive advantage

and win competition. PT XYZ needs to maximize the role of strategic partners, including Key Opinion Leaders (KOLs), global suppliers, as well as national and international research institutions. Management may consider developing a research roadmap that is aligned with market needs and the strategic direction of diagnostic laboratory equipment product development, both in the short and long term. Furthermore, research outcomes and innovations should be protected through patents or intellectual property rights for manufacturers. Through this approach, research outputs can be effectively translated into commercial products, encompassing market validation, prototyping, product feasibility assessment, supply chain development, and distribution systems.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

PT XYZ has five external key factors both from opportunities and threats, where the key factor of opportunity with the highest weighted score is strengthening competitiveness by complying with regulations, while the key threat factor with the highest weighted score is the increasingly stringent quality policy. The internal analysis identified five key strength factors and five key weakness factors. The most significant strength, based on the highest weighted score, is PT XYZ's strong Key Opinion Leader (KOL) network, while the most critical weakness is that its legal certifications are also held by competitors. Externally, PT XYZ demonstrated a strong ability to respond to environmental factors, as reflected by an EFE score of 3.27, while its utilization of internal factors was moderate, with an IFE score of 2.23. According to the IE Matrix, PT XYZ is positioned in the Grow and Build quadrant, leading to the formulation of seven alternative strategies based on the SWOT matrix.

Recommendations

While this study provides valuable insights into PT XYZ's strategic position, future research should focus on prioritizing the identified strategies based on factors such as expected ROI, ease of implementation, and alignment with the company's long-term vision. Additionally, it would be beneficial to establish measurable success indicators for each strategy. For example, the success of a market penetration strategy

could be tracked through increased sales volume or market share in targeted segments. Further research could also explore the competitive landscape in more depth, analyzing the strategies of PT XYZ's direct competitors to refine and optimize the proposed strategies. By prioritizing strategies and tracking their success with clear indicators, PT XYZ can more effectively implement its growth plans and ensure sustainable development.

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