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STRATEGIC PORTFOLIO MANAGEMENT FOR PHARMACEUTICAL SOES: A COMPARATIVE STUDY OF NPD MANAGEMENT IN INDONESIA'S JKN ERA

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Abstract

According to Indonesia's Ministry of State-Owned Enterprises' strategic mandate, all SOEs, including pharmaceutical firms, are required to create economic value. However, pharmaceutical SOEs consistently underperform private and multinational competitors financially, a trend persisting both pre- and post-COVID-19 despite overall industry growth and the challenging JKN pricing system. The 2020 formation of a pharmaceutical SOE holding aimed to boost national resilience, product availability, and innovation, but after four years, financial improvement remains elusive, with the holding company, PT Bio Farma, recording losses from 2022 to 2024. Given that effective portfolio management is vital for pharmaceutical revenue sustainability, this underperformance indicates a core strategic deficiency, making New Product Development (NPD) portfolio management a critical issue. This research employs a mixed-method approach—benchmarking against private and multinational firms, VRIO analysis, and SWOT/TOWS synthesis—to identify structural gaps in strategic evaluation, decision-making, and capability alignment within SOEs. The findings culminate in a Strategic Blueprint proposing the establishment of a central Strategic Portfolio Management Office (SPMO) at the holding level, supported by subsidiary Project Management Offices (PMOs). The blueprint introduces a standardized NPD evaluation framework designed to enhance decision rigor, ensure strategic fit, and align subsidiary activities with core capabilities. This study contributes to strategic management literature by offering a practical, competitive strategy blueprint to improve SOE competitiveness in a regulated, high-pressure market.

Keywords: ***Pharmaceutical Industry, SOEs, Governance, Portfolio Management, Strategic Capability***

INTRODUCTION

State-owned enterprises (SOEs) in Indonesia are expected to make significant financial contributions to the nation, a goal formally outlined in the Ministry of SOEs' Strategic Plan 2020–2024. Among the three strategic actions defined, one key mandate is to enhance the financial value, national contribution, governance, and restructuring of SOEs (BUMN, 2019). This expectation extends to the pharmaceutical sector, where the Ministry of SOEs established a holding company led by PT Bio Farma (Persero), with PT Indofarma, PT Kimia Farma, and PT INUKI as subsidiaries. The aim was to strengthen national pharmaceutical resilience, ensure product availability, and boost innovation across the group (BUMN, 2019). However, despite four years since the holding's formation, its financial performance has declined, recording losses from 2022 to 2024 (Biofarma, 2024), and prior studies indicate that pharmaceutical SOEs consistently underperform compared to private domestic and multinational firms (Atmaja & Davianti, 2022).

The transformation of Indonesia's pharmaceutical industry has been significantly influenced by the implementation of Jaminan Kesehatan Nasional (JKN) in 2014, Indonesia's universal health coverage program managed by BPJS Kesehatan. JKN consolidated the nation's healthcare consumers into a single national buyer—the government—leading to centralized procurement through national tenders governed by the Ministry of Health. Winning suppliers are selected based on competitive pricing and supply continuity, with procurements executed via the E-Katalog system (Kemkes, 2024). As a result, price has become a dominant factor in procurement decisions. This shift has rendered the market increasingly commoditized and price-sensitive, creating challenging conditions for pharmaceutical firms. As noted by Noffrendi Roestam of Ikatan Apoteker Indonesia, the cost pressure significantly affects profitability (Azzahra, 2024). A 2019 study of seven publicly listed pharmaceutical companies—

including SOEs Indofarma and Kimia Farma—confirmed a decline in financial performance after JKN's rollout, underscoring the structural challenges posed by the new pricing system (Suherdi, 2019). In this evolving environment, sustaining long-term revenue hinges on strategic capabilities such as effective portfolio management and robust new product development (NPD). Bieske et al. (2023) emphasizes portfolio management as a critical success factor, while Cooper (2019) highlights NPD as a central driver of revenue growth and competitive survival. Given that Indonesian pharmaceutical SOEs continue to underperform amidst intensified market pressures from JKN, weaknesses in managing their product portfolios—especially in innovation and product selection—represent a key strategic gap. Despite the importance of these areas, research on portfolio management strategies within Indonesian pharmaceutical SOEs remains scarce. This thesis aims to address that gap by developing a strategic blueprint through benchmarking SOEs against successful private and multinational firms, particularly in the domain of new product development portfolio management.

Business Issue

Southeast Asia, characterized by countries that have boosted pharmaceutical expenditures by at least USD 1 billion over a five-year span while maintaining a GDP per capita below USD 3,000. According to IQVIA, such nations are projected to outpace the global average growth rate and emerge as the chief engines propelling the worldwide industry's expansion in the coming years (CPHI Japan, 2023). Within this context, Indonesia presents the most promising growth trajectory for the global pharmaceutical landscape, underpinned by its status as the world's fourth-most populous nation, which ensures a vast patient base and inherent structural demand potential. This market's expansion has been markedly amplified by governmental initiatives, particularly the rollout of Jaminan Kesehatan Nasional (JKN), Indonesia's universal health coverage scheme that has substantially broadened medicine accessibility for patients (Hasnida et al., 2020). Nevertheless, this growth introduces complexities for pharmaceutical entities, as JKN, coupled with the e-catalogue procurement mechanism, has escalated market volumes while exerting intense downward pressure on pricing, compelling manufacturers to fulfill large-scale orders at diminished margins (Satibi et al., 2022). Consequently, success in this arena transcends mere scaling; it demands adept navigation of a highly price-competitive environment, marking the advent of what is termed the JKN disruption—a transformative policy that has fundamentally altered the valuation and dynamics of pharmaceuticals in Indonesia. The JKN initiative has profoundly restructured the Indonesian pharmaceutical industry's operations, influencing pricing, procurement, and distribution channels. By December 31, 2024, JKN encompassed 278.1 million participants, achieving a coverage rate of 98.45% of the national population (Figure 1.), surpassing the 2024 benchmark of 98% outlined in Presidential Regulation No. 36/2023 and underscoring the program's vigorous nationwide rollout (DJSN, 2024).

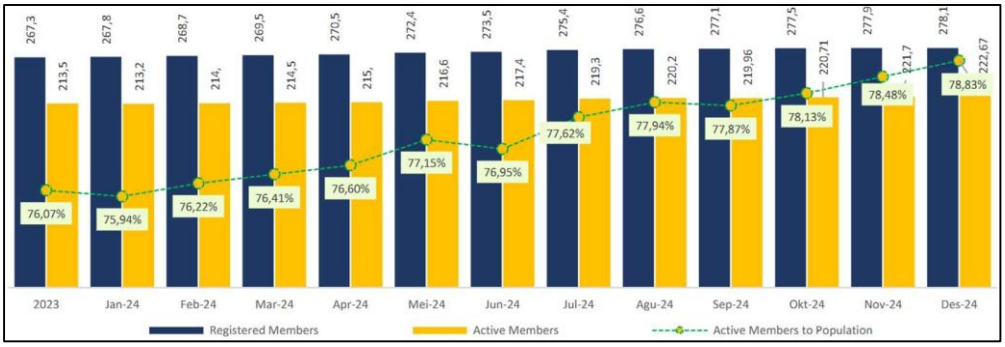

Figure 1. Registered and Active Members of JKN (in Mn of peoples)
Source: DJSN (2024)

Along with JKN, there is an E-Katalogue system, a centralized procurement platform through which government healthcare facilities can procure directly and transparently from listed suppliers. In addition, private healthcare facilities that would like to serve BPJS patients, also need to procure the medications through this system. Due to the price transparency and also price being one of the crucial factor to be the tender winner, nearly 80% of medicines listed in E-Katalogue saw price declines (more than 50%), compared to their price in regular market, according to studies (Anggriani et al., 2020). This system ultimately created cost savings for patients and healthcare facilities, however on the other hand, it forces pharmaceutical companies to reduce their BPJS-related products' margin. The market transformation triggered by JKN can be better understood by looking at Porter's Five Forces framework in Figure 2.

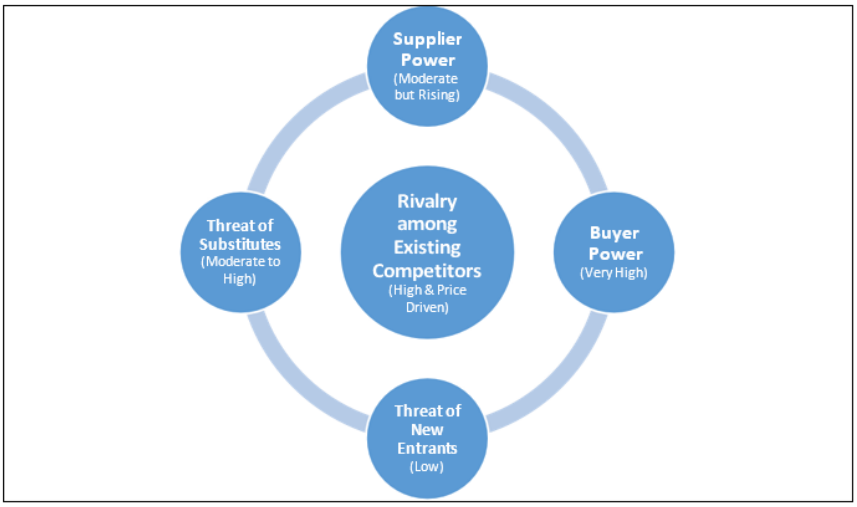

Figure 2. Porter's Five Forces Analysis on Indonesia Pharmaceutical Industry Landscape after JKN
Source: Author (2025)

The implementation of Jaminan Kesehatan Nasional (JKN) has significantly consolidated buyer power by establishing BPJS Kesehatan as the sole national purchaser through the e-katalog system, enabling hospitals and clinics to set price ceilings based on e-katalog listings, thereby compelling manufacturers to offer the lowest prices to secure substantial market access (Satibi et al., 2022). This dynamic amplifies the threat of substitutes, particularly for generic medicines, as procurement units can readily switch between brands and suppliers to secure the lowest prices, increasing product interchangeability. Supplier power remains moderate but is projected to rise due to Indonesia's continued reliance on imported Active Pharmaceutical Ingredients (APIs), creating supply chain

vulnerabilities (Aditya & Belarminus, 2025). Meanwhile, the threat of new entrants remains low, hindered by high capital requirements, stringent regulations from BPOM, and a fiercely price-driven market environment—conditions reinforced by the Ministry of Industry's 2021 report indicating sluggish growth in new pharmaceutical ventures (Figure 3). As a result, competition among existing players is intense and predominantly driven by pricing strategies.

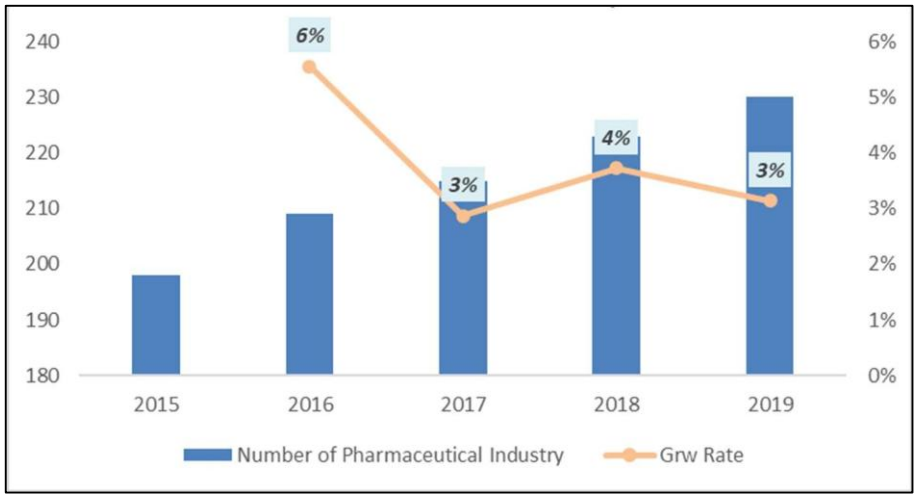

Figure 3. Number of Pharmaceutical Industry in Indonesia
Source: (IQVIA, 2023)

Overall, JKN has succeeded in increasing patient access but also redefined how Indonesia's pharmaceutical market dynamics. The Ministry of Health (MoH) and BPJS Kesehatan control the demand through policy and reimbursement models; BPOM regulates the product registration or legality to market status, and pharmaceutical

companies need to adapt to strive in this pressure. Hence, in this environment, pharmaceutical companies must navigate strict pricing controls and lower margins. Therefore, long-term revenue will be based on the ability to select and develop the correct products, those that can continue to be viable at regulated prices, and with increasing competition, making strategic portfolio more critical than ever. The strategic challenge for Indonesia's pharmaceutical state-owned enterprises (SOEs), particularly those under the Bio Farma Holding, has intensified due to shifting market dynamics driven by the Jaminan Kesehatan Nasional (JKN) policy. Despite their strategic advantage as the largest domestic suppliers to the government-linked JKN system, these SOEs have underperformed financially, reporting negative profitability and negative EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization) between 2022 and 2024, according to consolidated results from PT Bio Farma (Persero) (Biofarma, 2024). Operating profit (loss) is calculated as gross profit minus operating expenses, while net profit (loss) further deducts financing costs, taxes, and other expenses. EBITDA, a key performance metric widely used to assess operational stability—especially in capital-intensive sectors like pharmaceuticals—reflects a company's core profitability before non-operational and non-cash charges (Mukhambetov et al., 2020). It is influenced by a delicate balance among product pricing, cost of goods sold, and overhead expenses, making effective portfolio management more crucial than ever in navigating the pressure of a low-margin, high-volume, and highly competitive market environment.

Table 1. Financial Performance Indicators of PT Bio Farma (Persero) in Mn Rupiah
Source: Biofarma (2024)

Parameters	2020	2021	2022	2023	2024
Operating Profit /	828.89	3,318.76	491.84	(1,409.33)	(968.13)
(Loss) Profit / (Loss) for the Year	289.19	1,942.90	(76.52)	(2,430.61)	(1,079.70)
EBITDA	1,314.99	4,083.17	1,456.67	(389,28)	(53.02)

Indonesia's pharmaceutical state-owned enterprises (SOEs) have exhibited negative profitability and EBITDA, as shown in Table 1., indicating that core operations are not generating adequate value and pointing to deeper financial issues (Mukhambetov et al., 2020). This stems from multiple problems, including fraud at PT Indofarma, Tbk and PT Kimia Farma, Tbk, involving financial manipulation, fictitious transactions, corruption, and illegal lending, which reveal profound governance weaknesses requiring immediate reform per the Ministry of SOEs' Strategic Plan 2020–2024 (BUMN, 2019 : CNN, 2024). Yet, these governance lapses do not fully explain the downturn. Financial reports in Tables 2. and Table 3. further demonstrate that negative profitability persists at the subsidiary level, with Indofarma facing losses since 2021 and Kimia Farma since 2022, signaling insufficient gross margins to offset operating expenses and a clear misalignment in product portfolios (Mukhambetov et al., 2020). This reflects broader strategic flaws, such as uncompetitive offerings or high costs, beyond mere mismanagement, necessitating portfolio realignment to enhance viability amid fierce competition.

Table 2. Financial Performance Indicators of PT Kimia Farma, Tbk in Mn Rupiah
Source: KAEF (2021, 2024)

Parameters	2020	2021	2022	2023	2024
Operating Profit / (Loss)	653	985	(66.8)	(1.710)	(810.7)
Profit / (Loss) for the Year	20	289	(662.8)	(2,260)	(1,208)

Table I.2 Financial Performance Indicators of PT Indofarma, Tbk in Mn Rupiah
Source: INAF (2021, 2024)

Parameters	2020	2021	2022	2023	2024
Operating Profit / (Loss)	58	51.9	(348.7)	(603.5)	(253.7)
Profit / (Loss) for the Year	0.3	(37.5)	(334.5)	(721)	(457.6)

While governance failures like fraud have exacerbated financial strains on Indonesia's pharmaceutical state-owned enterprises (SOEs), the persistent operating losses point to deeper structural problems, such as a lack of high-margin or strategically aligned products in their portfolios. Although some attribute this to obligations for low-margin JKN-reimbursed drugs, data from the 2025 Consolidated Drug Tender for Ministry of Health Vertical Hospitals' Price List and Types of Medicines in the e-Catalogue reveals that SOEs (PT Indofarma, PT Kimia Farma, and PT Phapros) represent only 12% of tendered molecules—less than the 15% contributed by private firm PT Kalbe Farma—indicating they are not major JKN suppliers and thus their negative profitability stems not primarily from JKN involvement but from fundamental weaknesses in product portfolio competitiveness, particularly in new product development (NPD) (Kemkes, 2025). To address these gaps, this study benchmarks NPD portfolio management practices across SOEs, local private, and multinational companies, then develops a Strategic Portfolio Management Blueprint as a practical decision-making and governance framework to enhance SOEs' product portfolios in the JKN era and ultimately boost financial performance.

Research Questions and Research Objectives

The study aims to address the persistent challenges in the new product development (NPD) portfolio management of Indonesia's pharmaceutical state-owned enterprises (SOEs) by benchmarking their practices against those of successful private local and multinational firms. Central research questions focus on identifying the key principles driving effective portfolio and NPD management in competitive markets during the JKN era, assessing how SOEs' current practices differ from these high-performing archetypes, and uncovering actionable strategies to close critical gaps. These questions guide a comprehensive assessment of both strategic frameworks and operational processes, ensuring the study remains focused on practical and implementable insights. The primary research objectives are to identify best practices from leading private and multinational pharmaceutical companies (MNCs), benchmark these against the current practices of Indonesian SOEs, and develop a tailored Strategic Portfolio Management Blueprint. This framework is designed not only to enhance the competitiveness of SOEs' product portfolios but also to align with their unique value propositions and public mandates. By integrating insights from real-world case studies and organizational processes across three archetypes—multinational, private local, and SOEs—the study seeks to deliver a robust, context-specific strategy for transforming SOE performance in the JKN landscape. The research scope is limited to the prescription (Rx) segment of Indonesia's pharmaceutical market, with a comparative analysis conducted through a mixed-methods case study involving quantitative and qualitative data. While findings are analytically generalizable rather than statistically representative due to the purposive sampling and limited access to executive-level information, results are triangulated using secondary sources such as official reports, government documents, media coverage, and prior academic research. This methodological rigor ensures credible insights despite constraints, enabling the development of a decision-making and governance framework that can serve as a roadmap for revitalizing SOE innovation and financial sustainability.

LITERATURE REVIEW

1. Theoretical Foundation

New Product Development (NPD), Innovation, Product Portfolio and Portfolio Management

The study focuses on transforming New Product Development (NPD) portfolio management in Indonesia's pharmaceutical state-owned enterprises (SOEs) by comparing their practices with those of successful private local and multinational firms. NPD is a core innovation process that converts creative ideas into valuable products, and a product portfolio encompasses the collection of projects a firm manages simultaneously (Cooper, 2012). In the pharmaceutical sector, it spans the entire lifecycle from research and development to commercialization. Projects are typically categorized into breakthrough (high risk, high novelty), platform (shared capabilities for future products), derivative (incremental improvements), and support (efficiency-focused) types (Anderson et al., 2024). These classifications provide a structured way for firms to assess and balance innovation across different risk and

value profiles. Effective NPD portfolio management serves as a strategic lever to manage high uncertainty and capital intensity. The Product Development and Management Association (PDMA) identifies three core objectives: maximizing value, achieving portfolio balance, and aligning with organizational goals (Anderson et al., 2024). To achieve value maximization, firms must continuously assess projects based on scientific feasibility, market potential, and competitive dynamics. Strategic resource allocation—financial, human, and manufacturing—must be directed toward projects with the highest expected return. A disciplined selection and prioritization process, guided by evolving criteria across development stages, ensures that early-stage projects are evaluated for strategic fit and market opportunity, while later-stage projects are assessed on profitability, differentiation, and time-to-market speed (Carbonell-Foulquié et al., 2004).

A critical enabler of portfolio discipline is the implementation of governance mechanisms such as milestone reviews and "Go/No Go" decision points. These processes help organizations proactively terminate underperforming or low-potential projects and fast-track promising ones, thereby improving overall portfolio quality. In capital-intensive industries like pharmaceuticals, the efficiency of portfolio management directly impacts long-term financial performance. Poor management—such as maintaining a large number of low-potential projects or failing to exit unviable ones—can severely undermine profitability (Bieske et al., 2023). Conversely, a well-structured portfolio strategy that emphasizes alignment with strategic objectives, commercial viability, and robust execution capabilities can unlock substantial financial and competitive advantages (Antonijevic, 2014)

This research context underscores why Indonesia's pharmaceutical SOEs face significant challenges: despite public mandates to innovate and serve national health goals, their NPD portfolio practices often fall short of best-in-class standards. By benchmarking against high-performing private and multinational firms, the study aims to diagnose these gaps and develop a tailored Strategic Portfolio Management framework. The framework will integrate proven methodologies in project classification, governance, and resource allocation, while accounting for the unique public-sector value that SOEs hold. Ultimately, the goal is to enhance the SOEs' innovation capacity, improve their financial sustainability, and strengthen their role in advancing Indonesia's healthcare ecosystem under the JKN (National Health Insurance) framework.

State of The Art

The Indonesian pharmaceutical market operates under strong state dominance due to the Jaminan Kesehatan Nasional (JKN) system, which has centralized procurement through the e-katalog platform managed by BPJS Kesehatan. This has made the government the largest buyer of medicines, significantly reducing drug prices—up to 80% in some cases—while improving access and transparency. However, this policy-driven environment has created intense price pressure, particularly on generic drugs where state-owned enterprises (SOEs) are most active, limiting their ability to absorb rising input costs. The heavy reliance on imported Active Pharmaceutical Ingredients (APIs), exceeding 90%, further exposes SOEs to exchange rate volatility, especially fluctuations in the Indonesian Rupiah (IDR) against the US Dollar, which exacerbates margin squeeze.

Technological advancements such as digital health platforms and e-procurement systems are accelerating industry transformation, improving market reach and data transparency, yet they also intensify competition and demand faster response times. While private and multinational firms leverage advanced data-driven tools for R&D and portfolio management, SOEs still rely on fragmented, manual systems, resulting in slower innovation cycles. Environmental regulations and sustainability standards are increasingly important, aligning with global ESG trends, but compliance adds cost—especially for SOEs attempting to reposition as future-ready manufacturers. The regulatory landscape remains complex, with lengthy approval processes from BPOM and Ministry of Health, and government-mandated pricing, reference pricing, and reimbursement rules further constraining profitability.

The Strategic Pillar of SOEs aims to balance national development and financial sustainability, as seen in the 2020 formation of the Pharmaceutical SOE Holding, uniting PT Bio Farma, PT Kimia Farma, PT Indofarma, and PT Industri Nuklir Indonesia under a unified vision for an integrated life-sciences ecosystem. Despite this, practical integration remains weak, with overlapping functions, limited coordination in R&D and procurement, and independent operations undermining potential synergies. Financial data shows persistent profitability challenges across SOEs, highlighting a gap between strategic intent and operational execution. The dual role of SOEs—as both commercial entities and implementers of public health policy—creates a strategic tension: while government alignment ensures market access, rigid bureaucratic processes and external pressures limit agility, rendering many SOEs unable to compete effectively in a fast-changing, price-sensitive environment.

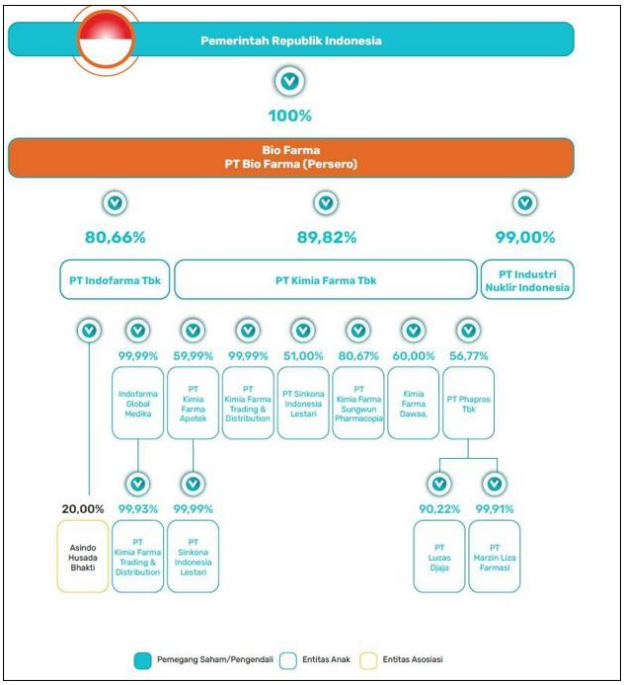

Figure 4. Indonesia Pharmaceutical SOE Holding

The weak financial performance of Indonesia's pharmaceutical state-owned enterprises (SOEs) stems not only from JKN pricing pressures but also from entrenched governance weaknesses and strategic indiscipline, including repeated financial fraud, speculative decisions, and capability-mandate mismatches at the holding level, as uncovered by BPK investigations and media reports (Putri, 2024 : Rachman, 2024). This has led to the absence of an integrated portfolio evaluation system, resulting in flawed investment and divestiture choices that prioritize low-value generic products and outdated formulations, while high-value therapeutic innovations are dominated by private firms and multinationals. Beyond cost margins, the core issue lies in fragmented decision-making, unaccountable leadership, and siloed subsidiary operations that perpetuate losses, despite studies on incentives like TKDN and halal certifications (Hasnida et al., 2020 : Satibi et al., 2022). Addressing this research gap, the study proposes portfolio governance as a key reform, developing a Strategic Portfolio Management framework tailored to SOEs' unique constraints and public responsibilities to enhance performance in the sector.

2. Conceptual Framework

This study introduces a conceptual framework designed as a comparative benchmarking tool to evaluate New Product Development (NPD) Portfolio Management practices across three archetypes of pharmaceutical firms: state-owned enterprises (SOEs), private local firms, and multinational corporations. Drawing from established theories in prior literature, the framework centers on four key drivers of portfolio performance—portfolio governance, resource allocation, regulatory strategy, and market conditions—which are grouped into internal factors (strategic decision-making and resource allocation) and external factors (regulatory strategy and market conditions). These elements form the core of the framework, serving as the basis for the survey instrument and interview protocol in this research, enabling a structured assessment of how firms navigate NPD challenges in the Indonesian pharmaceutical landscape.

As an external factor, market dynamics, competitive responsiveness, and time-to-market are pivotal in NPD Portfolio Management, aiming to maximize value amid Indonesia's highly competitive pharmaceutical market pressured by JKN pricing. Firms must analyze and anticipate market shifts to respond effectively, while time-to-market ensures first-mover advantages in a price-sensitive environment through strategies like parallel product development or external partnerships (Hering et al., 2018). This study evaluates the significance of these factors for different firm types and explores the specific strategies employed to address them, highlighting how responsiveness influences overall portfolio success. Regulatory and compliance capability, another critical external factor, profoundly impacts the speed and cost of NPD outcomes in pharmaceuticals by necessitating proactive regulatory planning, early engagement with authorities, and adoption of advanced approaches like Quality by Design (QbD) to reduce risks and expedite approvals (Raka & Liangrokapart, 2017). In Indonesia's regulated environment, these capabilities determine development efficiency and market entry timelines. The research assesses the perceived

importance of regulatory aspects across firms and examines variations in compliance strategies, providing insights into how SOEs, private locals, and multinationals build and leverage these capabilities to enhance NPD performance.

Internally, strategic decision-making and portfolio governance require structured processes to align projects with corporate innovation strategies, evaluating consistency with business goals, investment breakdowns, and priorities through tools like Pass/Fail assessments, scoring, financial analyses (e.g., NPV, IRR, Breakeven), and frameworks such as Stage-Gate® for governance, documentation, and cross-functional reviews to counter uncertainties and biases (Anderson et al., 2024 : Suchak & Murray, 2017). Meanwhile, resource allocation, cross-functional integration, and internal capabilities emphasize aligning limited resources—spanning business development, R&D, regulatory, medical, manufacturing, and marketing—with organizational goals to optimize value, fostering collaboration across departments for mutual objectives (Anderson et al., 2024; Suchak & Murray, 2017). This study investigates the adoption of these internal mechanisms, assessing how firms evaluate capabilities, allocate resources, and promote integration to drive NPD portfolio effectiveness.

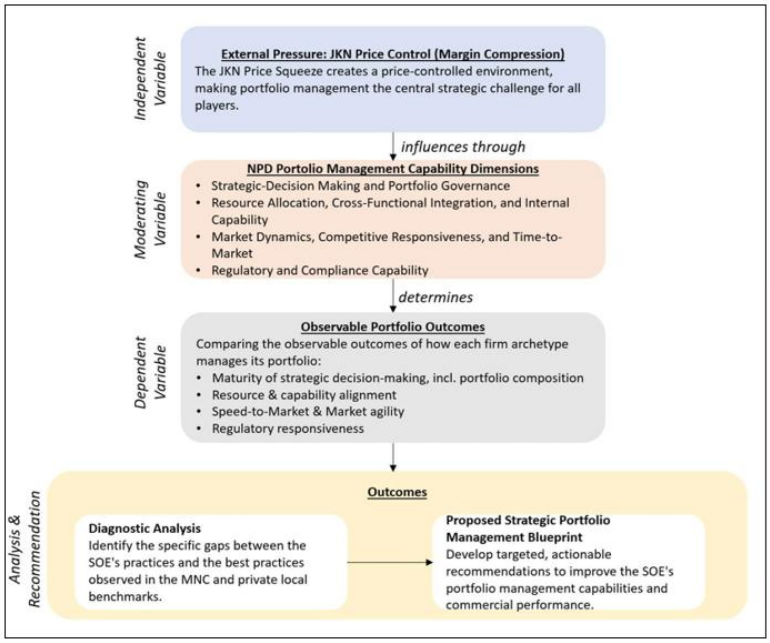

Figure 5. Conceptual Framework

Figure 5. presents the conceptual framework for this study, which posits that the strategic performance of Indonesian pharmaceutical firms is shaped by the interaction between the independent variable—external JKN policy pressure—and the dependent variable of observable portfolio outcomes, with this relationship moderated by the firm's internal capabilities in four core NPD portfolio management dimensions; the analysis will subsequently compare these dynamics across firm archetypes to diagnose gaps in State-Owned Enterprises (SOEs) and develop a proposed strategic portfolio management blueprint for them.

METHOD

Research Design

This study employs an explanatory sequential mixed-methods design (QUAN → qual), where quantitative data collection and analysis precedes a qualitative phase. This approach is chosen because the research questions—which aim to identify gaps between State-Owned Enterprises (SOEs) and other firm archetypes before developing tailored recommendations—cannot be adequately answered by a singular methodological approach (Sekaran & Bougie, 2016). The initial quantitative phase will identify performance differences, while the subsequent qualitative phase will provide a detailed exploration with key individuals to interpret and contextualize those findings, thereby grounding the final strategic recommendations. A purposive, judgment sampling technique is utilized, selecting participants based on their expertise and organizational position, as the specialized knowledge required for New Product Development (NPD) Portfolio Management is limited to specific managerial roles (Sekaran & Bougie, 2016). Respondents are exclusively Business Development Managers from publicly listed (Tbk) prescription-based pharmaceutical companies. The universe of potential companies was refined from 15 public pharmaceutical firms

by excluding healthcare distributors and traditional medicine manufacturers (IDNFinancials, n.d.). The remaining eligible companies were categorized into three archetypes: Private Local (e.g., Kalbe Farma, Soho Global Health), Multi-National (e.g., Darya-Varia Laboratoria, Merck), and SOEs (e.g., Kimia Farma, Indofarma). The final benchmark selection for comparison with SOEs was based on new product revenue performance data from IQVIA ITMA for Q2/2025. The top performer from the Private Local category, PT A, and from the Multi-National category, PT B, were selected. A demonstrated the highest new product revenue (IDR 3,614 billion), while B was the highest-performing multinational affiliate (IDR 112 billion). These companies serve as benchmarks against the SOEs to diagnose specific strategic portfolio management gaps and inform a relevant proposed blueprint for SOE improvement.

Data Collection Method

The data collection strategy for this mixed-methods study employs a sequential approach, beginning with quantitative primary data via a structured survey and followed by qualitative primary data from semi-structured interviews. Primary data is sourced from Business Development managers at the selected benchmark firms (A, B, and the SOEs). The initial quantitative phase involves a "New Product Portfolio Decisions Survey" using a 5-point Likert scale, which is designed to measure the perceived importance of various external and internal factors influencing new product development (NPD) decisions. This survey is structured in four parts: a respondent profile, an assessment of external factors (e.g., addressable market size, regulatory stability, e-catalogue price feasibility), an assessment of internal factors (e.g., strategic fit, resource capacity, cost mitigation capability), and questions on project governance (e.g., stage-gate processes, decision-making authority) (Anderson et al., 2024 : Hering et al., 2018 : Raka & Liangrokapart, 2017 : Suchak & Murray, 2017).

The external and internal factors in the survey correspond directly to the four NPD Portfolio Management Capability Dimensions outlined in the conceptual framework. Specifically, the external factors are categorized into dimensions representing Market Dynamics, Competitive Responsiveness, and Time-to-Market (e.g., market size, competition, pricing feasibility) and Regulatory and Compliance Capability (e.g., regulatory clarity, approval time). The internal factors are categorized into dimensions representing Strategic Decision Making and Portfolio Governance (e.g., strategic fit, decision-process clarity, incentive alignment) and Resource Allocation, Cross-Functional Integration, and Internal Capability (e.g., R&D capability, team bandwidth, cost mitigation). The survey results will thus quantify the relative importance of these capability dimensions across the different firm archetypes.

Following the analysis of the survey data, the qualitative phase involves conducting in-depth, semi-structured interviews lasting 60-75 minutes with a representative from each benchmark firm. The purpose of these interviews is to provide a detailed exploration of the reasoning behind the quantitative scores, to contextualize the firms' portfolio management processes, and to gain deeper insight into how the external pressures and internal capabilities interact in practice. This sequential design allows the quantitative findings to inform and guide the qualitative inquiry, ensuring the interviews focus on interpreting and explaining the initial numerical results. To triangulate and validate the primary findings, the study also incorporates secondary data from a variety of sources. This includes the annual reports of the subject firms, pharmaceutical sales performance data from sources like IQVIA, relevant government policy documents, and industry news articles. The integration of this secondary data provides additional context and supports a more robust analysis of the primary data collected from the surveys and interviews.

Data Analysis Method

The data will be analyzed through a multi-stage, integrated process. First, a benchmarking analysis of the survey results will be conducted to quantitatively compare the strategic priorities and portfolio management capabilities of the State-Owned Enterprises (SOEs) against the private local and multinational benchmarks, addressing the first research question by identifying competitive gaps and advantages (Prašnikar et al., 2005). Subsequently, a qualitative thematic analysis of the interview transcripts will be performed to identify recurring patterns, contextualize the quantitative findings, and explain the managerial rationale behind each firm's portfolio management system. Following this diagnostic phase, a strategic synthesis will be developed for the SOEs. Their internal capabilities, as identified, will be assessed using the VRIO framework to determine which resources can provide a sustainable competitive advantage. This VRIO profile will then inform a SWOT/TOWS analysis, serving as the foundation for the "Strengths" to formulate a comprehensive strategic proposal (Prašnikar et al., 2005). Ultimately, the insights from all analytical stages—benchmarking, thematic analysis, and strategic synthesis—will be consolidated into a final, actionable Strategic Portfolio Management Blueprint for the SOEs, transforming diagnostic findings into concrete reform recommendations.

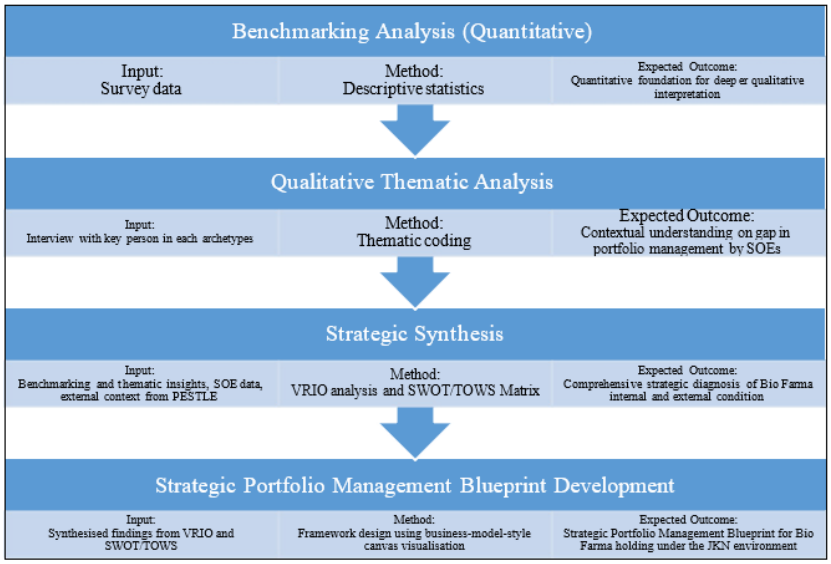

Figure 6. Flowchart of the research methodology

RESULTS AND DISCUSSION

This chapter synthesizes quantitative benchmarking and qualitative analysis to strategically understand how each firm archetype manages its portfolio under the JKN program, specifically analyzing how SOEs respond to external pressures, how their internal capabilities shape decisions, and what governance mechanisms they employ, thereby identifying capability gaps between SOEs and other archetypes; through the integration of benchmarking results, thematic analysis, and the VRIO-TOWS methodology, it develops a comprehensive diagnosis of SOE portfolio management weaknesses, which forms the foundational basis for the subsequent Strategic Portfolio Management Framework.

1. Data Analysis

The benchmarking survey was distributed to senior Business Development executives across the three pharmaceutical firm archetypes: A for the private local sector, B for the multinational corporation (MNC) sector, and State-Owned Enterprises (SOEs). A total of eight responses were collected—three each from MNCs and local private firms, and two from SOEs—all from professionals with an average of over 15 years of industry experience. To enrich the data, interviews were conducted with executive leaders from A "Local" and B "MNC", though access to SOE executives could not be secured; all participant identities remain confidential for consistency and anonymity. For data processing, responses based on a five-point Likert scale measuring the importance of various New Product Development (NPD) factors were converted into numerical scores: 'Not Important' as 1, 'Slightly Important' as 2, 'Moderately Important' as 3, 'Important' as 4, and 'Very Important' as 5 (Author, 2025). The scores for each factor were then averaged across respondents within each archetype to produce mean scores, which quantitatively reflect the relative importance assigned to each external and internal factor in the portfolio decision-making processes of the respective firm types.

Table 3. Rate of Importance for Factors in NPD Portfolio Management in each Archetype

Parameter	LOCAL	MNC	SOE
External Factors			
1. Market Dynamics, Competitive Responsiveness, and Time-To-Market			
A1. Addressable market size	4.7	4.7	4.5
A2. Expected market growth	4.7	4.3	4.5
A3. Current Competition landscape	4.3	4.3	5.0
A4. Pipeline pressure	4.3	4.0	5.0
A5. Patent landscape / IP barrier	4.3	5.0	3.5
A6. Policy or tender rule change risk	4.0	4.0	5.0
A7. E-catalogue price feasibility	4.0	4.3	5.0
A8. Channel fit (Tender/Private)	3.7	4.0	4.0

A9. Foreign Exchange (FX)/API exposure	3.3	4.0	3.5
2. Regulatory and Compliance Capability			
A10. Regulatory clarity	3.7	4.0	4.0
A11. Regulatory stability	3.7	3.7	3.5
A12. Time to approval/launch	3.7	4.3	4.0
Internal Factors			
1. Strategic Decision-Making and Portfolio Governance			
B1. Strategic fit (Therapeutic Area)	4.7	4.7	3.5
B2. Platform fit	3.7	4.3	3.5
B3. Brand fit	3.3	4.3	4.0
B4. Time-to-market	4.3	4.3	4.0
B5. Decision-process clarity	4.0	4.0	3.0
B6. Incentive alignment	3.0	3.5	3.0
B7. Localization/TKDN feasibility	3.3	3.3	4.5
2. Resource Allocation, Cross-Functional Integration, and Internal Capability			
B8. R&D Capability in formula development	3.3	4.0	3.0
B9. Capacity/bandwidth (key functions)	4.0	4.3	3.5
B10. COGS mitigation capability	4.0	4.3	3.0
B11. FX/API risk mitigation capability	3.3	4.0	3.0

Source: Author (2025)

2. External Factors Benchmarking

Analysis of external factors related to market dynamics reveals a distinct strategic divergence among archetypes. The SOEs' evaluation profile forms a pronounced "pressure-spike" shape, showing they place the highest emphasis on factors related to external threats and constraints, such as competition intensity, pipeline pressure, tender-rule volatility, and e-catalogue price feasibility. In contrast, both private local firms and MNCs exhibit smoother, more balanced radar charts, integrating opportunity indicators (e.g., market size, patent landscape) with risk and pressure indicators. A critical point of difference is the SOEs' lower rating of patent landscape/IP barriers (scoring 3.5 versus 4.0-5.0 for others), a factor MNCs consider strategically vital for timing market entry and launching first-generic products, as supported by interview insights and literature (Memedovich et al., 2025). This pattern, alongside a proactive "capability-driven mindset" described by private firm executives that aligns with research on opportunity-taking as a key competitive indicator (Farzaneh et al., 2022), highlights an asymmetry in SOE strategic logic: it is heavily reactive to external pressures while overlooking strategic enablers like IP management.

Regarding regulatory and compliance capability factors, the analysis shows moderate variability and general agreement across all archetypes that regulatory clarity, stability, and approval time are important, but not the most significant determinants. Private local firms assigned identical, moderate scores to all three regulatory parameters (3.7), indicating stable expectations and sufficient internal capability to manage BPOM processes, albeit with concerns about regulatory dynamism managed through cross-functional coordination. Interviews with both local and MNC executives noted the challenge of fully implementing Quality-by-Design (QbD) principles due to unpredictable regulatory changes, a difficulty underscored in existing literature (Yang et al., 2025). The overall conclusion from the external factor benchmarking is that regulatory factors present little differentiation between firm archetypes. This finding underscores that the core portfolio management challenges for SOEs are rooted not in regulatory barriers, but in deeper strategic, governance, and internal capability issues, as evidenced by their pressure-anchored evaluation approach contrasted with the more balanced, forward-looking logic of private and multinational firms.

3. Internal Factors Benchmarking

The benchmarking of internal factors related to strategic decision-making and portfolio governance reveals significant differences among archetypes. Both local private firms and multinational corporations (MNCs) show high

alignment, with the highest ratings for Strategic Fit (Therapeutic Area), and they employ structured, cross-functional processes for evaluating new product opportunities. MNCs particularly emphasize institutionalized practices ensuring alignment with long-term strategy, as seen in their high scores for Platform Fit, Brand Fit, and Time-to-Market. In stark contrast, State-Owned Enterprises (SOEs) demonstrate lower ratings on Strategic Fit, Platform Fit, and Decision Process Clarity, indicating fragmented strategic direction and underdeveloped governance systems. This is corroborated by qualitative evidence, such as the strategic mandate mismatch at Indofarma between its pharmaceutical assets and its assigned focus on herbal products and medical devices(Putri, 2024). SOEs' only notably higher rating was on Localization/TKDN Feasibility, which reflects compliance with government mandates rather than a strategic competitive advantage.

Analysis of factors concerning resource allocation, cross-functional integration, and internal capability further highlights these disparities. MNCs emphasize capacity/bandwidth of key functions and Cost of Goods Sold (COGS) mitigation capability, with their centralized R&D teams balancing exploration and exploitation functions, though this model can lead to overreliance on contract manufacturing with associated quality risks (Gray et al., 2016) Local private firms prioritize Foreign Exchange/Active Pharmaceutical Ingredient (FX/API) risk mitigation, employing strategies like creating specialized API procurement subsidiaries to gain stronger supplier leverage and sourcing from stable regions. Conversely, SOEs assign the lowest importance ratings (3.0-3.5) to all internal capability factors, including R&D ability, production capacity, and cost mitigation. This pattern suggests that internal capability alignment is a critical consideration in portfolio selection for both local private firms and MNCs, whereas SOEs exhibit limited emphasis on these factors. The inability to conduct interviews with SOE executives leaves it unclear whether their low scores stem from a perceived existing capability to mitigate such risks or a fundamental lack of consideration for these dimensions in their decision-making processes. Despite the existence of a local API manufacturer within the SOE group (PT Kimia Farma Sungwun Pharmacopia), its integration and utilization across SOEs remains uncertain. Overall, the internal factor benchmarking reinforces the diagnosis that SOEs possess the infrastructure but lack the managerial agility, strategic discipline, and integrated capability focus necessary for effective portfolio management.

4. Portfolio Governance

The governance practices reveal a significant maturity gap between the archetypes. While SOEs report monthly portfolio reviews and the existence of "kill rules," the data is ambiguous regarding whether these are used for high-level strategic evaluation or merely administrative oversight. In contrast, both local private firms and MNCs utilize structured quarterly reviews for strategic feasibility assessments, commercial viability checks, and disciplined pipeline adjustments. For instance, the local private firm separates operational project monitoring from quarterly "sanity check" meetings explicitly designed for strategic reflection and funding decisions, effectively serving as a dynamic, albeit unwritten, kill mechanism. Final decision-making authority also differs, with SOEs relying on top-down CEO directives, whereas local and MNC firms employ cross-functional committees for shared, collaborative governance.

The MNC exemplifies a highly mature governance structure through its integrated Global Innovation Framework. This involves a multi-layered stage-gate process requiring sequential approvals from local and global leadership, and a quarterly review cycle structured into three distinct phases (Product Concepting, Project Forecasting, Pre-launch Review) to rigorously evaluate strategic fit and commercial viability early on. This formal, data-driven funnel, heavily influenced by financial forecasting from the initial idea stage, enables a disciplined "fewer, larger bets" philosophy. Ultimately, the analysis indicates that SOEs possess governance structures on paper, but these lack the embedded discipline, strategic rigor, and data-centric accountability that characterize the more mature, capability-aligned decision-making processes of the private local and multinational firms.

5. Integrated Analysis

The integrated analysis reveals that the underperformance of State-Owned Enterprises (SOEs) is not primarily due to external structural factors but stems from deficiencies in internal governance and strategic decision-making. While all archetypes operate within the same JKN and BPOM environment, SOEs exhibit a reactive posture: they overemphasize external pressure indicators (like competition and price feasibility) and underreact to strategic opportunities, notably undervaluing intellectual property (IP) landscape assessments. This pressure-driven approach aligns with their social mission for access and affordability but conflicts with mandates for innovation and efficiency (BUMN, 2019). Internally, SOEs show the lowest importance ratings for capability alignment factors—such as R&D readiness, cost mitigation, and strategic fit—and for governance factors like decision-process clarity. Their sole

emphasized internal factor, TKDN feasibility, appears driven by compliance rather than competitive strategy. The causal logic identified indicates that SOEs possess a mission but lack the coherent internal mechanisms—transparent governance, data-driven processes, and capability-integrated decision-making—to execute it effectively. Unlike local private and multinational firms, which employ disciplined, cross-functional governance (e.g., stage-gates, quarterly sanity checks, and shared authority), SOEs rely on top-down directives and fragmented processes. Thus, the core problem is not a lack of strategy but a deficiency in strategic portfolio management: SOEs require a framework that enables disciplined prioritization, incorporates capability and IP assessments, and aligns incentives, resources, and governance toward a unified portfolio vision. The subsequent analysis will translate these findings into a Strategic Portfolio Management Blueprint to address these governance and capability gaps.

6. VRIO Analysis of SOEs

The vertically integrated structure of Pharmaceutical SOEs under the Bio Farma Holding, encompassing the entire supply chain from API manufacturing to retail, represents a valuable and somewhat rare resource due to the significant investment required, akin to strategies employed by top performers like Kalbe Farma which benefit from such integration through improved coordination and cost control (Karbowski & Prokop, 2019). However, a VRIO analysis reveals that while these resources—including the domestic manufacturing footprint, policy proximity, preferential access to government programs like JKN, and state-backed funding—are valuable and in some cases rare and hard to imitate, they are not effectively organized for exploitation. The production network suffers from underutilization and a lack of international accreditation, while advantages like direct tender access and low-cost capital are undermined by inefficiency, bureaucratic allocation, and an absence of performance discipline. Consequently, the analysis concludes that SOEs possess "strong in structure but weak in system" resources; they have tangible assets and institutional privileges that are valuable and rare, but the lack of organizational design, strategic incentives, and integrated portfolio governance prevents these resources from being converted into a sustained competitive advantage. This finding directly aligns with earlier diagnostic results, confirming that the core weakness of SOEs lies not in their resource endowment but in their capability to strategically organize and deploy these assets effectively.

7. SWOT/TOWS Analysis of SOEs

A SWOT analysis of Indonesia's pharmaceutical State-Owned Enterprises (SOEs) under the Bio Farma Holding structure highlights their unique position as commercial entities with a public health mandate. Key strengths (S) include a vertically integrated supply chain, a domestic manufacturing footprint with cGMP-certified facilities, preferential policy access to government programs like JKN and TKDN, and stable state-backed capital. However, these are countered by significant weaknesses (W): low innovation resulting in portfolios of low-margin generics, centralized and bureaucratic decision-making, frequent leadership turnover, a lack of integration and talent mobility across holding subsidiaries, and reactive portfolio management driven by licensing offers rather than market scanning, as noted in national strategic documents and recent analyses (BUMN, 2019). The external environment presents notable opportunities (O), such as expanding healthcare demand under JKN, government incentives for local manufacturing and pharmaceutical self-reliance (including the "Making Indonesia 2045" agenda), and growth potential in biopharmaceuticals where Bio Farma's vaccine expertise can be leveraged, especially with support for local API manufacturing (Guh, 2025). Concurrently, SOEs face substantial threats (T), including persistent JKN price compression, intense competition from more agile private and multinational firms, regulatory uncertainty, and instability caused by political cycles and governance scandals that erode public trust and disrupt long-term execution.

A subsequent TOWS analysis generates strategic directions by cross-referencing these factors. SO Strategies propose using strengths to capture opportunities, such as leveraging the integrated value chain to expand into high-growth therapeutic areas and utilizing manufacturing assets and policy proximity to capitalize on TKDN mandates. ST Strategies suggest deploying strengths to counter threats, for instance, using the value chain and scale to withstand JKN price pressure and applying policy proximity to navigate regulatory delays. WO Strategies focus on overcoming weaknesses by exploiting opportunities, like strengthening governance discipline to pursue high-growth segments and aligning subsidiary capabilities with national incentives. WT Strategies aim to minimize weaknesses to avoid threats, such as reducing bureaucratic bottlenecks to prevent vulnerability under price pressure and enhancing talent mobility to buffer against political disruptions. The TOWS analysis reveals that the core challenge for SOEs is not a lack of external resources or pressures but a critical internal misalignment. Despite possessing significant structural advantages, these fail to translate into competitive performance due to deficiencies in governance, strategic decision-making, and internal integration—a gap starkly contrasted by the disciplined, capability-aligned approaches of

private local and multinational firms. This disconnect between assets and execution forms the central capability gap identified. Consequently, the following subchapter will introduce a strategic blueprint designed to bridge this gap by realigning SOEs' strengths with market opportunities through the establishment of a consistent NPD portfolio management system and strengthened governance discipline.

8. Business Solution

The comprehensive data analysis reveals a critical capability gap within State-Owned Enterprises (SOEs): despite possessing considerable manufacturing resources and unique policy access, they suffer from poor portfolio governance and decision-making, which prevents these strengths from being translated into strategic competitive advantages. Therefore, the proposed business solution centers on establishing a central Strategic Portfolio Management Office (SPMO) and a standardized NPD Evaluation Framework, followed by two practical applications designed to leverage the SOEs' unique capabilities. The SPMO is proposed as a central governance body at the holding level to unify decision-making across fragmented subsidiaries. It functions as a strategic department integrating cross-functional expertise (Business Development, R&D, Finance, etc.) to ensure NPD portfolio decisions are based on transparent commercial, technical, and regulatory criteria rather than unplanned or politically motivated reasons. This model employs a dual-layer structure where the SPMO at the holding level is responsible for strategic governance, opportunity screening, stage-gate approvals, and resource prioritization, while Project Management Offices (PMOs) within each subsidiary handle execution (detailed planning, R&D, launch preparation). This structure aligns with the ambidextrous organization model (O'Reilly & Tushman, 2004), balancing exploratory strategic initiatives with operational exploitation, and aims to address core weaknesses like fragmented decision-making and lack of cross-subsidiary synergy.

Complementing the SPMO, the NPD Evaluation Framework establishes a transparent, evidence-based process for evaluating new product proposals. Each project is scored across five key dimensions—Estimated Time-to-Market, Market Forecast, Pricing Structure & Cost Feasibility, Competitive Intensity, and Policy Alignment—with assigned weights to produce a total score. Projects below a defined threshold are deferred or rejected. This framework ensures consistent, disciplined prioritization across all subsidiaries, driving strategic alignment and portfolio balance rather than subjective judgment. Two strategic applications demonstrate how this reformed governance can unlock SOE strengths. First, API Vertical Integration for TKDN-Based NPD leverages the existing local API manufacturer, PT Kimia Farma Sungwun Pharmacopia. Guided by the SPMO and the evaluation framework, the holding can strategically select APIs aligned with the Ministry of Health's roadmap, coordinate finished-dose development with the appropriate manufacturing subsidiary, and create commercial opportunities through licensing or technology transfer. Second, Technology Transfer for Vaccine Product Development capitalizes on Bio Farma's vaccine expertise. The SPMO would govern the biopharmaceutical portfolio, focusing on vaccines aligned with national programs and accelerating development through global technology-transfer partnerships to build high-value, differentiating assets. Together, the SPMO and the NPD Evaluation Framework provide the structural backbone to transform SOE portfolio management from a compliance-based process into a strategic, disciplined system that harnesses inherent strengths for greater competitiveness and national pharmaceutical resilience.

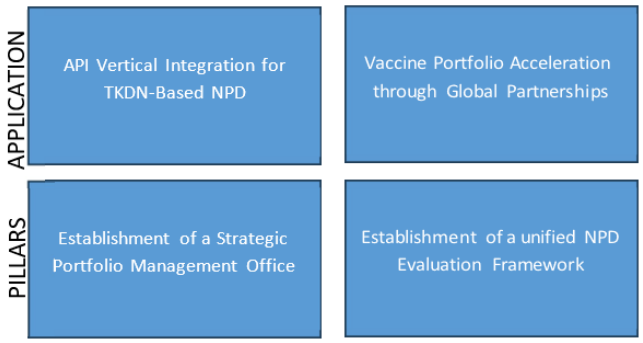

Figure 7. Business Solutions

9. Implementation Plan & Justification

The implementation plan for the proposed strategic solutions is structured using a 5W + 1H framework and is executed through two structural pillars and two practical applications. The first pillar involves establishing the Strategic Portfolio Management Office (SPMO), which will consist of a core team at the Bio Farma Holding level—

chaired by the Director of Business Development and supported by cross-functional leaders—and subsidiary-level Project Management Offices (PMOs) within each operational company. This structure is designed to centralize strategic governance while preserving operational autonomy, aligning with the ambidextrous organization model for balancing exploration and exploitation. The SPMO will be physically located at the Holding office, with PMOs housed in subsidiary corporate offices. Implementation will be phased over 12 months, beginning with charter approval and role definition (Months 1-2), followed by team recruitment and template creation (Months 3-4), establishment of a Portfolio Review Board (Months 5-6), alignment and training with subsidiaries (Months 7-9), and culminating in full operationalization and the first quarterly review cycle (Months 10-12). Key actions include drafting a formal NPD Governance Charter, redesigning approval flows, integrating subsidiary business development teams into a central strategic funnel, enforcing standardized scoring and "kill rules," and publishing quarterly portfolio dashboards to the Holding Board.

The second pillar is the implementation of the standardized NPD Evaluation Framework, owned and designed by the SPMO with input from PMOs and functional departments, to be used across all subsidiaries and consolidated at the Holding. Its rollout is scheduled over 7 months, starting with framework design and piloting (Months 1-3), full rollout and training (Months 4-6), and mandatory integration into all idea submissions and stage-gate processes from Month 7 onward. The two practical applications leverage this new governance. First, API Vertical Integration for TKDN-Based NPD will be executed by PT Kimia Farma Sungwun Pharmacopia (API development), subsidiary R&D teams (finished-dose development), the SPMO (portfolio prioritization), and PMOs (project monitoring), with the Ministry of Health as an observer. The multi-year plan begins with molecule identification (Months 1-2), followed by API development (1 year), finished-dose development (3 years), and commercial partnerships (starting Year 4). Second, Vaccine Portfolio Acceleration through Global Partnerships will involve Bio Farma (Persero), global technology-transfer partners, the SPMO (governance), PMOs (execution), and BPOM (regulatory alignment). Implementation involves using the SPMO scoring to prioritize vaccine projects, negotiating staged technology-transfer agreements, and deploying PMOs to manage the transfer process and regulatory pathways.

CONCLUSION AND RECOMMENDATION

Conclusion

This study aimed to diagnose the underperformance of Indonesia's pharmaceutical State-Owned Enterprises (SOEs) within the JKN policy environment and to design a strategic remedy. The first key conclusion is that high-performing private local and multinational corporations (MNCs) share a common, effective approach to portfolio management, characterized by disciplined Stage-Gate governance, cross-functional evaluation, and a balanced consideration of all new product development (NPD) factors—including strategic opportunities like intellectual property (IP) protection—rather than a narrow focus on external pressures.

Second, benchmarking and analysis reveal definitive strategic and governance gaps within SOEs. While SOEs are hyper-responsive to external pressures such as competition, pipeline pressure, and e-catalogue pricing, they exhibit significant weaknesses in internal governance, including strategic fit, decision-process clarity, R&D capability, and cost governance. A VRIO analysis confirms that SOEs possess valuable and rare resources—like vertical integration, policy proximity, and state-backed capital—but lack the organizational systems to convert these into a sustainable competitive advantage. The TOWS synthesis further demonstrates that internal weaknesses, such as centralized decision-making and fragmented subsidiaries, render SOEs vulnerable to JKN price pressure and regulatory uncertainty, resulting in uncompetitive portfolios and financial losses.

The third and fundamental conclusion is that the root cause of SOE underperformance is internal strategic disorganization, not external disadvantage. Their portfolios are driven by compliance and ad-hoc opportunities rather than structured, evidence-based evaluation, making governance maturity the critical missing link. Consequently, the proposed solutions—a Strategic Portfolio Management Office (SPMO) and a unified NPD Evaluation Framework—are designed to directly address this capability gap by instituting transparent, disciplined governance for portfolio decisions. The accompanying practical applications, focusing on API vertical integration and vaccine portfolio acceleration, illustrate how these structural reforms can generate tangible value aligned with national health priorities. Ultimately, transforming NPD portfolio management is the most feasible path for SOEs to regain competitiveness, though this must be part of a broader improvement in overall governance integrity and leadership.

Recommendations

Based on the findings and implementation roadmap, several practical recommendations are proposed for Bio Farma Holding and its subsidiaries. First, the Holding should formally establish the Strategic Portfolio Management

Office (SPMO) as the central governance backbone for New Product Development (NPD) decision-making, supported by subsidiary-level Project Management Offices (PMOs) to ensure strategic coherence and operational agility. Second, the Holding must institutionalize a unified NPD Evaluation Framework to replace subjective selection, prioritizing factors like time-to-market and sales forecast potential alongside transparent cost and pricing feasibility assessments to build resilience against JKN margin pressure and competition. Third, the Holding should strategically leverage its unique resources by prioritizing API vertical integration, utilizing Kimia Farma Sungwun Pharmacopia to develop APIs aligned with the Ministry of Health's TKDN roadmap for subsequent finished-dose development and commercial partnerships, and by accelerating its vaccine portfolio through structured global technology-transfer agreements.

Furthermore, SOEs must proactively invest in rebuilding public and industry trust by strengthening internal governance, enforcing subsidiary integration, and demonstrating consistent quality and transparency, which is essential for future collaborations and license-out strategies. For future academic research, two areas warrant deeper investigation: the quantitative measurement of portfolio returns and risks under JKN price caps, and organizational behavior studies exploring incentive alignment and decision biases within public-sector pharmaceutical firms. Collectively, these recommendations provide a coherent pathway to transform Indonesia's pharmaceutical SOEs from compliance-driven entities into capability-driven competitors, contributing to national pharmaceutical independence and long-term industry resilience. This study offers a structured framework for understanding and improving NPD portfolio management, with the hope that its insights will inform managerial decisions and encourage further research toward a more innovative and sustainable pharmaceutical ecosystem.

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