

# Formulation of Business Strategy Utilizing Environmental Analysis and Business Model to Enhance Fully Burden Operating Income (FBOI) Case Study at PT Z Indonesia

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## Abstract

A business strategy represents a company's comprehensive plan for attaining its projected business objectives within a defined timeframe. A critical performance indicator for a business unit is the achievement of its targeted profitability growth rate. A static or decreasing profitability rate is affected by multiple interconnected factors intrinsic to the business unit. Environmental and business model analyses furnish a holistic perspective of the business unit, facilitating the identification of business processes that can be optimized. This research aims to formulate an effective business strategy to enhance Fully Burden Operating Income (FBOI) case study at PT Z, a company in the oil field industry. A qualitative method with a case study approach is employed, involving Internal and external environmental analyses are conducted using the Resource-Based View framework, Value Chain Analysis, PESTEL, and Porter's Five Forces. The results of these analyses are integrated into a SWOT/TOWS Matrix to develop strategies. Furthermore, Root Cause Analysis is integrated to identify the underlying issues hindering optimal FBOI performance within PT Z's business model. The TOWS matrix generated 40 strategies that were then combined, integrated and synthesized into 16 key strategies, then it is prioritized by priority. Those of strategies mainly focus on improvements to process efficiency and revenue enhancement, with the expected outcome of enhancing PT Z's profitability and maintaining the position as market leader within its industry. This research offers strategic business recommendations that are both comprehensive and practically applicable, with significant implications for fostering sustainable growth within the company.

Keyword: Strategy, FBOI, Environmental analysis, Business Model

## I. Introduction

PT Z is as a multinational company within the oil field services industry and is recognized as one of the world's leading oil field services companies. Despite its status as a market leader in Indonesia, particularly in upstream well completions business, PT Z faces ongoing challenges in enhancing its profitability, as indicated by its fully burdened operating income (FBOI). The trend analysis indicated that there is no always linear relationship between growth in revenue and profitability.

A closer look at company performance data between 2019 and 2023 reveals a compelling insight, revenue growth does not guarantee increased profitability. For instance, while revenue increased in 2023, the FBOI percentage actually declined, a sharply contrast to 2022, where a marginal revenue increase of 0.3 percent correlated with a significant rise in FBOI. Furthermore, the revenue data from 2019 and 2020, which surpassed that of 2021 and 2022, yielded lower FBOI percentages. These insights strongly suggest that company profitability is influenced by factors beyond simple revenue fluctuations.

FBOI represents operating income after deducting all associated operating expenses. This financial metric measurement reflects the profitability of a given business unit in a larger organization. FBOI provides the overall picture of the profitability from a business unit within corporation, which includes all the costs related to the business unit operation. Initial research identifies where factors such as operational costs, resource utilization, and inefficient operation processes and scheduling within the existing business model potential to be optimized. According to (Wheelen & Hunger, 2015), to analyse a company is greatly assisted by studying the business model that the company is currently running. (Teece, 2010) formulates that a

business model describes the rationale of how an organization creates, delivers, and captures value, and according to (Mitchell & Coles, 2004), a business model includes choices of offerings, strategy, infrastructure, organizational structure, trading practices, as well as operational processes and policies used by businesses to generate revenue. (Pasaribu, R et al., 2023) mention innovations within business models have a significant positive impact on competitive advantage and performance.

The observed inefficiencies in business processes at PT Z, particularly profitability improvement, is a clear indication that there are gaps in the efficiency of its business model for the company. In addition, focus should be given to the review and improvement of existing business model to retain and gain new market share, while simultaneously ensuring adequate level of profitability within the business model. Considering that the external environment has a substantial role in determining developments in the oil field services industry, a comprehensive review of the company's strategic direction should be conducted with reference to both internal and external environmental analyses. This requirement emphasizes the need for further research to make possible the characterization of business process optimization, as well as the improvement of operational aspects of the business operations with potential for optimization or inefficient, thus moving towards the construction of an effective and competitive business model.

To address these issues, this research aims to explore the following research questions.

- a. What is the existing business model of PT Z, particularly in light of its challenges in enhancing profitability?
- b. What are findings of the SWOT analysis based on the BMC blocks and which segments can be optimized?
- c. How does environment analysis affect the business model at present?
- d. What are the alternative competitive strategies from the TOWS matrix, pairing off root cause analysis findings?
- e. What is the new BMC (and strategic priorities which can be actioned)?

## **II. Material and Methods**

### **2.1 Literature Review**

#### **1. Strategic Management**

Strategic management consists of the full range of managerial decisions and actions towards the formulation and implementation of strategies designed to achieve organizational goals. (David, 2017). According to (Wheelen & Hunger, 2015) Strategic management is defined as a comprehensive and integrated set of managerial decisions and actions designed to determine an organization's long-term performance. Base on strategy hierarchy the type of strategy addresses three types of strategy: corporate, business, and functional. The unit analysis from the research is business strategy.

#### **2. Business Model Canvas**

The business model canvas introduced by Alexander Osterwalder (Osterwalder & Pigneur, 2010) serves as a tool for both developing new business models and documenting existing ones. As a strategic management tool, the BMC translates a company's concepts, customers, infrastructure, and finances into visual elements for easier comprehension. Its ability to visualize the business model holistically facilitates the identification of issues and the development of solutions in operational management by providing a platform to comprehensively analyze all aspects of the organization.

#### **3. RCA**

Root cause analysis is systematic approach to identifying the underlying causes of problems or events.

#### **4. The Resource-Based View**

The Resource-Based View RBV (David, 2017) contends that a firm's internal resources, encompassing their composition, type, quantity, and attributes, are the most important elements in developing strategies that would result in an effective sustainable competitive advantage. The resource-based view in strategic management is characterized by the development of the unique resources and capabilities of a firm, the efficient use, sustained exploitation, and development of these resources and capabilities over time. From this perspective, the search for strategies that are unique and hard to imitate will generate a substantial advantage that is hard for competitors to imitate and reproduce (thus leading to a sustainable competitive position).

#### **5. Value Chain Analysis**

A systematic analysis of value chain activities helps to highlight a company's strengths and weaknesses. According to Porter, variations in competitors' value chains are a primary source of competitive advantage (Wheelen & Hunger, 2015).

#### 6. Porter's five forces

(Porter, 1980) The purpose of competitive strategy within a business unit is to secure a position within its industry where the company can most effectively defend against competitive forces or influence them to its advantage.

#### 7. PESTEL

External analysis to assess the external macro-environmental factors that can impact an organization.

#### 8. SWOT/TOWS matrix

The SWOT matrix is a strategic planning tool used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a project or business venture. According to (David, 2017), The effectiveness of a SWOT matrix is largely determined by the accuracy of the analysis of internal and external factors, along with the capability of managers to identify the most appropriate strategies.

## 2.2 Research Framework

The initial phase involves identifying issues at PT Z through direct observation and internal data collection, supported by literature reviews of previous research. This portrays the current business model, enhanced by interviews or FGDs with stakeholders. Subsequently, a root cause analysis is conducted to identify and eliminate underlying causes, enabling targeted strategies. An environmental analysis, using PESTEL and Porter's Five Forces for external factors and VRIO and value chain analysis for internal factors, identifies strengths, weaknesses, threats, and opportunities, summarized in a SWOT matrix. The objective is to formulate and prioritize strategies that expected to significantly improve performance, especially profitability. Prioritization is crucial due to the multitude of possible actions, requiring strategic experts to select the most compelling alternatives by evaluating advantages, disadvantages, trade-offs, costs, and benefits. The prioritized strategies are then translated into actionable business strategy recommendations, integrated into a revised Business Model Canvas to enhance PT Z's competitiveness.

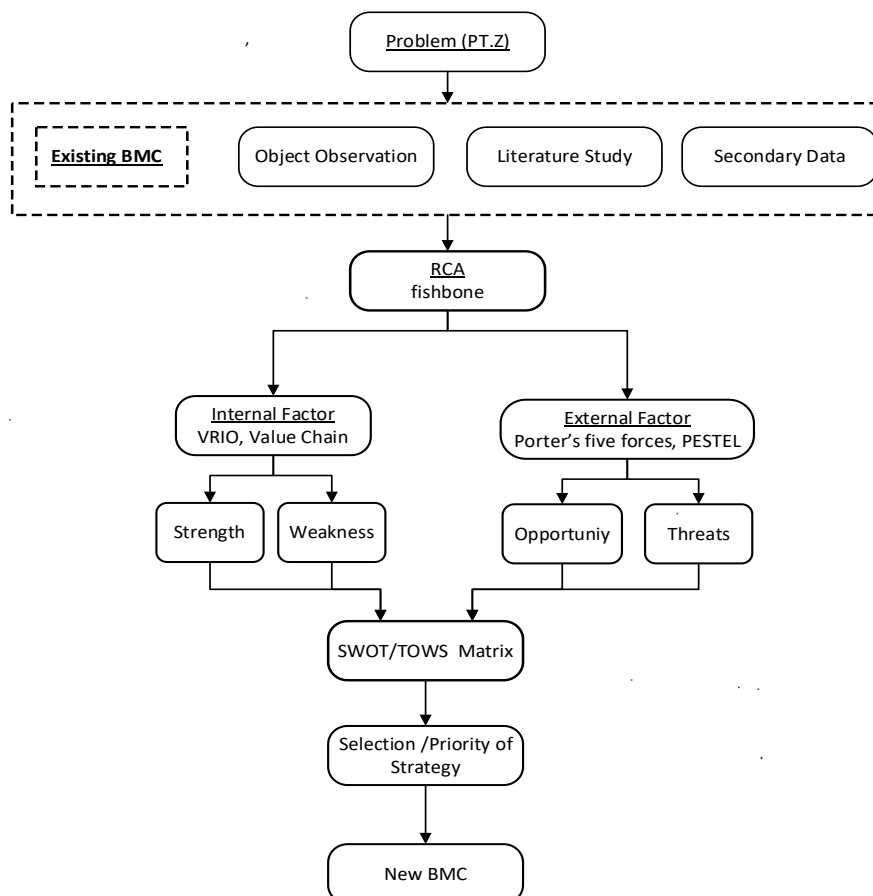


Figure-1: Research Framework

## 2.3 Research Method

This research employs a qualitative methodology, focusing on an in-depth understanding of social phenomena through exploration and interpretation, with the object remaining unchanged by the researcher's presence, allowing clear problem identification. Interviews conducted until data saturation is reached. It got sample of eight company leadership, including representatives from business development leadership, operation leadership, engineering leadership, and tender & contract leadership. The data obtained from these interviews underwent a validation and reduction process using source triangulation, which involved comparing the information gathered from the interviews with other data sources, such as company documents and field observations, to ensure data validity. Data validity in research refers to the standards of truthfulness and quality of data, reflecting the extent to which the data are accurate, reliable, and appropriate for the phenomenon or variables being studied.

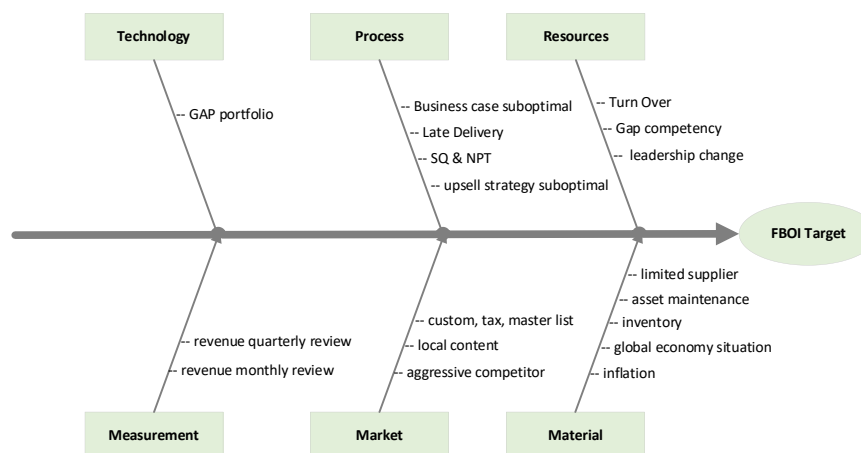
## III. Results

This process results in condensed data, which are then presented and integrated into the individual blocks of the Business Model Canvas. The current business model is identified to provide answers to the research questions (a).

**Table 1: Existing BMC of PT Z**

Business Model Canvas PT Z		Designed for: PT Z	Designed by: Anton Hutahaeen	Date: 29 Mar 2025	Version: 0.1
Key Partnerships	Key Activities	Value Propositions	Customer Relationships	Customer Segments	
1. Local distributor 2. Inspector company 3. Logistics and transport company 4. Hotel 5. Machining / fabrication company 6. Vendor etc.	The sale of goods and services encompasses the following activities: 1. Field preparation and Execution 2. Equipment resources & deliverable, (Consumable, sales items, Capital, service tools) 3. Business development activities, such as sales, relationship management, and tender processes.	1. Engineering solution 2. Technical expertise 3. Service quality	1. Delivering goods and services with a service quality that meets customer expectations.  2. Providing value to customers through competitive pricing and technology.	1. Targeting all oil operators, ranging from those focused on high technology and medium technology to cost-driven customers.  2. Targeting all geothermal operators although limited supply product and services.	
	Key Resources		Channels		
	1. Manufacturing team 2. Technology team 3. Country resources including BD and Ops 4. Support functions such as HR, legal, finance, SQ, logistics.		1. Direct sales 2. Local agent Customer outreach and communication facilitated through the Business Development team via direct engagement methods, including participation in exhibitions, golf tournaments, academic institutions, published papers, digital platforms and perform technology day.		
Cost Structure			Revenue Stream		
1. COGS, 2. Fix Cost (salary, depreciation, rental, facility cost, insurance, IT, indirect cost) 3. Variable cost (overtime, customs & duties, agent fee, freight, travel & entertainment, material, repair, material supply, personal expenses)			1. Product sales 2. Services 3. Rental 4. Facility storage 5. Software simulation		

Therefore, a problem identification process is conducted to analyse the root causes, specifically addressing "the failure to achieve the profit targets set by the corporation for PT Z, as measured by FBOI annually." This analysis focuses on PT Z's current business model. Data sources were obtained from interviews, observations, and company data, followed by member checking to validate the findings.



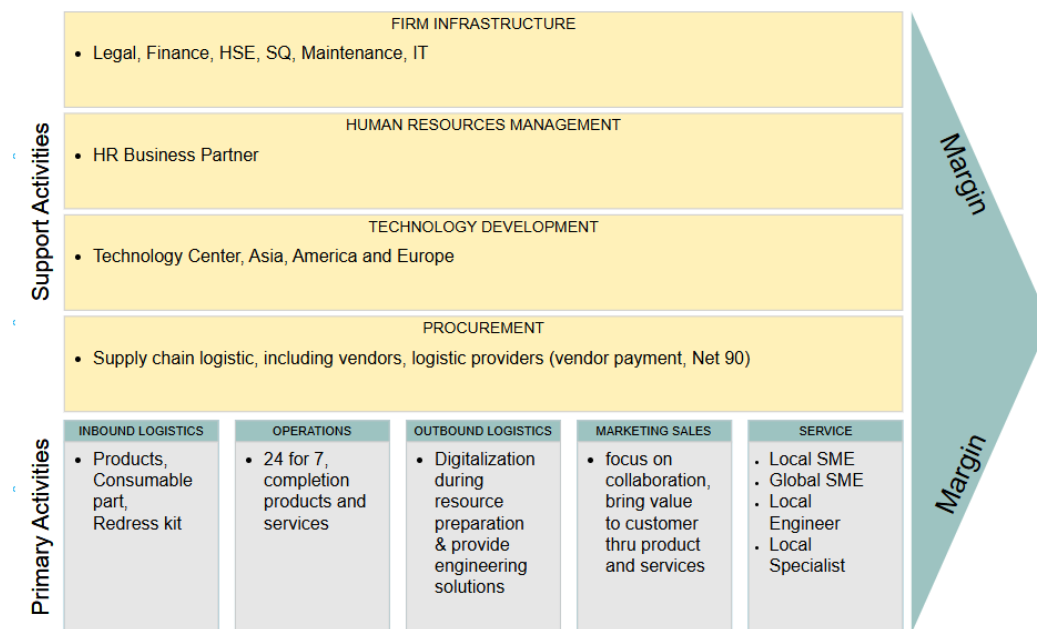
**Figure-2: Fishbone RCA**

Following the visualization of PT Z's business model via the Business Model Canvas and the subsequent identification of existing issues, the subsequent phase involves an environment analysis aimed at pinpointing applicable internal and external determinants. These analyses provide answers to the research questions (c).

**Table 2: VRIO framework PT Z**

Resources/Capability	V	R	I	O	Implications
Support for technology & innovation	Y	Y	Y	Y	sustained competitive advantage
Global support & system	Y	Y	Y	Y	sustained competitive advantage
Software & simulation	Y	Y	Y	Y	sustained competitive advantage
Facility in country	Y	N	N	Y	competitive parity
Competency & experience Personnel	Y	N	N	Y	competitive parity
Product portfolio	Y	Y	N	Y	temporary competitive Advantage
Product customization	Y	N	N	Y	competitive parity
Compliance with International standard	Y	Y	N	Y	temporary competitive advantage
Compliance with specific validation	Y	Y	N	Y	temporary competitive advantage
Experience and track record	Y	N	N	Y	competitive parity
Customer relationship	Y	N	N	Y	competitive parity
Operational efficiency	Y	N	N	Y	competitive parity
Control Point	Y	N	N	Y	competitive parity

Leveraging the VRIO framework, PT Z possesses resources and capabilities, notably in innovation, technology support, global support systems, and software and simulations, which afford a sustained competitive advantage. Capitalizing on these strengths is crucial for reinforcing its business model and fostering profit growth. However, the company exhibits competitive parity and transient competitive advantages in certain areas. Consequently, PT Z should focus on bolstering its competitive strengths to maintain market leadership.



**Figure-3: Value chain analysis PT Z**

A deep understanding of the value chain enables firms to identify areas with the potential for enhanced efficiency and cost reduction, while simultaneously maintaining the differentiation of their products or services.

**Table 3: IFE**

<i>Key Internal Factors</i>	<i>Weight</i>	<i>Rating</i>	<i>Weighted score</i>
<b>Strength</b>			
The company's portfolio has the capacity to reach all customer segments, from those focused on cost driven solutions to those requiring high technology within the oil and gas industry.	0.09	4	0.36
The value proposition is aligned with customer needs and expectations.	0.09	4	0.36
The company possesses an effective distribution channel, focusing on the value of its products.	0.06	3	0.18
Customer experience is distinguished by its service quality, product reliability, and its integrity in business practices.	0.09	4	0.36
Market leader for completion in country	0.08	4	0.32
Diversification thru CCS market	0.06	3	0.18
company possesses resources that are challenging for competitors to replicate.	0.07	4	0.28
Digitalization in prepare resources	0.05	3	0.15
The company employs control points to ensure the proper execution of processes	0.06	3	0.18
Local agent support market expansion	0.05	3	0.15
The cost structure demonstrates considerable efficiency throughout the business processes.	0.05	3	0.15
<b>Weakness</b>			
Limited product in some market segment such as geothermal, intervention	0.04	1	0.04
The organizational structure tends to be larger compared to its competitors, which is necessary to effectively deliver the value proposition to customers	0.02	2	0.04
The communication channels do not yet fully accommodate the preferences of certain operators.	0.02	2	0.04
Customer has mindset of competitor	0.03	1	0.03
Majority market share based on standard product which are easily substituted, leading to minimal profit margins	0.04	1	0.04
The substantial organizational structure contributes to increased direct and indirect costs.	0.02	2	0.04
Free of charge for new engineer	0.02	2	0.04
Limited partnership results due to limited competency, and increased local content	0.03	2	0.06
operational costs are elevated due to the continued reliance on expatriate personnel in specific projects, particularly those in deep-water environments, and the presence of Cost of Poor Quality	0.03	2	0.06
<b>Total</b>	<b>3.06</b>		

The Internal Factor Evaluation matrix is a strategic tool employed to aid in the formulation of strategies by providing a concise yet comprehensive assessment of a company's internal environment. Specifically, the IFE matrix enables an understanding of PT Z's position in relation to its internal resources and capabilities, which is crucial for the development of realistic and effective strategies.

External environmental analysis involves the identification and evaluation of factors external to the organization that may have an impact on its performance and success. The purpose of this analysis is to understand the opportunities and threats that may arise from the external environment, enabling an organization to formulate appropriate strategies to address them. An organization's ability to identify and respond to environmental changes, even before competition begins, is the starting point for competitive advantage (Wheelen & Hunger, 2015).



**Table 4: Industry forces affected business model.**

Porter's five forces	affected business model
Threat of New Entrants	low to medium
Threat of Substitutes	low
Power of Supplier	low
Power of Buyers	high
Competitive Rivalry	medium

**Table 5: PESTEL analysis**

Politic	Economic	Social	Technology	Environmental	Legal
*heavily regulated by government.	*volatility price base on demand and supply	* green energy awareness in society *affordable energy still become preferences in society nowadays	* tech in oil and gas reduce capex *tech in electric vehicle reduce demand of fossil fuel	*net zero emission carbon *renewable energy	*regulatory overlap between minister, or between central and region authority *local content *import

**Table 6: EFE**

Key External Factors	Weight	Rating	Weighted score
<b>Opportunity</b>			
Indonesian government aim to achieve a production level of 1 million barrels of oil per day by 2030.	0.09	4	0.36
Indonesia economic growth 5-6 % increasing demand for energy, which is primarily still sourced from fossil fuels.	0.09	4	0.36
Net zero emissions from international operator and government open market in CCUS	0.08	4	0.32
The advancement of digitalization is propelling the evolution of electric completion technology.	0.07	3	0.21
Oil and gas are categorized as vital national assets protected by the government	0.06	3	0.18
Production sharing contract scheme reduces upstream oil and gas investment risk for operators.	0.05	3	0.15
Stringent regulations concerning workplace safety and quality standards reinforce the value proposition.	0.05	3	0.15
Large investments and specific technologies present barriers to new entry	0.06	3	0.18
High switching cost due to dependence of fossil fuels.	0.06	3	0.18
Not much dependence of supplier	0.06	3	0.16
The cost structure tends to be similar for major players, intensifying competition in business strategies.	0.05	3	0.15
<b>Threat</b>			
Local content regulation	0.05	2	0.1
Energy transition to renewable energy	0.02	1	0.02
Legal overlaps exist between central and regional jurisdictions.	0.02	1	0.02
Intense competition, particularly in general completion work, poses a challenge to achieving substantial profit margins.	0.04	2	0.08
The tendency of operators to persistently exert downward pressure on prices is influenced by the abundance of original equipment manufacturers capable of fulfilling their requirements.	0.04	3	0.12

The market's significantly influenced by consumer purchasing power	0.05	1	0.05
A deceleration in the global economy coupled with tariff disputes may precipitate a reduction in energy demand	0.02	1	0.02
Unstable internet bandwidth in Indonesia often disrupts connectivity	0.02	1	0.02
Adoption of electric vehicle technology tends to decrease the demand for fossil fuels.	0.02	1	0.02
Total	2.85		

Following internal and external analyses, the strengths, weaknesses, opportunities, and threats are identified for each segment of the business model. Subsequently, a SWOT/TOWS matrix is constructed to develop strategies aimed at enhancing PT Z's business model.

**Table 7: Sample SWOT/TOWS matrix for Customer Segment block**

S	W	O	T
<p>The existing portfolio has the potential to cater to all customer segments.</p> <p>Becoming a preference for operators, particularly for general completion services.</p> <p>Focusing on and creating a market for carbon capture and storage.</p>	<p>The portfolio's limitations especially in the geothermal and certain segments, such as interventions.</p>	<p>Government regulation for oil and gas production.</p> <p>economic growth in Indonesia.</p> <p>The clean energy trend is driving the CCS and electric completion market.</p>	<p>The trend towards divesting from fossil fuels.</p> <p>Current tariff disputes.</p> <p>Frequent regulatory changes in Indonesia</p>
<b>TOWS matrix:</b>			
<p><b>SO strategy (Strengths - Opportunities):</b></p> <p>SO: The company can strategically leverage its extensive portfolio, proven performance history, and engagement in the Carbon Capture and Storage market to target new operators in response to increased market activity.</p> <p><b>ST strategy (Strengths - Threats):</b></p> <p>ST: The strategic utilization of portfolio advantages to stay for sustaining market share, particularly in response to the volatility and regulatory transformations affecting the fossil fuel sector, compounded by ongoing tariff conflicts and evolving energy policies.</p> <p><b>WO strategy (Weaknesses - Opportunities):</b></p> <p>WO: Establishing a strategic team to analyse market needs and portfolio gaps is crucial for identifying opportunities for new product innovations.</p> <p><b>WT strategy (Weaknesses - Threats):</b></p> <p>WT: Conducting market research to identify unmet market needs</p>			

subsequently, a SWOT/TOWS matrix is created for all blog segments of the business model canvas, resulting the following table 8, and table 9.



**Table 8: Synthesis of Matrix TOWS 40-Strategy**

<div> <div>Internal Factor Analysis Summary (IFAS)</div> <div>External Factor Analysis Summary (EFAS)</div> </div>	STRENGTHS (S)	WEAKNESS (W)
	<p>Internal strength factors:</p> <ol style="list-style-type: none"> <li>1. Customer segments (3 strengths)</li> <li>2. Value propositions (3 strengths)</li> <li>3. Channels (1 strength)</li> <li>4. Customer relationship (3 strengths)</li> <li>5. Revenue streams (2 strengths)</li> <li>6. Key resources (3 strengths)</li> <li>7. Key activities (3 strengths)</li> <li>8. Key partnerships (1 strength)</li> <li>9. Cost structure (1 strength)</li> </ol>	<p>Internal weakness factors:</p> <ol style="list-style-type: none"> <li>1. Customer segments (1 weaknesses)</li> <li>2. Value propositions (1 weaknesses)</li> <li>3. Channels (1 weaknesses)</li> <li>4. Customer relationship (1 weaknesses)</li> <li>5. Revenue streams (1 weaknesses)</li> <li>6. Key resources (4 weaknesses)</li> <li>7. Key activities (4 weaknesses)</li> <li>8. Key partnerships (3 weaknesses)</li> <li>9. Cost structure (3 weaknesses)</li> </ol>
<p>OPPORTUNITIES (O)</p> <p>External opportunity factors:</p> <ol style="list-style-type: none"> <li>1. Customer segments (3 opportunities)</li> <li>2. Value propositions (1 opportunity)</li> <li>3. Channels (1 opportunity)</li> <li>4. Customer relationships (2 opportunities)</li> <li>5. Revenue streams (1 opportunity)</li> <li>6. Key resources (2 opportunities)</li> <li>7. Key activities (2 opportunities)</li> <li>8. Key partnerships (2 opportunities)</li> <li>9. Cost structures (3 opportunities)</li> </ol>	<p>STRATEGY (SO)</p> <ol style="list-style-type: none"> <li>1. Customer segments: SO: The company can strategically leverage its extensive portfolio, proven performance history, and engagement in the Carbon Capture and Storage market to target new operators in response to increased market activity.</li> <li>2. Value propositions: SO: Implement value propositions to furnish distinct value that is challenging for competitors to either replicate or substitute, thereby establishing a competitive advantage.</li> <li>3. Channels: SO: Expand sales and distribution channels to capitalize on existing market momentum, ensuring comprehensive market coverage.</li> <li>4. Customer relationships: SO: Maintain and enhance customer loyalty by consistently meeting expectations in project delivery.</li> <li>5. Revenue streams: SO: Preserve the current market share with expanding into emerging markets like CCS and E-completion to generate new revenue streams.</li> <li>6. Key Resources: SO: Leverage global support and emerging market opportunities to accelerate research and development in environmentally friendly products. Utilize unique differentiators to enhance customer value, enabling superior pricing structures and increased profit margins.</li> <li>7. Key activities: SO: Utilize global support to boost sales and services in growing potential markets.</li> <li>8. Key partnerships: SO: Leverage existing local partnerships to expedite market penetration and increase local content, as well as identify portfolio gaps and address them through collaborations at the corporate level.</li> <li>9. Cost Structure: SO: Develop and expand a cost-effective portfolio and optimize the cost structure by evaluating potentially optimizable costs such as accommodation, freight, transportation, and others.</li> </ol>	<p>STRATEGY (WO)</p> <ol style="list-style-type: none"> <li>1. Customer segments: WO: Establishing a strategic team to analyze market needs and portfolio gaps is crucial for identifying opportunities for new product innovations.</li> <li>2. Value propositions: WO: Simplify processes and restructure organization to deliver value propositions efficient and effective</li> <li>3. Channels: WO: Develop more inclusive distribution channels to reach diverse operator preferences.</li> <li>4. Customer relationships: WO: Shift customer mindset through pursuit, collaboration, and innovation.</li> <li>5. Revenue streams: WO: increasing added value thru re-engineering for standard product so become cost-effectively.</li> <li>6. Key resources: WO: (1) Streamline processes to optimize organization and resource utilization, reducing operational costs (2) Assess the necessity of adding head count to bridge existing operational gaps</li> <li>7. Key activities: WO: (1) Negotiate with operator for engineer (&lt;3 years) with good competency able to charge for services revenue (2) Improve suboptimal activities like business case development, asset maintenance, and inventory management to boost efficiency, cut costs, and seize opportunities from increased market activity.</li> <li>8. Key partnerships: WO: Seek new partners to fill portfolio gaps, reduce supplier dependence, and provide training and competency development for partners to aggressively penetrate the market and increase target market.</li> <li>9. Cost structure: WO: Enhancing the expertise of the local workforce to mitigate reliance on expatriate personnel can lead to a reduction in operational expenditures.</li> </ol>
<p>THREATS (T)</p> <p>External threats factors:</p> <ol style="list-style-type: none"> <li>1. Customer segments (3 threats)</li> <li>2. Value propositions (2 threats)</li> <li>3. Channels (4 threats)</li> <li>4. Customer relationship (1 threat)</li> <li>5. Revenue streams (1 threat)</li> <li>6. Key resources (1 threat)</li> <li>7. Key activities (2 threats)</li> <li>8. Key partnerships (2 threats)</li> <li>9. Cost structure (2 threats)</li> </ol>	<p>STRATEGY (ST)</p> <ol style="list-style-type: none"> <li>1. Customer segments: ST: The strategic utilization of portfolio advantages to stay for sustaining market share, particularly in response to the volatility and regulatory transformations affecting the fossil fuel sector, compounded by ongoing tariff conflicts and evolving energy policies.</li> <li>2. Value propositions: ST: Conduct a review of value propositions to ensure they remain relevant to market needs and customer demands, thereby consistently delivering value to customers.</li> <li>3. Channels: ST: Strengthen existing sales and communication channels, emphasizing the value provided by the products to counter competitor aggressiveness, and leverage distribution channel strengths to address product substitutes.</li> <li>4. Customer relationships: ST: Maintain customer relationships by demonstrating a strong track record and consistently delivering work that meets customer expectations.</li> <li>5. Revenue Streams: ST: Sustain market share by consistently maintaining service quality, providing value-added innovations, and strong customer relationships.</li> <li>6. Key resources: ST: Evaluate key resources against competitors to continuously identify differentiators and maintain a competitive edge.</li> <li>7. Key activities: ST: Leverage global resources to introduce portfolios lacking experience in country and capitalize on collaborative opportunities with operators through strategically aligned corporate initiatives</li> <li>8. Key partnerships: ST: Conduct thorough due diligence before entering partnerships to mitigate conflicts and evaluate partner performance against set targets.</li> <li>9. Cost structure: ST: Utilize an efficient cost structure as a competitive advantage against new entrants and to enhance profitability</li> </ol>	<p>STRATEGY (WT)</p> <ol style="list-style-type: none"> <li>1. Customer segments: WT: Conducting market research to identify unmet market needs.</li> <li>2. Value propositions: WT: Restructure the organization to ensure the value proposition offered remains relevant and can be a competitive advantage in the market.</li> <li>3. Channels: WT: Address bandwidth issues and collaborate with regulators to improve connectivity and business efficiency.</li> <li>4. Customer relationship: WT: Conduct technology sessions, inviting customers to visit technology and manufacturing facilities.</li> <li>5. Revenue streams: WT: Seek market opportunities in uncommon products, collaborate with customers to discover potential products that provide value.</li> <li>6. Key resources: WT: (1) Implement continuous improvement to increase efficiency in order to compete with competitors. (2) Enhancing career succession planning is crucial for cultivating leadership talent and mitigating employee turnover.</li> <li>7. Key activities: WT: (1) Enhance the competence of young engineers and transfer knowledge through strong global support. (2) Improve in business case development, asset maintenance procedure, and inventory management practices, those are crucial to mitigate the adverse effects stemming from the limited of experienced labour.</li> <li>8. Key partnerships: WT: Conduct risk assessments and rigorous evaluations of partners to identify and address potential issues before conflicts arise.</li> <li>9. Cost structure: WT: Diversify services and markets, creating new markets to reduce risks from new entrants and adapt to regulatory changes.</li> </ol>

**Table 9: Paraphrase and synthesis strategy**

40 Strategy on BMC block		Strategy
Customer Segment		
SO	The company can strategically leverage its extensive portfolio, proven performance history, and engagement in the Carbon Capture and Storage market to target new operators in response to increased market activity.	1. Keep market growth consistent by using the portfolio's strengths to reach all operators and tap into new markets in CCS (7)
ST	The strategic utilization of portfolio advantages to stay for sustaining market share, particularly in response to the volatility and regulatory transformations affecting the fossil fuel sector, compounded by ongoing tariff conflicts and evolving energy policies.	
WO	Establishing a strategic team to analyze market needs and portfolio gaps is crucial for identifying opportunities for new product innovations.	2. Innovate through market research: Build a team to analyze market needs and tech gaps, so get what new technology is needed.
WT	Conducting market research to identify unmet market needs	
Value Proposition		
SO	Implement value propositions to furnish distinct value that is challenging for competitors to either replicate or substitute, thereby establishing a competitive advantage.	3. Strengthen and ensure the value proposition remains relevant. (6)
ST	Conduct a review of value propositions to ensure they remain relevant to market needs and customer demands, thereby consistently delivering value to customers.	
WO	Simplify processes and restructure organization to deliver value propositions efficient and effective	4. Implement organizational restructuring and efficiency enhancements. (11)
WT	Restructure the organization to ensure the value proposition offered remains relevant and can be a competitive advantage in the market	
Channels		
SO	Expand sales and distribution channels to capitalize on existing market momentum, ensuring comprehensive market coverage.	5. Implement expansion, optimization, and refinement of distribution channels, encompassing the augmentation of existing channels and ensuring their effective operation.
ST	Strengthen existing sales and communication channels, emphasizing the value provided by the products to counter competitor aggressiveness, and leverage distribution channel strengths to address product substitutes.	
WO	Develop more inclusive distribution channels to reach diverse operator preferences.	
WT	Address bandwidth issues and collaborate with regulators to improve connectivity and business efficiency.	
Customer Relationships		
SO	Maintain and enhance customer loyalty by consistently meeting expectations in project delivery.	6. Sustaining and enhancing existing customer loyalty through a focus on service quality and safety. (3)
ST	Maintain customer relationships by demonstrating a strong track record and consistently delivering work that meets customer expectations.	
WO	Shift customer mindset through pursuit, collaboration, and innovation.	7. Focusing on pursuit, collaboration, and technology to reach new customers enhances the perception that PT Z is a reliable business partner. (1)
WT	Conduct technology sessions, inviting customers to visit technology and manufacturing facilities.	
Revenue Streams		
SO	Preserve the current market share with expanding into emerging markets like CCS and E-completion to generate new revenue streams.	8. Maintain a leading market share while simultaneously pursuing diversification into novel market segments. (9)(10)
ST	Sustain market share by consistently maintaining service quality, providing value-added innovations, and strong customer relationships.	
WO	Increasing added value thru re-engineering for standard product so become cost-effectively.	9. Enhance innovation and engineering capabilities, focusing on ensuring that product offerings consistently deliver value to customers. (8)(10)
WT	Seek market opportunities in uncommon products, collaborate with customers to discover potential products that provide value.	
Key Resources		
SO	Leverage global support and emerging market opportunities to accelerate research and development in environmentally friendly products. Utilize unique differentiators to enhance customer value, enabling superior pricing structures and increased profit margins.	10. Leveraging product differentiation strategies to enhance market positioning and competitive advantage. (8)(9)
ST	Evaluate key resources against competitors to continuously identify differentiators and maintain a competitive edge.	
WO	(1) Streamline processes to optimize organization and resource utilization, reducing operational costs	11. Enhance the efficiency of operational resources, focusing on improvement and efficiency (4)
	(2) Assess the necessity of adding head count to bridge existing operational gaps	
WT	(1) Implement continuous improvement to increase efficiency in order to compete with competitors	12. Evaluate the utilization of personnel with current activity status.
	(2) Enhancing career succession planning is crucial for cultivating leadership talent and mitigating employee turnover.	
		13. Evaluating the identify reasons for the unsuccessful implementation of "success factors and employee development" initiatives for employees, addressing these gaps through continuous improvement.
Key Activities		
SO	Utilize global support to boost sales and services in growing potential markets.	14. Scheduling global SME visit to customer office including regional leadership
ST	Leverage global resources to introduce portfolios lacking experience in country and capitalize on collaborative opportunities with operators through strategically aligned corporate initiatives	
WO	(1) Negotiate with operator for engineer (<3 years) with good competency able to charge for services revenue	15. Accelerate competence development and knowledge transfer among junior engineers
	(2) Improve suboptimal activities like business case development, asset maintenance, and inventory management to boost efficiency, cut costs, and seize opportunities from increased market activity.	
WT	(1) Enhance the competence of young engineers and transfer knowledge through strong global support.	16. Improve the database system, specifically focusing on tendering, inventory, asset management processes within SharePoint, and integrate Gantt charts for comprehensive tender management.
	(2) Improve in business case development, asset maintenance procedure, and inventory management practices, those are crucial to mitigate the adverse effects stemming from the limited of experienced labour.	
		17. Conducting cross-functional training initiatives encompassing logistics, export/import procedures, finance, RES, and legal aspects is crucial to ensure that employees possess a comprehensive understanding of end-to-end business processes.
Key Partnerships		
SO	Leverage existing local partnerships to expedite market penetration and increase local content, as well as identify portfolio gaps and address them through collaborations at the corporate level.	18. Establish manufacturing facilities in Indonesia for products with low complexity to enhance the local content Level through strategic partnerships.
WO	Seek new partners to fill portfolio gaps, reduce supplier dependence, and provide training and competency development for partners to aggressively penetrate the market and increase target market.	
ST	Conduct thorough due diligence before entering partnerships to mitigate conflicts and evaluate partner performance against set targets.	19. Expand and enhance collaborative partnerships through due diligence evaluation processes
WT	Conduct risk assessments and rigorous evaluations of partners to identify and address potential issues before conflicts arise	
Cost Structure		
SO	Develop and expand a cost-effective portfolio and optimize the cost structure by evaluating potentially optimizable costs such as accommodation, freight, transportation, and others.	20. Negotiate with current suppliers for discounts and, if needed after reviewing their performance, switch to better options to get the best value and efficiency.
WO	Enhancing the expertise of the local workforce to mitigate reliance on expatriate personnel can lead to a reduction in operational expenditures.	
ST	Utilize an efficient cost structure as a competitive advantage against new entrants and to enhance profitability	21. The implementation of lean management principles is crucial for assessing factors amenable to optimization, including inventory levels, freight expenses, and operational expenditures
WT	Diversify services and markets, creating new markets to reduce risks from new entrants and adapt to regulatory changes.	

From the 21 strategies formulated through the synthesis of the TOWS matrix, some were found to be identical and could be combined with others. As a result, the initial 21 strategies were condensed into 16 primary strategies. This is also providing answers to research question (d).

To achieve a sustainable competitive advantage, strategies should be prioritized to optimize resources for the desired goals. Furthermore, a strategy should be specific and measurable, allowing for evaluation and improvement. It should also clearly define who is involved in its implementation. Understanding the characteristics of each category is essential for PT Z to make informed decisions and implement strategies that align with its objectives and capabilities. From the 16 strategies it can be categorized into short-term, medium-term, and long-term strategies for PT Z, based on the following criteria:

(i) Short-Term Strategies focus on rapid improvements that directly impact finances, reduce the risk of losses, and close strategic gaps in the business model, addressing the discrepancy between planned and achieved goals. When gaps occur, strategies should adapt to improve performance, or goals need to be adjusted for realism. Consequently, objectives should be continuously reviewed to ensure their utility. By

closing strategic gaps, an organization can become more efficient and competitive. Based on these criteria, there are four strategies as follows.

1. Accelerate competence development and knowledge transfer among junior engineers
2. Evaluating the identify reasons for the unsuccessful implementation of "success factors and employee development" initiatives for employees, addressing these gaps through continuous improvement.
3. Evaluate the utilization of personnel with current activity status.
4. The implementation of lean management principles is crucial for assessing factors amenable to optimization, including inventory levels, freight expenses, and operational expenditures

(ii) Medium-Term Strategies are crucial for optimizing PT Z's business model, important but not urgent, focusing on enhancing efficiency and productivity, developing human resources, growing revenue, and generally requiring time and resources to achieve the desired outcomes within a specified timeframe. Based on these criteria, there are seven strategies as follows.

1. Keep market growth consistent by using the portfolio's strengths to reach all operators and tap into new markets in CCS.
2. Strengthen and ensure the value proposition remains relevant.
3. Implement restructuring and efficiency enhancements thru the resources.
4. Scheduling global SME visit to customer office including regional leadership.
5. Negotiate with current suppliers for discounts and, if needed after reviewing their performance, switch to better options to get the best value and efficiency.
6. Improve the database system, specifically focusing on tendering, inventory, asset management processes within SharePoint, and integrate Gantt charts for comprehensive tender management.
7. Conducting cross-functional training initiatives encompassing logistics, export/import procedures, finance, RES, and legal aspects is crucial to ensure that employees possess a comprehensive understanding of end-to-end business processes.

(iii) Long-Term Strategies require time for implementation due to due diligence, investment capital, or research and development. These strategies are not urgent and require corporate approval, recommended for sustaining the organization's business model. Based on these criteria, there are five strategies as follows.

1. Innovate through market research: Build a team to analyse market needs and tech gaps, so get what new technology is needed.
2. Implement expansion, optimization, and refinement of distribution channels, encompassing the augmentation of existing channels and ensuring their effective operation.
3. Expand and enhance collaborative partnerships through due diligence evaluation processes.
4. Sustain market leadership and pursue diversification into novel sectors via innovation and engineering.
5. Establish manufacturing facilities in Indonesia for products with low complexity to enhance the local content Level through strategic partnerships.

These strategies were then incorporated into a business model canvas, based on the block of segments, to further address the research question (e).

**Table 10: New BMC**

Business Model Canvas PT Z		Designed for: PT Z	Designed by: Anton Hutahaean	Date: 2 July 2025	Version: 0.1
Key Partnerships	Key Activities	Value Propositions	Customer Relationships	Customer Segments	
1. Local distributor 2. Inspector company 3. logistics and transport company 4. Hotel 5. Machining / fabrication company 6. Vendor etc.  (+) Expand and enhance collaborative partnerships through due diligence evaluation processes. (+) Establish manufacturing facilities in Indonesia for products with low complexity to enhance the local content Level through strategic partnerships.	The sale of goods and services encompasses the following activities: 1. Field preparation and Execution 2. Equipment resources & deliverable, (Consumable, sales items, Capital, service tools) 3. Business development activities, such as sales, relationship management, and tender processes.  (+) Accelerate competence development and knowledge transfer among junior engineers. (+) Scheduling global SME visit to customer office including regional leadership. (+) Conducting cross-functional training initiatives encompassing logistics, export/import procedures, finance, RES, and legal aspects is crucial to ensure that employees possess a comprehensive understanding of end-to-end business processes. (+) Improve the database system, specifically focusing on tendering, inventory, asset management processes within SharePoint, and integrate Gantt charts for comprehensive tender management.	1. Engineering solution 2. Technical expertise 3. Service quality  (+) Strengthen and ensure the value proposition remains relevant.	1. Delivering goods and services with a service quality that meets customer expectations. 2. Providing value to customers through competitive pricing and technology.  (+) Keep market growth consistent by using the portfolio's strengths to reach all operators and tap into new markets in CCS.	1. Targeting all oil operators, ranging from those focused on high technology and medium technology to cost driven customers. 2. Targeting all geothermal operators although limited supply product and services.  (+) Innovate through market research: Build a team to analyze market needs and tech gaps, so get what new technology is needed.	
	Key Resources		Channels		
	1. Manufacturing team 2. Technology team 3. Country resources including BD and ops 4. Support functions such as HR, legal, finance, SQ, logistics.  (+) Evaluate the utilization of personnel with current activity status. (+) Evaluating the identified reasons for the unsuccessful implementation of "success factors and employee development" initiatives for employees, addressing these gaps through continuous improvement. (+) Implement restructuring and efficiency enhancements through the resources.		1. Direct sales 2. Local agent Customer outreach and communication facilitated through the Business Development team via direct engagement methods, including participation in exhibitions, golf tournaments, academic institutions, published paper, digital platforms and perform technology day.  (+) Implement expansion, optimization, and refinement of distribution channels, encompassing the augmentation of existing channels and ensuring their effective operation.		
Cost Structure			Revenue Stream		
1. COGS 2. Fix Cost (salary, depreciation, rental, facility cost, insurance, IT, indirect cost) 3. Variable cost (overtime, customs & duties, agent fee, freight, travel & entertainment, material, repair, material supply, personal expenses)  (+) Negotiate with current suppliers for discounts and, if needed after reviewing their performance, switch to better options to get the best value and efficiency. (+) The implementation of lean management principles is crucial for assessing factors amenable to optimization, including inventory levels, freight expenses, and operational expenditures.			1. Product sales 2. Services 3. Rental 4. Facility storage 5. Software simulation  (+) Sustain market leadership and pursue diversification into novel sectors via innovation and engineering.		

#### IV. Discussion

This research uses a case study approach, elaborating the business model canvas and environmental analysis to refine the business model and develop strategic business recommendations. Unlikely often found in case study research, that object of research on business to consumer models, this research examines on a business to business organization. Recognizing the specialized nature of the business under study, and the resulting BMC is highly specific, then modifications to the business model aimed at improving FBOI can be further assisted through tools like root cause analysis, to complement the framework and offer a more detailed approach to optimization. The findings of this research expected can be applied also into similar businesses or industries. Future research could evaluate the process and implementation of recommended strategies generated from environmental and business model analyses under actual conditions. This could involve elaborating strategies with project management techniques. Further studies may also explore other matrices in strategic management, and conduct a feasibility study of a long-term strategy, considering factors like technical, market, operational, risk, legal, and cost aspects.

#### V. Conclusion

Oil and gas in Indonesia are heavily regulated, then external influences and regulations significantly affected PT Z's business model. The company demonstrates effectiveness and responsiveness in capitalizing on opportunities and mitigating external threats, as evidenced by an EFE score of 2.85. This is also consistent with a competitive advantage, as shown in the IFE Index of 3.06. It means that the internal strengths of PT Z are stronger than the internal weaknesses, so PT Z has a good base to hold a competitive advantage, face challenges from the outside, and respond to changing market requirements.



The analysis of the TOWS matrix produced 40 strategies that were consolidated, combined, and functionally arranged into 16 major strategies. These were then categorized into short, medium, and long-term projects to help make the company's business model even better.

The findings indicate that PT Z has the potential to improve profitability through growth in sales and business model. The main upstream product lines, e.g. CCS and electric completions systems, offer large potential for revenue generation to PT Z in line with the continued drive for cleaner energy. In addition, several segment such as intervention, unconventional, and multilateral product portfolio areas have upsides for further concentration to maximize revenue contribution. Efficiencies in the business model can be realized through assessments of suppliers, resources, and business processes like tendering and operations.

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## References

1. Andersen, B., and Fagerhaug, T. (2006) *Root Cause Analysis, Simplified Tools and Techniques*. (2<sup>nd</sup> ed.). USA: ASQ Mission
2. Bourgeois, L., Meensel, J. V., Marchand, F., & Passel, S. V. (2024). Factors influencing business model change: a case study for the European crop protection industry. In *British Food Journal* (Vol. 126, Issue 13, p. 643). Emerald Publishing Limited. <https://doi.org/10.1108/bfj-03-2024-0281>
3. Creswell, J. W. (2018). *Research Design :Qualitative, Quantitative, and Mixed Methods Approaches*. (5<sup>th</sup> ed.). USA: SAGE Publications, Inc.
4. David, F. R., David, F. R., & David, M. E. (2017). *Strategic management: Concepts and cases: A competitive advantage approach* (16th ed.). New Jersey: Pearson Education.
5. Freeman, J., & Waters, C. D. J. (1993). Inventory Control and Management. In *Journal of the Operational Research Society* (Vol. 44, Issue 3, p. 316). Palgrave Macmillan. <https://doi.org/10.2307/2584204>
6. Miles, M. H. (2014). *Qualitative Data Analysis, A Methods Sourcebook*, (3<sup>rd</sup> ed.). USA: Sage Publications
7. Mitchell, D. W., & Bruckner Coles, C. (2004). Business model innovation breakthrough moves. *Journal of business strategy*, 25(1), 16-26. <http://dx.doi.org/10.1108/02756660410515976>
8. Novia, C., Pasaribu, R. D., Sutjipto, M. R., & Bustomi, D. (2022). ANALISIS BUSINESS MODEL CANVAS (BMC) CV MUNJUL JAYA KARAWANG. In *Jurnal Ilmiah Manajemen Ekonomi & Akuntansi (MEA)* (Vol. 6, Issue 3, p. 943). <https://doi.org/10.31955/mea.v6i3.2445>
9. Osterwalder, A., & Pigneur, Y. (2012). *Business Model Generation : A Handbook for Visionaries, Game Changers, and Challenger*. Elex Media Komputindo.
10. Osterwalder, A., Pigneur, Y. (2010). *Business model generation: a handbook for visionaries, game changers, and challengers*. New Jersey: John Wiley & Sons, Inc.
11. Pasaribu, R. D., Shalsabila, D., & Djatmiko, T. (2023). Revamping business strategy using Business Model Canvas (BMC), SWOT analysis, and TOWS matrix. In *Heritage and Sustainable Development* ISSN 2712-0554 (Vol. 5, Issue 1, p. 1). <https://doi.org/10.37868/hsd.v5i1.125>
12. Porter, M.E., (1985). *Competitive Advantage*. Free Press, New York, NY.
13. Porter, M.E., (1980). *Competitive Strategy*. Free Press, New York, NY.
14. Pratama, N. N., & Tricahyono, D. (2024). Designing a Digital Business Model Using SWOT Analysis and Business Model Canvas (Case Study of PT 372 Kopi Indonesia). In *International Journal of Scientific and Management Research* (Vol.7, Issue 10, p. 1).<https://doi.org/10.37502/ijsmr.2024.71001>
15. Rust, R. T., Moorman, C., & Dickson, P. R.. Getting Return on Quality: Revenue Expansion, Cost Reduction, or Both?. *Journal of Marketing*, 66, 7–24.
16. Singh, J., & Singh, H. (2012). Continuous improvement approach: state-of-art review and future implications. Emerald Group Publishing Limited 2040-4166. DOI 10.1108/20401461211243694
17. Sutjipto, M.R., Ernie Tisnawati Sule, E.T., Sucherly., Kaltum, U. (2019). The effect of organizational relationship and competitive strategy on the performance of wholesale network service business in Indonesia. *Journal of Entrepreneurship Education* Volume 22, Issue 3, 2019.

18. Sugiyono. (2013). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabet
19. Teece, D. J. (2010). Business models, business strategy and innovation. *Long range planning*, 43(2), 172-194. <http://dx.doi.org/10.1016/j.lrp.2009.07.003>
20. Wheelen, T. L., & Hunger, J. D. (2015). *Strategic Management and Business Policy: Toward Global Sustainability* (14th ed.). Pearson Education.
21. Yi, H. D., Park, S., & Kim, J.-H. (2019). The Effects of Business Strategy and Inventory on the Relationship between Sales Manipulation and Future Profitability. In *Sustainability* (Vol. 11, Issue 8, p. 2377). Multidisciplinary Digital Publishing Institute.