# To Retrench or Invest? Evaluating the Turnaround and Recovery Strategies of Indonesia MNEs through Data Science Approaches

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#### **Abstract**

This study aims to investigate the turnaround and recovery strategies employed by Ecolab International Indonesia MNEs after facing significant financial decline caused by the COVID-19 pandemic. This research analyzed internal factors, external opportunities, and threats to define effective strategies using a multi-method approach. Qualitative interviews were conducted to identify key themes, supported by examining company publications, especially annual financial reports from 2018 to 2022, to understand economic trends before, during, and after the pandemic. Thematic analysis was utilized to analyze the results, involving coding interview transcripts using ATLAS.ti and validating these themes through member checking to ensure reliability. Our findings show that Ecolab's turnaround strategy (cost reduction, enhancing value in sustainability, restructuring leadership, and organizational culture) was essential in addressing immediate and long-term challenges. The recovery strategy (operational and financial strategies, strategic focus area, regulatory and market dynamics) helped the company navigate the pandemic's impact and its position for sustainable growth. This study breaks new ground by integrating sustainability into strategic frameworks, aligning with global trends. Offering fresh perspectives enhances the relevance and value of MNEs' corporate strategy research in emerging markets. Additionally, our findings provide actionable insights for other companies to effectively incorporate sustainable practices into their turnaround and recovery strategies, ensuring long-term growth and regulatory compliance.

Keywords: Five Forces Analysis, Recovery Strategy, Specialty Chemical, Thematic Analysis, Turnaround Strategy

## 1. Introduction

The increasing demand for high-performance chemicals in end-user industries such as oil and gas, pulp and paper, and FMCG is anticipated to drive market growth significantly. A previous report [1] states that the global specialty chemicals market will reach USD 721.06 billion by 2025, growing at a compound annual growth rate of 5.1% from 2020 onward. Ecolab International, one of Indonesia's multinational enterprises (MNEs), specializes in producing specialty chemicals for industry and hospitality applications. Ecolab's diversification allows it to meet client needs and ensure tailored solutions to improve efficiency and performance within various operations. As markets continue to develop, companies like Ecolab can utilize their experience and innovation to meet industry-wide demands for products like theirs.

Ecolab is currently facing both challenges and potential opportunities in its industry. The COVID-19 epidemic has significantly increased demand for sanitation products, resulting in the sector's rapid expansion [2]. Several players, including large foreign companies, mark the industry. Opportunities continue to arise from the growth in the industry. The pandemic triggered a significant economic downturn that lasted nearly three years. Since mid-2022, the economy began to stabilize, and the pandemic was managed through vaccinations [3]. Specialty chemicals companies have benefited from this recovery, with North America and Mainland China becoming the two largest markets. In 2020, the

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Asia Pacific region accounted for 6.8% of the global specialty chemicals market. The increasing industrialization of countries like Singapore, Malaysia, Thailand, and India will offer lucrative opportunities [4].

Despite the economic recovery, Ecolab has yet to return to its pre-pandemic financial performance. The company has implemented several strategies to increase profit margins. These include organizational restructuring and tightening expenses. Unlike other companies in the specialty chemical industry, Ecolab adopted a multifaceted strategy. The approach included cost reduction, asset reallocation, and technology adoption. It also focused on employee engagement. Ecolab International Indonesia, part of Ecolab International, an American company with 181 locations worldwide, adopted a comprehensive approach beyond cost reduction. It allowed Ecolab to achieve immediate operational efficiencies and long-term strategic objectives. Ecolab has nearly 3 million customers in 170 countries and caters to 40 industries.

Ecolab must respond strategically to the challenges caused by the pandemic to maintain its competitive advantage. The company's vision is to be the leading provider of water, hygiene, and antimicrobial services and technologies, protecting vital resources and ensuring success. Ecolab is committed to making the planet cleaner, safer, and healthier. This vision fits in with this commitment. Ecolab's ability to contribute to the sustainability of the environment through its products defines its success [5]. Ecolab, formerly part of Regional Asia Pacific, is now part of the Southeast Asia Market. In 2020, Southeast Asia was separated from Japan, Korea, and ANZ. Southeast Asia comprises Indonesia, Singapore, Malaysia, Thailand, Vietnam, and the Philippines.

In this regional context, Ecolab International Indonesia's financial outcomes mirror the wider trends of this area, recognized as the most significant and rapidly expanding market for specialty chemicals, highlighting substantial opportunities for corporate growth [6]. Therefore, this study seeks to ascertain whether Ecolab International Indonesia employs effective turnaround and recovery strategies to return profits to pre-pandemic levels. The investigation will identify internal and external influences affecting their operations, review turnaround phases from pre-pandemic through post-pandemic recovery periods, and outline effective methods to enhance profit margins.

Previous research [7] shows that turnaround strategies have evolved, enabling managers to increase agility and audacity. While turnaround strategies have been extensively studied in North America and Europe [8], [9], few research studies have focused on those specific to specialty chemicals, particularly in the Indonesian context. Previous bibliometric analyses [10] highlight that most studies concentrate on economic impacts and general business strategies without looking at the specific challenges of the specialty chemicals sectors in countries like Indonesia. This study aims to fill that gap by examining Ecolab International Indonesia's business strategy in-depth, highlighting successful strategies and areas where improvements are needed.

This research investigated the internal and external factors affecting the company's operation, the various phases experienced in its turnaround process, and the measures taken to improve profits. This analysis helped to create effective turnaround plans that can be used in other industrial contexts. The response of Ecolab International Indonesia to the pandemic illustrated the dynamic nature of specialty chemicals sector companies. Their proactive attitude in seizing opportunities and resolving issues ultimately decided the company's long-term sustainability. This study provided essential knowledge for turnaround and recovery strategies, offering valuable insights for professionals and researchers to enhance their understanding of effective turnaround strategies. The objective was to propose strategic management techniques to aid recovery and economic expansion following a pandemic outbreak. Specifically, our findings pin on the importance of classifying internal resources to align with strategic actions, integrating turnaround and recovery strategies, and addressing immediate challenges and long-term growth through a comprehensive approach.

This research also contributed to the existing literature on turnaround strategy by offering an in-depth examination of Ecolab International Indonesia in the Indonesian specialty chemicals sector and emerging market context. It filled a gap in the literature by identifying unique internal and external factors and successful strategies used by Ecolab. By offering such insights, this framework may be easily adaptable in other contexts worldwide.

## 2. Related Work

# 2.1. Competitive Environment Analysis

Companies that are looking to remain competitive must be able to adapt to and observe changes in an ever-changing environment. Before developing more adaptive strategies, firms can use competitive environment assessments to identify external influences on their operations. This theory emphasizes that it is important to understand and identify market opportunities and threats by evaluating the competitive environment. PESTEL is an evaluation framework that helps businesses assess macroeconomic variables, including political, economic, social, technological, environmental, and legal [11]. These include government policies or economic trends, social concerns about technological innovation and development, and ecological considerations or related laws.

Porter's Five Forces model offers an insightful analysis of competition within an industry. This model measures competitive intensity, threats posed by new entrants or substitute products, and bargaining power among suppliers and buyers - helping companies devise strategies that strengthen and preserve competitive advantages. In the case of intense competition, differentiation may be necessary, while brand loyalty might be required to achieve economies in new situations.

The COVID-19 outbreak has dramatically altered the competitive landscape for many industries. The abrupt increase in the demand for sanitation products demonstrated the importance of being flexible and adaptable to market shifts [12]. Companies that could quickly adapt their production and distribution chains to meet changing demands were better placed to succeed, and this period highlighted that strategic flexibility and constant environmental scanning are necessary to maintain competitiveness in rapidly changing conditions.

# 2.2. Resource and Capability Analysis

Internal environment analysis is crucial for identifying a company's core strengths and enhancing its competitiveness. According to Porter [12], this analysis, often called the value chain, positions the company within the overall strategic framework and identifies its competitive advantage through core competency analysis. The value chain concept assumes that business success is supported by core and support functions necessary to achieve profit margins. A thorough understanding of internal factors is essential for developing effective business strategies. It involves carefully identifying and evaluating all internal variables to determine the company's strengths and weaknesses. Aligning company strategy with internal resources and external market changes is vital for maintaining competitiveness.

Resource analysis is a key component of this process. Previous studies [13] categorize resources into two main types: tangible and intangible. Tangible resources, such as factories, equipment, technology, raw materials, and machinery, are physical and easily identifiable. Intangible resources include intellectual property rights and trade secrets. Both types of resources must be utilized effectively and efficiently to implement company strategies successfully. Abdorrahman and Kamran [14] define resources as inputs companies use to produce goods and services. At the same time, Barney [15] emphasizes that organizational effectiveness is primarily determined by internal resources, which include physical, human, and managerial resources.

Value chain analysis further elaborates on how competitive advantage is derived from various company activities in designing, manufacturing, distributing, delivering, and supporting its products. These activities are categorized into primary activities (inbound logistics, operations, outbound logistics, marketing and sales, and service) and support activities (procurement, technological development, human resource management, and infrastructure) [16]. These activities are interconnected, creating customer value and supporting the company's overall strategy. Effective execution of these activities can lead to cost advantages or differentiation, providing a competitive edge.

For example, efficient inbound logistics management (such as procurement of raw materials) can reduce costs and enhance production efficiency. Similarly, robust technological development can lead to innovation and improved product quality, contributing to customer satisfaction and loyalty. By meticulously analyzing each value chain component, companies can identify areas for improvement and leverage their resources to achieve strategic objectives. During the COVID-19 pandemic, many companies had to reassess their internal capabilities and resources to adapt to new market realities. For instance, Ecolab implemented organizational restructuring and expenditure-tightening

strategies to navigate the economic downturn and improve profit margins [17]. These internal adjustments were crucial for maintaining operational efficiency and ensuring business continuity in a challenging environment.

# 2.3. Turnaround Strategies

The conceptual framework for analyzing corporate performance decline and identifying appropriate turnaround strategies is crucial for understanding how companies can recover from adverse conditions. For example, previous research [18] extends the conceptual model of turnaround strategies originally proposed by Pearce and Robbins [19]. Pearce and Robbins [19], highly influential in the field, formulated a two-step process analysis for turnaround strategies: reduction (also known as operational initiatives) and strategic initiatives. Performance or operational measures are defined as a sequence of organizational actions to reduce costs and assets [20]. In contrast, strategic actions involve modifying or adapting the company's scope and competitive approach [21]. To function effectively, an organization must understand the causes of its decline, which can stem from external and internal factors.

Although Pearce and Robbin's [19] arguments are foundational and have spurred the development of pivotal analytical models, their framework has faced criticism on several points. First, Pearce and Robbins [19] asserted that addressing operational problems (i.e., inefficiencies) requires operational initiatives (e.g., reduction). At the same time, strategic issues (i.e., misalignment with the environment) necessitate strategic actions (e.g., introducing new products). Second, severe performance decline typically demands operational actions such as asset retrenchment. Third, Pearce and Robbins [19] viewed turnaround as a two-phase process where operational actions precede strategic actions.

Turnaround strategies are crucial for companies facing declining performance. According to Schendel, Patton, and Riggs [22], a turnaround strategy involves activities that reverse a company's decline in performance. Supardi and Mastuti [17] describe turnaround as management actions when a company faces failure, leading to prolonged crises and uncertain prospects, prompting owners and management to change the organization's direction. In general, turnaround strategies are corporate strategies designed to save a company that has suffered losses [23]. Companies can more efficaciously tackle the unique challenges faced by maturing companies by incorporating the potential consequences of turnaround strategies into their risk-management plans instead of merely addressing conventional challenges that arise [24].

A generic turnaround strategy proposal has multiple phases. The preparation phase includes administrative and organizational/cultural restructuring strategies. The improvement stage includes three operational strategies: cost reductions, asset reallocations, and selected product/marketing. The growth phase concentrates on repositioning. According to David [25], the internal and external factor evaluation matrices serve as strategic tools to summarize and evaluate strengths and weaknesses within functional business units and identify relationships among them.

While research has been conducted on corporate turnarounds and their application to various industries, these strategies' specific dynamics and efficacy still need to be understood in Indonesia's specialty chemicals sector. It is also difficult to find empirical evidence of how companies such as Ecolab International Indonesia adapted strategies in response to internal inefficiencies and market pressures induced externally by events such as the COVID-19 outbreak.

This research aims to fill this gap through a detailed study of Ecolab International Indonesia. It focuses on the factors that influence its operations and the strategies implemented to return profit margins to levels prior to the pandemic. This study contributes to a better understanding of turnaround strategies for emerging markets by analyzing the company's strategic recovery responses within the Indonesian specialty chemicals industry context.

## 3. Research Methodology

## 3.1. Research Design

This research was conducted using a multi-approach approach, using qualitative (in-depth interviews), secondary data (financial reports), and observation [26]. This study employs the conceptual framework developed by Trahms, Ndofor, and Sirmon [18] to analyze corporate performance decline and identify appropriate turnaround strategies. This framework extends the concept of turnaround strategies originally proposed by Pearce and Robbins [19], which has been highly influential in the field. Pearce and Robbins [19] formulated a two-step process analysis for turnaround strategies: reduction (also known as operational initiatives) and strategic initiatives. Performance or operational

889

measures are defined as organizational actions to reduce costs and assets [20]. Utilizing this comprehensive framework, our study aims to understand better the strategies needed to navigate corporate decline and recovery periods. Our research extends previous studies on turnaround strategies by providing insights into the recovery strategies implemented by Ecolab based on thematic analysis findings from interviews.

## 3.2. Data Collection Methods

The primary data was directly collected from the subjects of the research. This research collected primary data through structured interviews with three key informants at PT Ecolab International Indonesia. These interviews were conducted using a structured interview technique. A series of questions aligned with the analytical tools and methodologies used. In addition, informants had to complete pre-prepared evaluations on different matrices. The key informants were selected according to their roles and responsibilities in the company. They needed to have a comprehensive understanding of its strategies and operations. The selected informants include the CEO (P1), the Director of Human Resources (P2), and the General Manager of the Light Division (P3).

Data reliability was ensured by comparing interview responses to external and internal publications documentation. However, it is important to recognize that collecting data from company employees can introduce biases. Multiple informants were interviewed to reduce biases. The secondary data used in this study came from internal company reports such as annual and financial reports and company publications. Moreover, secondary data were sourced externally from documents like statistical reports and media publications. Observations were used to evaluate and assess social phenomena and facilitate modifications based on these assessments. This method includes participating in Ecolab International Indonesia monthly, quarterly, or annual management meetings. The researcher could distinguish between relevant and irrelevant observations [27].

# 3.3. Data Analysis Methods

Our analysis methods use a Generic Turnaround Strategy Proposition and Internal (IFE) and External (EFE) Factors. The previous research analyzed generic turnaround strategies [28], identifying various actions a company can take to halt decline and drive recovery. The operational focus of turnaround strategies involves enhancing company performance, while strategic changes entail altering or adapting the company's business practices. Typically, turnaround strategies include the preparation phase (administrative and organizational/cultural restructuring strategies), the improvement phase (three operational strategies: cost reduction, asset reallocation, and selective product/marketing strategies), and the growth phase (repositioning strategies). According to David [25], the IFE and EFE matrices are strategic tools used to summarize and evaluate key strengths and weaknesses of functional business areas, identifying the relationships between these areas. These matrices are developed through the following steps:

- 1) List key internal factors (using VRIO for internal factors) and external factors (using PESTEL and Five Forces for external factors). Begin with strengths and then proceed with weaknesses.
- 2) Assign a weight ranging from 0 (not important) to 1 (very important) to each factor, indicating its significance to the company or industry. The total weight for all factors should sum to 1
- 3) Assign a rating from 1 to 4 to each factor (1: Major Weakness 4: Major Strength)
- 4) Multiply each factor's weight by its rating to determine the weighted score; 5) Sum the weighted scores for each variable to determine the total weighted IFE score for the company.

Coding interview transcripts using ATLAS.ti was employed to identify recurring themes. This research uses the Gioia approach to analyze our thematic data. Gioia's approach [29] is a useful method for systematically examining and interpreting themes found within qualitative interview data. This process typically includes three major steps: firstly, identifying first-order concepts through interviews and documents extracted for this research; secondly, categorizing those first-order concepts into second-order themes that represent larger concepts or patterns; thirdly, blending the themes into aggregate dimensions with more fundamental knowledge bases-this technique reduces complexity qualitative data into an easy structured, readable form making concluding simpler as well as formulating theories more readily.

Strategic focus, operational and finance strategies, regulatory and market dynamics, and then classified the themes. To ensure the validity and reliability of the themes, a member check was performed wherein the interviewees identified the themes. The peer debriefing process was used to verify the coding processes and themes.

### 4. Result

This study determines if Ecolab International Indonesia has implemented effective turnaround strategies to restore profits to levels before the pandemic. The research identifies factors both internal and outside the company. It analyzes turnaround phases, from pre-pandemic to after-pandemic. And it determines effective strategies for enhancing profit margins. Furthermore, the study examines the recovery strategies employed by Ecolab International Indonesia. The findings, which resulted from thematic analysis, demonstrate the company's efforts in financial management, operational restructuring, and market adaptation to fulfill sustainability and profit.

## 4.1. Financial Performance Trends

Visual aids such as tables and graphs were utilized to illustrate financial trends and comparative data before and after the pandemic (see Table 1). The following table shows the key financial metrics of Ecolab International Indonesia from 2018 to 2023. It depicts the revenue and net profit trends of Ecolab International Indonesia over the years.

Year	Net Sales (USD Million)	Net Income (USD Million)	Assets (USD Million)
2018	14,668.2	1,429.1	20,074.5
2019	14,906.3	1,558.9	20,869.1
2020	11,790.2	967.4	18,126.0
2021	12,733.1	1,129.9	21,206.4
2022	14,187.8	1,091.7	21,464.3

**Table 1**. The revenue and net profit trends of Ecolab International Indonesia

# 4.2. Competitive Environment Analysis Result

The competitive environment analysis examines external factors that affect Ecolab International Indonesia's business operations using the PESTEL and Five Forces frameworks.

Firstly, PESTEL provides several key insights. Ecolab International Indonesia is characterized by a stable political environment that supports sustainability initiatives. This climate is aligned with global goals, such as the United Nations Sustainable Development Goals. However, political uncertainty can affect business operations, such as during elections and policy changes. Additionally, Ecolab is an American company with a base in Indonesia, which poses a risk to bilateral relations. According to P1, "We are preparing politics for the upcoming election next year, it will also drive various infrastructure and health care projects that can benefit our operation."

Global macroeconomic conditions were difficult in 2022, as rising fuel and other essential goods prices affected operating expenses. However, Ecolab's focus on sustainability aligns with Indonesia's planned carbon-tax policy, which presents opportunities and challenges. Moreover, inflation and fluctuating exchange rates impact Ecolab's operational costs, highlighting the importance of strategic financial management. Despite these challenges, Ecolab has remained resilient in its water and sanitation segments. As stated by P1, "Our focus should be on sustainability and other trends that align with Indonesia's planned carbon tax."

Regarding social influence, the consumer's behavior, influenced by their personality, lifestyle, and demographics, is important. The changing lifestyles and higher purchasing power of the middle class are driving a shift to cleaner practices. Consequently, Ecolab's products have seen a surge in demand due to the increased public awareness about hygiene. Moreover, the need to continue public health efforts is highlighted by the fact that poor sanitation continues to be a problem. P1 mentioned, "The pandemic has increased public awareness of hygiene and significantly boosted demand for our sanitation product."

The industry 4.0 revolution places a high priority on automation and digitization. In line with this trend, Ecolab uses IoT technologies and Cyber-Physical Systems (CPS) to improve sustainability and operational efficiency. Moreover, Ecolab offers customers customized solutions that enhance their efficiency and satisfaction. Ecolab's ability to maintain a competitive advantage is due to its incorporation of advanced technology. This strategy helps them stay abreast of global trends and keeps them up-to-date with technological advancements. As the P1 explains, "We have embarked on a path of digital transformation by providing data center services and helping our customers with other technological developments."

Environmental issues such as climate change, water scarcity, and Ecolab's operations are affected significantly. The company's water sustainability initiatives and emission reduction goals are aligned with global environmental objectives. It strengthens its market position. Furthermore, Ecolab's technologies promote efficient resource management and sustainable water use. The company can reduce risks and open up new business opportunities by focusing on ecological sustainability. As P1 states, "Our company's sustainability focus is to reduce energy consumption, water consumption, and carbon emissions."

Ecolab's legal compliance with international and national regulations is essential. Adhering to trade and environmental regulations helps to enhance its reputation. Indonesia's PROPER program supports Ecolab's sustainable initiatives, ensuring they align with national environmental laws. Moreover, Ecolab's compliance record is key to its operational stability and competitive position. According to P1, "Our strict compliance with government regulations helps us maintain operational stability."

The Five Forces model reveals market dynamics in the specialty chemical sector. Ecolab and other key players compete fiercely, such as BASF Clariant Diversey Ecolab. Consequently, both local and international competitors threaten Ecolab's market leadership. To maintain its competitive edge, it must adopt innovative strategies. Additionally, new entrants face a serious threat due to high barriers to entry. These include substantial capital requirements, regulatory compliance, and other factors. However, the pandemic has decreased entry barriers for sanitization products, increasing the competition. Ecolab's established market position and technological advancements have mitigated this threat.

Although substitutes pose a limited threat due to their uniqueness, the rise of local companies producing sanitization products during pandemics poses a threat. Ecolab's focus on differentiation and innovation is one way it combats this threat. Ecolab's commitment to quality and sustainability helps the company stand out against competitors. Due to the availability and criticality of materials, Ecolab's bargaining power is moderate. Nevertheless, Ecolab's diverse supply chain and strong relationships with suppliers help reduce the risks associated with supplier power.

Buyers have much bargaining power due to the intense competition between producers. To counter this, Ecolab has strong contracts and relationships with its major customers to maintain a steady customer base. In addition, Ecolab focuses on customer satisfaction and partnerships that last a long time to reduce buyer power. This analysis highlights the forces that directly impact its market position. Ecolab needs to be ahead of its competition to succeed. Due to the high capital requirements and regulations, new competitors are unlikely to enter. Furthermore, the established presence and the technological advantage are significant barriers to entry. Ecolab also prioritizes customer satisfaction above competing suppliers, reducing the risk of potential replacements. Finally, diversification, strategic supplier management, and the strong supplier relationships that Ecolab has built up play key parts in managing bargaining strength. Ecolab also prioritizes customer service, even as consumer bargaining power increases.

# 4.3. Resource and Capability Analysis Result

The resource and capability analysis examines Ecolab International Indonesia's internal strengths and weaknesses using the VRIO framework. It evaluates the company's resources and capabilities to determine their contribution to competitive advantage.

First, Ecolab's tangible resources include two manufacturing plants, five warehouses, and seven office branches. Financially, the company has shown consistent double-digit revenue growth, except in 2020, and maintains a high price-earnings ratio. For instance, As of November 2022, Ecolab's price-earnings ratio (PER) was 38, listed on the NYSE. Technologically, Ecolab utilizes ERP systems, digital machines, and integrated data centers to enhance its operations. Organizationally, the company employs about 1,000 people, with 27% of leadership roles held by women.

As P1 noted, "Our digital transformation journey is crucial, especially in enhancing our data center services and integrating advanced technology."

Moreover, Ecolab's intangible resources include continuous employee training, high employee engagement levels, and low employee turnover rates. High employee engagement levels have increased operational efficiency by 15%, as engaged workers tend to be more productive and committed to meeting Ecolab's goals. Additionally, low employee turnover decreases recruitment and training costs, directly impacting operational efficiency and customer satisfaction metrics. Furthermore, this company boasts an excellent product performance reputation, positive sustainability initiatives, and strong compliance practices that contribute to strong operational efficiencies and customer satisfaction metrics. Ecolab maintains strong external connections with customers, suppliers, government bodies, and the environment. As the P2 noted, "Ecolab offers competitive base compensation rates with comprehensive health benefits as well as performance bonuses to employees viewed as investments rather than costs during pandemic years; emphasizing their significance to its success rather than any layoffs during that time."

In addition, Ecolab has valuable resources that enhance efficiency and productivity and allow the company to exploit opportunities and mitigate risks. The resources are scarce, and certain capabilities can only be accessed by a small number of companies. Ecolab's resources are unique in their historical development, causal uncertainty, and social complexity. The company has structured its resources effectively, with formal reporting and strategic planning systems. Management control systems and compensation policy. These resources provide Ecolab International Indonesia with a strong advantage in the market, allowing it to implement its turnaround strategies successfully.

One of the challenges mentioned by P1 was, "The platform that we use may need to be updated in order for it to better align itself with current digital trend, which is crucial for our strategic goals." The P1 stressed the importance of upgrading infrastructure technology to remain competitive.

# 4.4. Generic Turnaround Strategy Proposition Result

Generic Turnaround Strategy Propositions (GTP) are the methods used to analyze Ecolab International Indonesia's turnaround strategies. This framework lists stages and the specific actions required to improve performance.

Initially, Ecolab International Indonesia restructured its administrative and organizational structure to better position itself for success. It was important to streamline processes, optimize operations, and restructure the leadership roles to become more agile and responsive. The company improved operational efficiency, decision-making, and organizational structure by improving its decision-making process. As P1 stated, "Our company was designed around the latest trends in health security, digitalization, and sustainable development."

Furthermore, Ecolab implemented three operational strategies to enhance its operations: cost-cutting, asset reallocations, and product/marketing plans. For instance, cost-cutting measures, such as eliminating unnecessary travel or optimizing supply chain logistics, were implemented, and technology was used to automate and streamline these functions. Ecolab took various cost-cutting steps, such as cutting unnecessary travel. Additionally, automation technology, such as robots, was used for workflow optimization, streamlining operations more effectively and saving costs overall. Moreover, tools such as virtual reality and e-learning were used to train internal staff, which helped reduce operational costs without compromising service standards. Additionally, Ecolab reallocated assets to its most profitable segments and divisions to maximize the return on investments. Ecolab's strategic shift allowed it to maximize investment returns while better-utilizing assets. Moreover, Ecolab focused on marketing its products to meet market demands, including sanitation and water-quality services that saw increased demand during a pandemic. The company paid special attention to the sustainability of its products, which resonated with eco-friendly customers. According to P2, "extensive digitalization efforts have been implemented" to ensure business continuity during a pandemic."

Subsequently, Ecolab entered a growth phase and focused on realigning its strategies to ensure sustainability and expansion. Ecolab demonstrated its commitment to innovation by integrating advanced technologies, like IoT systems and cyberphysical ones, into its business practices - increasing operational efficiencies while offering customers insight to optimize processes and minimize waste. Furthermore, Ecolab reaffirmed its commitment to sustainability by helping customers achieve their own environmental goals. Ecolab's services and products are designed to meet ecological

standards and minimize water usage. As P1 stated: "Our focus is on sustainability, digitalization, and advanced technology integration, this has played a key role in our recovery strategy and growth."

Ecolab International Indonesia, a company focusing on innovation and sustainability in the industry, stands out from other companies. Ecolab International Indonesia's overall turnaround strategy included a comprehensive approach encompassing immediate operational needs and long-term strategic objectives. Consequently, Ecolab successfully met pandemic-related challenges through cost efficiency, resource optimization, and innovative solutions. The following Table 2 is s a list of Ecolab International Indonesia's strategic and action plans for increasing profitability in Indonesia.

Company Action

Ecolab International Indonesia implemented cost-cutting measures across all operational lines, such as decreasing customer service costs (through virtual reality technology) and using e-learning tools for internal training.

Table 2. Ecolab Generic Turnaround Strategy

Enhancing Value in the Context of Sustainability	Ecolab has transformed its business value proposition to include eco-friendly sustainability elements. Ecolab has invested in technologies that help its customers reduce their water consumption and waste.
Restructuring Leadership and Organizational	Ecolab globally implemented an organizational restructuring to more closely reflect market schemes; new divisions aligned better with them, such as merging their heavy chemical division with a downstream division.

# 4.5. Value Chain Analysis Result

Strategy

Cost Reduction

Strategy

Culture

The Value Chain Analysis of Ecolab International Indonesia employs the VRIO framework to evaluate the company's internal resources and capabilities, offering insights into its strengths and weaknesses. Based on the Resource-Based View (RBV) perspective, this analysis examines how the company's internal characteristics relate to its performance. Ecolab's resources and capabilities are categorized into two main types: tangible and intangible.

The tangible resources are physical assets, organizational resources, financial resources, and technological assets. For example, Ecolab's operational efficiency and logistics are boosted by its two manufacturing plants and five warehouses. The company's financial performance is solid, with annual revenue increases of double-digits except in 2020. Notably, the price-earnings ratio (PER) will also be 38 in November 2022, the year ECL becomes listed at NYSE. Ecolab is a technology leader with an integrated datacenter and digital machinery. It also has an ERP system that helps maintain high operating standards. Moreover, Ecolab employs about 1,000 people, 27% of whom are women, demonstrating its commitment to diversity in leadership positions.

In addition to tangible resources, Ecolab invests heavily in intangible assets like brand reputation, company culture, and relations. Human assets, which include employee training programs designed to foster high performance, are also a significant investment. Furthermore, Ecolab engages customers by providing excellent product performance ratings in areas like sustainability and compliance while creating close working relationships with its customers, vendors, government agencies, and environmental groups. Compensation packages encompass comprehensive healthcare coverage as well as performance incentives.

The VRIO Framework assesses resources based on Value, Uniqueness, and Organization criteria. When resources assist an organization's strategy for increasing efficiency and efficacy by taking advantage of opportunities or neutralizing great-value risks, rare resources only available through certain companies are highly prized as assets for success. Rare resources, only available through certain companies, are highly prized as assets for success. Unique resources cannot be reproduced because they are distinctive due to the historical context, causal ambiguity, and social complexity. To maximize their value, resources must be organized effectively. This includes its report structure, strategic plans, management controls, compensation policy, and other aspects.

Ecolab's VRIO analyses reveal that Ecolab's physical assets are valuable and unique, but they need to be more inimitable and fully organized. Financial resources are well-organized, rare, unique, and valuable. Tech assets are

valuable and rare. They are also organized. Organizational resources are rare and valuable but must be more unique and well-organized. Human assets are highly organized, rare, and valuable. The company's brands are valuable, rare, inimitable, and well-organized. Relationships can be rare and valuable but could be more well-organized and inimitable. Finally, the company's culture is rare, valuable, incomparable, and well-organized. The following table summarizes Ecolab International Indonesia's detailed VRIO analysis. Table 3 summarizes Ecolab International Indonesia's detailed VRIO analysis.

Insights gathered during interviews highlight the company's management of its resources. For example, P1 emphasized aligning its organizational structure with a focus on digital transformation. P1 stated, "Our current focus is on digital and digital recession, helping customers with data centers as they are booming due to online shopping and hospitals recession." Additionally, P2 stressed the importance of Ecolab retaining high employee retention and a low turnover rate.

Table 3. VRIO Analysis of Ecolab International Indonesia

Resource of Capability	Valuable	Rare	Inimitable	Organized
Physical	Yes (own 2 manufacturing plants)	Yes (integrated certifications)	No (common/general system in the plant)	No (somewhat a combination of manual and digital operation)
Finance	Yes (strong performance)	Yes (high price per earning)	Yes (high price per earning)	Yes (high price per earning)
Technological assets	Yes (ERP system, digital machine, integrated data center)	Yes (digital machine and integrated data center)	Yes (digital machine and integrated data center)	Yes (integrated data center)
Organizational	Yes (good leadership skills, lean organization)	Yes (good leadership skills, lean organization)	No (common organization structure)	No (common organization structure)
Human	Yes (low turnover, high employee engagement, clear R&R)	Yes (low turnover, high employee engagement)	Yes (limited resources on chemical knowledge)	Yes (individual development plan program)
Brand	Yes (market leader in chemical specialty in sustainability)	Yes (market leader in chemical specialty in sustainability)	Yes (market leader in chemical specialty in sustainability)	Yes (market leader in chemical specialty in sustainability)
Relationship	Yes (strong in external relationships)	Yes (strong in external relationships)	No (common relation to external parties)	No (common relation to external parties)
Company culture	Yes (competitive base compensation, comprehensive health insurance, performance bonus)			

# 4.6. Thematic Analysis Turnaround and Recovery Strategies Result

According to our study and analysis utilizing the Gioia approach, Ecolab's recovery strategy consisted of several first-order concepts, prioritizing digital retirements and reduced travel in compliance with government rules and regulations. Issues then aggregated into broad secondary-order themes, including Digital Transformation & Technological Advancement," Cost Management & Financial Strategies," Legal Compliance," etc. Subthemes were then further aggregated to larger topics (aggregate dimensions) like Strategic Focus Areas, Operational Strategies, or Regulatory

Market Dynamics, for an overall view of Ecolab's recovery strategy. Figure 1 displays this comprehensive thematic analysis.

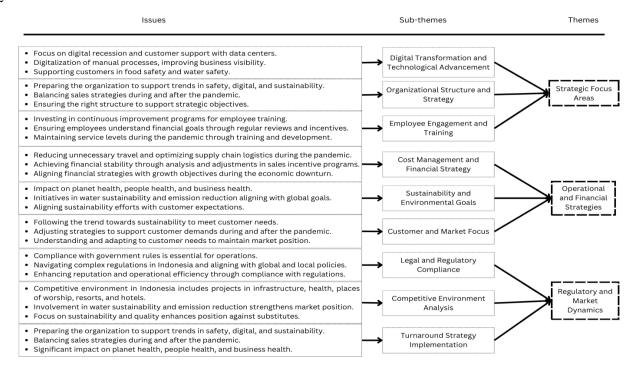


Figure 1. Thematic Analysis Result

The analysis highlighted the company's focus on technological innovations and digital transformations, showing a commitment to efficiency and adaptability. For instance, Ecolab International Indonesia implemented a costmanagement strategy to reduce travel costs and optimize logistical processes while focusing on sustainability and environmental goals to significantly contribute to the health of the planet, people, and business. Consequently, the company successfully maintained its market position by adapting to changes in market conditions and customer needs during and after the pandemic. In addition, the company has improved its reputation and efficiency through compliance with international and national regulations. Hoffman's Turnaround Framework and Recovery Strategy provided valuable insights to analyze Ecolab International Indonesia's strategy, but its application in emerging markets such as Indonesia requires critical evaluation. Cultural differences, such as Indonesia's hierarchical organizational culture, may impact turnaround strategies. They can make decision-making processes slower and more centralized than Western businesses. Furthermore, Indonesia's dynamic regulatory environment necessitates compliance with local labor and environmental standards, necessitating adaptations of Hoffman's framework for compliance. Emerging markets' competitive environment is complex. A mixture of large multinational companies and smaller local firms must work together with tailored strategies tailored to address specific challenges that face emerging markets while managing resource constraints - limited access to technologies or capital resources, for instance - through cost-effective means. Future research should investigate more refined and effective applications of Hoffman's framework in emerging markets like Indonesia. Ecolab International Indonesia's recovery and expansion strategies rely on comprehensive competitive analyses and implementation of turnaround strategies focused on digital transformation and sustainability. With such a multidimensional strategy in place aimed at operational efficiency, technological innovation, employee engagement, and resilience recovery will become more likely.

Our thematic analysis concluded on the recovery strategies employed by the company during the pandemic. Subsequently, we propose a framework that can serve as a guideline for overcoming adversity based on the experiences of Ecolab International Indonesia (see Figure 2).

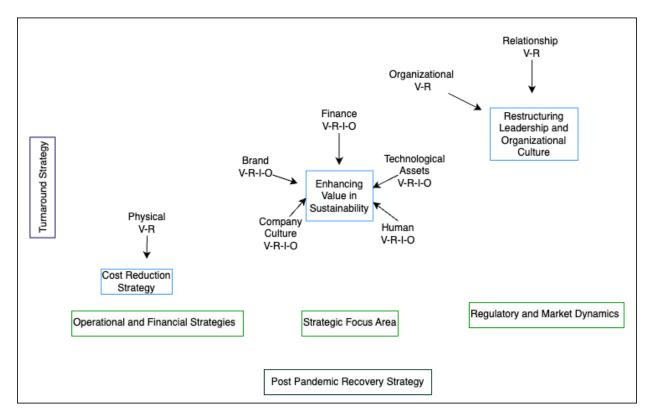


Figure 2. A conceptual framework for turnaround and recovery strategy

Previous research on turnaround strategies has highlighted reasons for failure in implementing them, such as shareholders' slow decision-making, unstable political leadership, and lack of management skills [1]. In Figure 2, our findings provide insights into the successful implementation of turnaround strategies by combining them with recovery strategies, demonstrating how a comprehensive approach can effectively address immediate challenges while positioning the company for sustainable growth.

Our proposed framework emphasizes the importance of first classifying a company's internal resources to align with the strategic steps to be taken. In the first scenario, the turnaround strategy will focus on a cost reduction strategy, where it is essential to assess the company's physical resources, followed by considering cost management and financial strategy, sustainability and environmental goals, and customer and market focus as part of the operational and financial recovery strategy to be adopted. Furthermore, the second scenario of the turnaround strategy, particularly enhancing value in sustainability, takes into account various company resources such as finance, brand, company culture, human resources, and technological assets, which will be of particular concern in the strategy recovery focus area (digital transformation and technological advancement, organizational structure and strategy, employee engagement and training). In the third scenario, the turnaround strategy of restructuring leadership and organizational culture will focus on organizational resources and relationships, which will be aligned with the strategy recovery regulatory and market dynamics (legal and regulatory compliance, competitive environment analysis, and turnaround strategy implementation). This way, the company can formulate the right strategic steps for sustainable recovery and growth post-pandemic, ensuring resilience and long-term success in a dynamic market environment.

#### 5. Literature Review, Conclusion and Future Research Recommendation

The analysis and discussion conducted on Ecolab International Indonesia's turnaround strategy to address declining profit margins and improve its condition from a turnaround strategy perspective can draw several conclusions. Firstly, the economic and technological factors are the most influential external elements affecting Ecolab International Indonesia's performance, as identified using the PESTEL framework. Furthermore, from the Five Forces analysis, the most impactful external factor is the bargaining power of buyers.

Secondly, the internal factors that significantly influence Ecolab International Indonesia's performance, identified using the VRIO framework, include finance, technology, human resources, and company culture. The company has undertaken various strategic and operational activities to improve and restore its business performance. Thirdly, the turnaround phase of Ecolab International Indonesia is characterized as early recovery [30]. The company implemented strategic steps such as cost reduction, organizational restructuring, and technology enhancement.

Lastly, the recommended turnaround strategies for Ecolab International include transitioning the business strategy from focusing solely on selling chemicals to promoting sustainability, emphasizing the implementation of the company culture values of "smarter, faster, better" to accelerate the achievement of company goals, evaluating, simplifying, and developing products with a focus on environmentally friendly applications that help customers achieve their sustainability programs, reducing costs by evaluating inefficient processes, shortening lead times, and utilizing digital technology, and focusing on digital marketing and product applications based on sustainability values, emphasizing water usage reduction, emission reduction, and wastewater minimization.

This study seeks to contribute value to Ecolab International Indonesia by strengthening its turnaround and recovery strategies to boost company performance. Hoffman's [31] generic turnaround theory provides several key recommendations, such as conducting market analyses and digitalization across all divisions to remain at par with industry acceleration. Moreover, achieving this requires long-term partnerships between suppliers and customers as well. Additionally, Ecolab can serve as an industry association leader by helping other companies understand government policies. Unfortunately, collaboration between chemical producers and governments to establish an industry roadmap remains minimal. Therefore, talent maps and training matrices are necessary for each task and role in this industry since human resources play an integral role in implementing technology into processes. It is crucial to have competent personnel to ensure that business operations are uninterrupted. Instead of reducing costs, it would be better to monitor them and standardize processes to ensure consistency.

However, the research may need to be validated or generalizable due to limitations. Three key informants were interviewed in structured interviews at Ecolab International Indonesia to collect primary data. Informants may have portrayed the company's strategies and results from an overly optimistic perspective. We minimized bias by comparing interview results with secondary sources, such as financial reports or industry publications. Nevertheless, geographic and regulatory limitations may prevent generalization across specialty chemical-sector companies. Therefore, future studies will need to include more companies. Additionally, data collected between 2018-2023 will only capture some of the effects of turnaround strategy implementation due to industry dynamics or external forces like economic fluctuations or regulatory changes.

Longitudinal studies can offer an in-depth examination of long-term impacts. While quantitative approaches provide better quantification, qualitative techniques often yield deeper insights. Future studies may use mixed methodologies to increase validity and enhance results, particularly as Hoffman's Framework may be altered by cultural or regulatory variations that still need to be fully addressed here. Continued research could result in more precise knowledge regarding its applicability to Indonesian emerging markets and their attendant limitations and implications. It would allow a balanced perspective when reviewing findings and impacts of future projects by acknowledging such obstacles to globalization.

Future research will investigate the following: To what degree have digital technologies altered operational efficiencies and customer experiences within the specialty chemical sector? Furthermore, what role do strategic alliances/partnerships/compliance strategies play in increasing resilience/expansion for specialty chemical firms operating in emerging markets? Once findings are made available for consideration and further exploration by specialty chemical firms themselves, further consideration can be made regarding factors contributing to success/sustainability for specialty chemical firms. This continuous inquiry will help to build a more comprehensive understanding of the dynamics in the specialty chemicals industry and guide strategic decision-making for enhanced resilience and growth.

Additionally, it would be valuable to explore how these findings from MNEs could be applied to SMEs to understand the broader implications of turnaround strategy. We suggest expanded research must explore how striking a balance between exploration and exploitation (ambidexterity) [32] will increase turnaround strategy efficiency among small

and medium-sized enterprises (SMEs) for long-term viability and expansion, using quantitative methods for verification or generalization.

## 6. Declarations

## 6.1. Author Contributions

Conceptualization: W.A., D.N., M.P.H.A., and E.M.; Methodology: W.A. and D.N.; Software: W.A.; Validation: W.A., D.N., M.P.H.A., and E.M.; Investigation: W.A.; Resources: D.N. and E.M.; Data Curation: M.P.H.A.; Writing Original Draft Preparation: W.A., D.N., M.P.H.A., and E.M.; Writing Review and Editing: W.A., D.N., M.P.H.A., and E.M.; Visualization: D.N.; All authors have read and agreed to the published version of the manuscript.

# 6.2. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

# 6.3. Funding

The authors received no financial support for this article's research, authorship, and publication.

## 6.4. Institutional Review Board Statement

Not applicable.

## 6.5. Informed Consent Statement

Not applicable.

# 6.6. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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