

A Strategic Approach to Business Transformation for Achieving Sustainable Corporate Performance

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Abstract

This study analyzes the Business Transformation Strategy for achieving sustainable corporate performance at PT Pupuk Indonesia (Tbk) using the Analytical Hierarchy Process (AHP). Key factors, actors, objectives, and strategic alternatives were identified to determine the most critical components driving the company's transformation. Governance emerged as the top priority factor, emphasizing the importance of robust governance structures in ensuring transparency and accountability. The Directors were found to be the most influential actors, underscoring the need for strong leadership in steering the transformation process. Improving operational efficiency was ranked as the highest priority objective, reflecting the company's focus on optimizing processes and enhancing productivity. The most important strategic alternative identified was the implementation of best practices in operational management, particularly through methodologies such as Lean and Six Sigma. The study concludes that effective governance, leadership involvement, operational efficiency, and the adoption of industry best practices are key to PT Pupuk Indonesia's successful business transformation and long-term sustainability.

Keywords: *Corporate Sustainability Performance, Operational Performance, Social Responsibility, Analytical Hierarchy Process (KHP).*

Introduction

In an era of increasing global environmental challenges and competitive market dynamics, industrial companies are being forced to rethink their business strategies to ensure long-term sustainability (Mulyono and Utami 2020; Torres da Rocha et al. 2022). The fertilizer industry in Indonesia recognizes the need for a transformation strategy that aligns operational performance with corporate sustainability goals. To this end, a rigorous approach was taken to identify and prioritize the strategic factors that will enable the company to achieve sustainable business performance (Dabukke et al. 2024; Dania et al. 2021). Corporate sustainability performance in the fertilizer industry has become a key focus as companies strive to balance economic growth with environmental responsibility and social impact. As an energy-intensive process, fertilizer production has significant sustainability implications, particularly in terms of greenhouse gas emissions, resource consumption and waste management. As global awareness of environmental degradation and the need for sustainable agricultural practices increases, fertilizer companies are under increasing pressure to adopt practices that minimize their environmental footprint while maintaining profitability and social responsibility (Liu et al. 2023; Napp et al. 2014; Locmelis et al. 2017; Setyawan 2020).

In corporate sustainability, the economic pillar is essential to the long-term viability of fertilizer companies. Profitability, competitiveness and financial performance are critical indicators of a company's ability to sustain operations while innovating and adapting to market trends (Khalil, Khalil, and Khalil 2022; Yagi and Kokubu 2020). For companies in the fertilizer industry, profitability is linked to efficient production processes, market demand for fertilizer products, and cost control measures, including the management of raw material prices and energy consumption. The environmental impact of fertilizer production is one of the most pressing challenges facing the industry. Fertilizers, particularly nitrogen-based products, are associated with significant greenhouse gas emissions during both production and use (Mostafaiepour et al. 2020; Santoso et al. 2023). Nitrous oxide, a potent greenhouse gas, is released from agricultural soils following the application of nitrogen fertilisers. In addition, the energy required to produce ammonia, a key component of many fertilisers, contributes to carbon emissions. This creates a dual challenge for

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companies: reducing their carbon footprint while ensuring that fertilisers remain effective in increasing crop yields (Chojnacka et al. 2019; Vargas et al. 2023; Dziuba, Todorow, and Kowalik 2016).

To address these challenges, fertiliser companies are increasingly adopting decarbonisation strategies, including improving energy efficiency, switching to renewable energy sources and exploring new production technologies such as green ammonia. Innovations in fertilizer formulations that reduce nutrient run-off and improve nutrient use efficiency are also key to reducing the environmental impact of fertilizers. Waste management practices, such as recycling industrial by-products and reducing waste generation, also contribute to environmental sustainability goals.

However, the industry is also vulnerable to external factors such as fluctuating global commodity prices, shifts in agricultural demand and changes in government policies relating to subsidies and regulations (Sumaji, Halim, and Sundari 2019; Santoso et al. 2023). For example, adjustments in fertiliser subsidies can have a direct impact on profitability, as companies may have to absorb costs or change their market strategies. To remain competitive, companies in the fertiliser sector must invest in research and development (R&D) to innovate new products that improve soil health, reduce environmental impact and meet the evolving needs of the agricultural sector (Ramadhani 2023).

Social sustainability in the fertiliser industry encompasses the company's responsibility to its employees, communities and other stakeholders. This includes fostering a positive corporate culture, ensuring fair labour practices and investing in the health and safety of employees (Waqas et al. 2021). Fertiliser production involves the handling of hazardous materials, making occupational health and safety a top priority. Companies that prioritise the wellbeing and safety of their employees not only meet regulatory standards, but also improve productivity and employee morale.

In addition to internal social responsibility, fertiliser companies play a vital role in supporting sustainable agriculture, which is essential for global food security. Many companies are involved in community development programmes that promote sustainable agricultural practices, provide training for farmers and facilitate access to quality fertiliser. These efforts contribute to increased agricultural productivity, improved farmer livelihoods and stronger stakeholder relationships. Corporate reporting on social initiatives, transparency in operations and stakeholder engagement are key aspects that strengthen a company's social sustainability performance. Achieving corporate sustainability in the fertiliser industry requires companies to integrate environmental, social and economic considerations into their core business strategies. This requires a holistic approach that aligns business objectives with sustainability goals. Governance structures play a key role in ensuring that sustainability is embedded in decision-making processes. Good corporate governance (GCG) principles, such as transparency, accountability and stakeholder involvement, are essential for managing sustainability risks and ensuring that companies operate in a responsible and ethical manner.

Integrating sustainability into business strategies not only enhances corporate reputation, but also creates long-term value by reducing operational risks, improving regulatory compliance and positioning companies as leaders in sustainable agriculture. Moreover, as investors and consumers increasingly prioritise sustainability, companies that excel in corporate sustainability performance are more likely to attract investment and customer loyalty (Almayali and Almusawy 2021).

In today's dynamic global landscape, industries face mounting pressure to adapt and transform their business models in response to environmental challenges, competitive market forces, and evolving consumer expectations. Companies in sectors such as the fertilizer industry, which is energy-intensive and environmentally impactful, are compelled to implement strategies that not only ensure profitability but also align with sustainable practices. The intersection of corporate sustainability and operational efficiency has become a critical focal point, especially as businesses recognize that sustainable transformation can lead to long-term resilience and market competitiveness. In this context, the urgency for a structured approach to business transformation, incorporating sustainability as a core objective, cannot be overstated.

This research aims to explore how companies like PT Pupuk Indonesia can leverage a strategic framework to balance these imperatives, paving the way for sustainable corporate performance. As sustainability becomes integral to corporate agendas worldwide, industries are increasingly adopting transformation strategies that are not only financially viable but also environmentally and socially responsible. Recent global trends highlight the importance of governance, leadership, and innovation in achieving these objectives, and companies that excel in these areas are more likely to thrive. By using tools like the Analytical Hierarchy Process (AHP) to prioritize critical factors in business transformation, organizations can make informed decisions that enhance operational efficiency and sustainability.

This study, therefore, addresses a significant gap by identifying and prioritizing key components of a successful business transformation strategy for PT Pupuk Indonesia, offering insights that are relevant for companies globally as they seek to integrate sustainable practices within their strategic frameworks. The methodology employed in this research includes the use of the Analytical Hierarchy Process (AHP), a multi-criteria decision-making tool that allows for the structured weighting of variables that influence business transformation. By working with seven industry experts and using Expert Choice software to process the results of the AHP questionnaire, this study presents a hierarchical model of the factors essential to business transformation. The analysis aims to determine the most effective strategy for PT. Pupuk Indonesia (Tbk) to balance operational efficiency with sustainability imperatives to ensure its continued success in a dynamic industrial landscape.

Through this research, PT. Pupuk Indonesia (Tbk) will gain a clearer understanding of the key drivers of successful business transformation and be better equipped to implement strategies that not only improve performance but also contribute to the broader goal of sustainable development. The strategic insights provided here are expected to help the company's leadership make informed, impactful decisions that are aligned with the company's long-term sustainability goals. Sustainable development is one of the greatest challenges facing humanity today. The concept of sustainability focuses on the ability of current generations to meet their needs without compromising the ability of future generations to meet their needs. This principle, often summarised as the "triple bottom line" (profit, people, planet), is the foundation of corporate sustainability. As a leader in the fertilizer industry, PT Pupuk Indonesia (Persero) has embraced this principle by optimizing resources, building productive collaborations with communities, partnering with the government and engaging other stakeholders in the pursuit of sustainability. Its approach serves as a model for the industry, demonstrating how sustainability can be integrated into core business strategies.

Literature Study

The study of strategic business transformation for achieving sustainable corporate performance has gained momentum as companies across industries face increasing pressures to balance profitability with social and environmental responsibilities. Corporate sustainability refers to a company's efforts to integrate economic, social, and environmental objectives into its business operations. The concept is often framed using the "Triple Bottom Line" (3P) approach, which includes Profit, People, and Planet (Correia 2018; Elkington 2013). Studies highlight that organizations focused on sustainable development aim to meet the needs of the present without compromising future generations (Lungguran and Sumani 2022). This approach is not just ethical but has become a business imperative as stakeholders, including investors and customers, demand greater accountability (Omar, Altohami, and Afzaal 2022).

In the context of the fertilizer industry, sustainability is especially relevant given the sector's reliance on finite natural resources and its impact on soil health, water quality, and greenhouse gas emissions (Waqas et al. 2021; Santoso et al. 2023; Menegat, Ledo, and Tirado 2022). The environmental pillar of sustainability has received significant attention in this sector, with studies exploring ways to reduce carbon footprints and enhance resource efficiency (Setyo Utomo and Maarif 2011). However, a balanced approach to sustainability that also considers social and economic impacts is necessary for long-term corporate success (Kuo, Wu, and Liu 2021; Aboelmaged 2018). This gap has led to calls for more research on how fertilizer companies can simultaneously address these multiple dimensions of sustainability.

Business transformation involves a fundamental shift in an organization's operations, strategies, or culture to achieve improved performance or adapt to changing market conditions. Research suggests that transformation efforts are often triggered by technological disruptions, regulatory changes, or shifts in consumer preferences (Orji 2019). Successful business transformation requires alignment between a company's strategic vision and its operational processes, with leadership playing a critical role in navigating these changes (Harumantaka, Fahmi, and Maulana 2019).

In industries like fertilizers, where environmental concerns are paramount, business transformation efforts are increasingly being geared towards sustainability (M. Wang et al. 2024; Chandra Budiman and Kurniawati 2023). These efforts often involve rethinking supply chains, adopting cleaner technologies, and developing more sustainable product offerings. However, the literature points to significant challenges, including high upfront costs, resistance to change, and the complexity of measuring sustainability outcomes (Santoso et al. 2023; Athi 2024).

Strategic transformation goes beyond operational adjustments and requires a shift in the organization's core business strategies to integrate sustainability into its long-term goals. This involves setting sustainability goals at the leadership level and ensuring that all departments align their efforts towards these objectives. In recent years, there has been growing interest in how companies can leverage strategic transformation to not only comply with regulatory demands but also create a competitive advantage by adopting sustainability as a core business driver (Suárez et al. 2021; Laszlo and Zhexembayeva 2011).

Leadership is frequently cited as a key determinant of successful business transformation. Transformational leadership theory emphasizes the role of visionary leaders in motivating employees to go beyond their immediate tasks and contribute to broader organizational goals, including sustainability (Bass & Avolio, 1994). Leaders play a crucial role in setting the strategic direction, fostering a culture of sustainability, and ensuring that sustainability initiatives are integrated into the company's long-term vision (Alotaibi 2022).

In the fertilizer industry, where production processes are capital-intensive and have significant environmental impacts, the role of leadership in driving sustainability transformation is particularly important. Studies have shown that companies with strong leadership are more likely to adopt sustainable business practices, invest in cleaner technologies, and engage stakeholders in their sustainability efforts. However, existing literature often fails to delve into how leadership can specifically facilitate the transition towards corporate sustainability within this industry, highlighting another research gap.

While qualitative analyses dominate much of the existing research on business transformation and sustainability, there is a growing need for more robust, quantitative approaches to prioritize sustainability drivers. The Analytical Hierarchy Process (AHP) has emerged as a valuable tool for this purpose, allowing decision-makers to systematically evaluate and rank multiple factors based on their relative importance (Sarasati and Dachyar 2021). AHP can be particularly useful in complex industries like fertilizers, where decision-making involves balancing various social, environmental, and economic trade-offs. Several studies have used AHP to assess sustainability performance in other industries (Junianto, Sunardi, and Sumiarsa 2023; Nainggolan et al. 2020; Y. Wang et al. 2023) but its application in the fertilizer sector remains limited. The use of AHP could provide a structured framework for evaluating the most important factors influencing sustainable business transformation, which is currently lacking in the fertilizer industry literature. Trends in sustainable business models can comprehensively transform the processes of production, consumption, and recycling of residual materials (Dubey et al. 2016). Sustainable business model innovation can serve as a growth strategy for business development (Santoso et al. 2023).

Fertilizer companies are increasingly under pressure to reduce their environmental impact while maintaining economic viability. Research has explored various strategies to reduce emissions and enhance efficiency, such as adopting more sustainable production processes and improving resource management (Hignett, 1985). However, the literature tends to focus predominantly on environmental outcomes, often neglecting the social and economic dimensions of sustainability (Herdiman and Antoro 2024; Abdilah and Cahyana 2023). This has created a gap in understanding how fertilizer companies can achieve a holistic approach to sustainability that encompasses all three pillars of the Triple Bottom Line. A gap analysis explains the

differences between previous research results and the current study. This research focuses on the influence of the 3P (People, Planet, and Profit) on the sustainability performance of PT Pupuk Indonesia (Persero) and explores the factors related to corporate sustainability performance. The study aims to formulate strategies for achieving corporate sustainability performance at PT Pupuk Indonesia (Persero).

Method

The Analytical Hierarchy Process (AHP) is a decision-making tool that helps in evaluating and prioritizing multiple factors in complex scenarios by breaking them down into a structured hierarchy (Sholeha et al. 2024; Kumar and Pant 2023; Kurniawan and Hariadi 2022; Heindl and Liefner 2019). In this study, AHP was used to identify and prioritize the most critical components influencing the Business Transformation Strategy at PT Pupuk Indonesia (Tbk) to achieve sustainable corporate performance. The AHP method was selected due to its effectiveness in prioritizing and weighting factors that influence complex strategic decisions, such as business transformation in the fertilizer industry. By decomposing the decision into a hierarchy, AHP enables a detailed comparison of elements that are challenging to measure directly.

The steps of using AHP in this study are as follows.

1. Define the Problem and Goal: The main goal of this study is to develop a business transformation strategy that ensures sustainable corporate performance at PT Pupuk Indonesia.
2. Break Down the Problem into a Hierarchical Structure: The study breaks the transformation strategy into four levels:
 - Level 1: Goal (Sustainable Corporate Performance)
 - Level 2: Key Factors influencing transformation (Governance, Social, Environmental, Operational, Leadership, and Transformation Strategy)
 - Level 3: Actors influencing these factors (Directors, Middle Management, External Stakeholders, and Operational Staff)
 - Level 4: Objectives and Strategic Alternatives (Operational Efficiency, Corporate Governance, Social Responsibility, Leadership, and Environmental Sustainability)
3. Pairwise Comparisons: AHP uses pairwise comparisons to evaluate the importance of each element at each level relative to others. For example:
 - How important is governance compared to social factors in achieving the goal?
 - How influential are directors compared to middle management in driving governance?

The study participants (experts or decision-makers) compare each pair of elements on a scale, and these comparisons are used to calculate priority weights for each factor, actor, objective, or alternative. Based on the data and facts obtained from the field, the results of the study and in-depth interviews, as well as expert justification using the AHP questionnaire, a weighting matrix can be developed for the Business Transformation Strategy to Achieve Sustainable Corporate Performance at PT. Pupuk Indonesia (Tbk).

The determination of factors was carried out comprehensively and thoroughly to avoid errors in identifying factors, which could lead to mistakes in defining the Business Transformation Strategy for Achieving Sustainable Corporate Performance at PT. Pupuk Indonesia (Tbk). The weighting of factors for the Business Transformation Strategy can be grouped into four clusters, with each cluster consisting of several nodes or variables. The clustering was conducted by considering the system classification in input-output (Marimin, 2007). In this research, a hierarchy was developed that has a structured design, with interconnections at each level or strata. The design of this hierarchy can be seen in Figure 1.

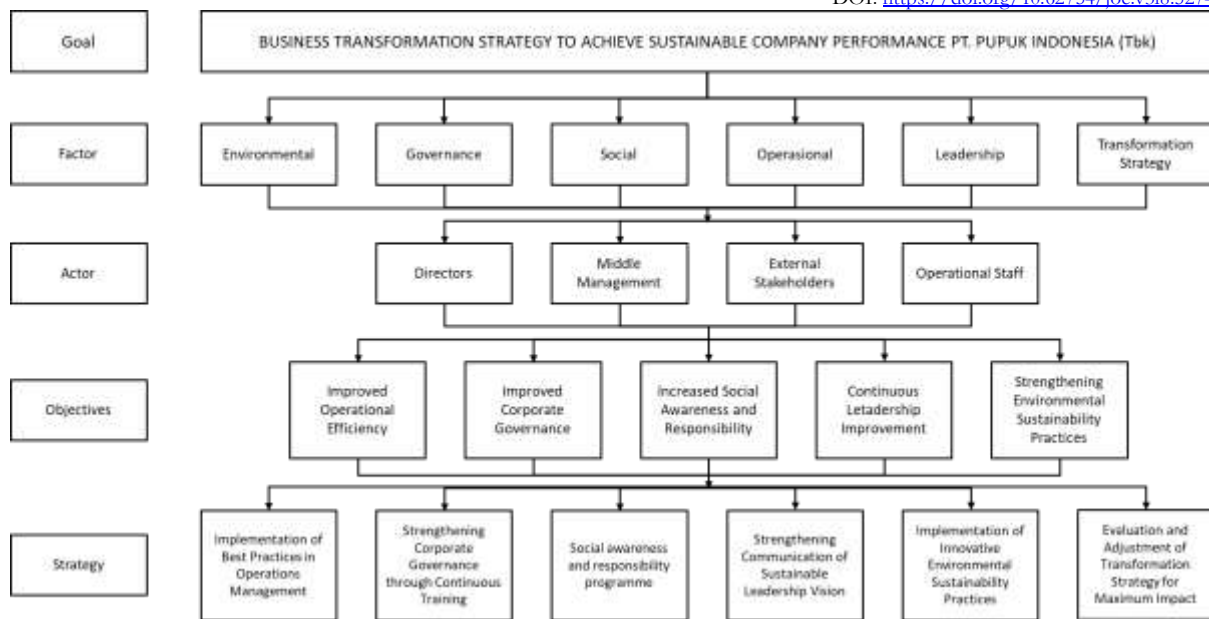


Figure 1 Business Transformation Strategy Hierarchy to Achieve Sustainable Company Performance

PT Pupuk Indonesia (Tbk)

The AHP hierarchy was structured with four levels: (1) Goal – achieving sustainable corporate performance, (2) Key Factors influencing the transformation, including governance, social, environmental, and operational aspects, (3) Actors involved, such as Directors and Middle Management, and (4) Strategic Alternatives to achieve the objectives. The strategy prioritization analysis using the Analytical Hierarchy Process (AHP) method is conducted to identify the best alternative strategy by evaluating the most influential factors or objectives from the perspective of various stakeholders. Through this AHP analysis, key results are obtained, including the prioritization of the most influential factors, identification of the key actors involved, the implicit or objective goals of the prioritized strategies, and the most appropriate strategies for implementation in the Business Transformation Strategy aimed at Achieving Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk). Following the AHP framework, a tailored AHP questionnaire was developed and was distributed to seven experts who are directly involved with the Business Transformation Strategy for Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk). The responses from each expert were collected and processed using the Expert Choice software to derive the results based on expert justification. Seven industry experts, each with over ten years of experience in sustainability and business operations within the fertilizer industry, were selected to ensure a robust and well-rounded perspective on the factors influencing PT Pupuk Indonesia's transformation.

Result And Discussion

Factor Analysis (Level 2)

The Factor Analysis aims to identify which factors are most critical in influencing the Business Transformation Strategy to Achieve Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk), based on the priority weights from the Analytical Hierarchy Process (AHP) results, as shown in Table 1.

Table 1: Priority Weights of Factors in the Business Transformation Strategy for Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk)

Factor	Priority Vector	Priority Ranking
Environmental	0.177	3
Governance	0.248	1
Social	0.187	2
Operational	0.131	5
Leadership	0.138	4
Transformation Strategy	0.119	6

The most crucial factor in achieving the Business Transformation Strategy for Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk) is Governance, with a weight of 0.248. The second most important factor is Social (0.187), followed by Environmental (0.177), Leadership (0.138), Operational (0.131), and lastly, Transformation Strategy (0.119).

The Factor Analysis in this study identifies Governance, Social, and Environmental factors as the top priorities for PT Pupuk Indonesia's business transformation towards sustainability. Governance, weighted highest, underscores the need for strong structures that ensure accountability and ethical decision-making. Social factors highlight the importance of corporate responsibility towards employees, communities, and stakeholder relations, while Environmental factors emphasize minimizing the ecological footprint through efficient resource use and waste reduction. Leadership and Operational factors follow, with Transformation Strategy being essential yet secondary. These findings suggest PT Pupuk Indonesia should focus on strengthening governance through continuous training, expanding social initiatives, and prioritizing environmental sustainability practices to align with global standards and enhance long-term competitiveness.

Actor Analysis (Level 3)

The Actor Analysis is conducted to determine which actors play the most significant role in influencing the Business Transformation Strategy to Achieve Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk), based on the priority weights from the AHP results.

Table 2: Actor Weights Against Factors in the Business Transformation Strategy for Achieving Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk)

Actor	Factor						Average	Rank
	Environmental	Governance	Social	Operational	Leadership	Transformation Strategy		
Director	0,374	0,496	0,358	0,355	0,518	0,509	0,435	1
Middle Management	0,191	0,215	0,231	0,321	0,218	0,230	0,234	2
External Stakeholder	0,279	0,174	0,286	0,184	0,164	0,160	0,208	3
Operational Staff	0,156	0,115	0,126	0,140	0,1	0,102	0,123	4

Table 2 presents the actor analysis, considering different factors:

- Environmental Factor: Directors (0.347), External Stakeholders (0.279), Middle Management (0.191), and Operational Staff (0.156).

- Governance Factor: Directors (0.496), Middle Management (0.215), External Stakeholders (0.174), and Operational Staff (0.115).
- Social Factor: Directors (0.358), External Stakeholders (0.286), Middle Management (0.231), and Operational Staff (0.126).
- Operational Factor: Directors (0.355), Middle Management (0.321), External Stakeholders (0.184), and Operational Staff (0.140).
- Leadership Factor: Directors (0.518), Middle Management (0.218), External Stakeholders (0.164), and Operational Staff (0.1).
- Transformation Strategy Factor: Directors (0.509), Middle Management (0.230), External Stakeholders (0.160), and Operational Staff (0.102).

On average, based on the highest to lowest priority weights, the order of actors is as follows: Directors (0.435), Middle Management (0.234), External Stakeholders (0.208), and Operational Staff (0.123). Various actors play key roles in achieving the goals of the Business Transformation Strategy for Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk). Overall, the most significant actor is the Directors (0.435), followed by Middle Management (0.234), External Stakeholders (0.208), and lastly, Operational Staff (0.123). The Directors are the primary actors because they are responsible for setting the company's strategic direction and making critical decisions regarding business transformation. Middle Management plays an essential role in translating the strategies established by the Directors into action plans and ensuring their implementation at the operational level.

External Stakeholders, though having a lower weight compared to Directors and Middle Management, still hold a significant role in influencing the business transformation strategy. They provide valuable insights, resources, and support to drive the success of the transformation. Lastly, Operational Staff has the smallest weight but still plays a crucial role in executing transformation plans in daily operational activities. Their involvement and support are essential to ensuring the smooth implementation of the business transformation strategy across the organization.

Objective Analysis (Level 4)

The objective analysis in this case aims to identify which objective is the most critical in influencing the Business Transformation Strategy for Achieving Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk), based on the priority weights from the Analytical Hierarchy Process (AHP) results, as shown in Table 3.

Table 3: Objective Weights Against Actors in the Business Transformation Strategy for Achieving Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk)

Objective	Actor				Average	Rank
	Directors	Middle Management	External Stakeholders	Operational Staff		
Improving Operational Efficiency	0,228	0,345	0,225	0,352	0,288	1
Improving Corporate Governance	0,299	0,254	0,251	0,253	0,264	2
Increasing Social Awareness and Responsibility	0,164	0,137	0,221	0,154	0,169	3

Enhancing Sustainable Leadership	0,158	0,132	0,166	0,133	0,147	4
Strengthening Environmental Sustainability Practices	0,152	0,131	0,137	0,108	0,132	5

The AHP results yielded the following ranking of objectives:

1. According to Directors, the ranking of objectives is: Improving Corporate Governance (0.299), Improving Operational Efficiency (0.228), Increasing Social Awareness and Responsibility (0.164), Enhancing Sustainable Leadership (0.158), and Strengthening Environmental Sustainability Practices (0.152).
2. According to Middle Management, the ranking is: Improving Operational Efficiency (0.345), Improving Corporate Governance (0.254), Increasing Social Awareness and Responsibility (0.137), Enhancing Sustainable Leadership (0.132), and Strengthening Environmental Sustainability Practices (0.131).
3. According to External Stakeholders, the ranking is: Improving Corporate Governance (0.251), Improving Operational Efficiency (0.225), Increasing Social Awareness and Responsibility (0.221), Enhancing Sustainable Leadership (0.166), and Strengthening Environmental Sustainability Practices (0.137).
4. According to Operational Staff, the ranking is: Improving Operational Efficiency (0.352), Improving Corporate Governance (0.253), Increasing Social Awareness and Responsibility (0.154), Enhancing Sustainable Leadership (0.133), and Strengthening Environmental Sustainability Practices (0.108).

Overall, based on the highest to lowest average weights, the prioritized objectives are as follows:

1. Improving Operational Efficiency (0.288)
2. Improving Corporate Governance (0.264)
3. Increasing Social Awareness and Responsibility (0.169)
4. Enhancing Sustainable Leadership (0.147)
5. Strengthening Environmental Sustainability Practices (0.132)

These objectives play key roles in achieving the goals of the Business Transformation Strategy for Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk). The main priority is Improving Operational Efficiency (0.288), followed by Improving Corporate Governance (0.264). The third priority is Increasing Social Awareness and Responsibility (0.169), followed by Enhancing Sustainable Leadership (0.147), and lastly, Strengthening Environmental Sustainability Practices (0.132).

The Objective Analysis (Level 4) reveals that improving Operational Efficiency is the top priority for PT Pupuk Indonesia's sustainable transformation, with the highest weight (0.288). This focus on operational efficiency reflects the need to streamline processes, reduce waste, and enhance productivity, all of which contribute directly to sustainability and cost-effectiveness. Corporate Governance ranks closely behind (0.264), emphasizing transparency, accountability, and effective decision-making as essential to embedding sustainability into corporate culture. Social Responsibility (0.169) is also significant, showing the importance of PT Pupuk Indonesia's commitment to its employees and communities. Sustainable Leadership (0.147) and Environmental Sustainability Practices (0.132) rank lower but are still crucial for long-term goals. These priorities indicate that PT Pupuk Indonesia should initially concentrate on enhancing operational processes

and governance frameworks, while steadily integrating social, leadership, and environmental strategies to build a comprehensive, sustainable business model.

Alternative Analysis (Level 4)

The purpose of the alternative analysis is to identify which alternatives are most important in influencing the Business Transformation Strategy for Achieving Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk), based on the priority weights from the Analytical Hierarchy Process (AHP) results, as shown in Table 3. The AHP calculation results are as follows:

- For the objective of Improving Operational Efficiency, the strategy with the highest weight is Implementing Best Practices in Operational Management, with a weight of 0.323. This is followed by Strengthening Corporate Governance through Continuous Training and Enhancing Communication of Sustainable Leadership Vision, each with a weight of 0.162.
- For the objective of Improving Corporate Governance, the strategy with the highest weight is Strengthening Corporate Governance through Continuous Training, with a weight of 0.272. This is followed by Enhancing Communication of Sustainable Leadership Vision with a weight of 0.188, and Implementing Best Practices in Operational Management, with a weight of 0.186.
- For the objective of Increasing Social Awareness and Responsibility, the strategy with the highest weight is Social Awareness and Responsibility Improvement Programs, with a weight of 0.254. This is followed by Implementing Best Practices in Operational Management with a weight of 0.178, and Strengthening Corporate Governance through Continuous Training, with a weight of 0.165.
- For the objective of Enhancing Sustainable Leadership, the strategy with the highest weight is Enhancing Communication of Sustainable Leadership Vision, with a weight of 0.226. This is followed by Strengthening Corporate Governance through Continuous Training with a weight of 0.192, and Implementing Best Practices in Operational Management, with a weight of 0.167.
- For the objective of Strengthening Environmental Sustainability Practices, the strategy with the highest weight is Implementing Innovative Environmental Sustainability Practices, with a weight of 0.201. This is followed by Social Awareness and Responsibility Improvement Programs, with a weight of 0.180, and Implementing Best Practices in Operational Management, with a weight of 0.174.

Table 4: Alternative Weights Against Objectives in the Business Transformation Strategy for Achieving Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk)

Strategy	Objective				
	Improved Operational Efficiency	Improved Corporate Governance	Increased Social Awareness and Responsibility	Continuous Leadership Improvement	Strengthening Environmental Sustainability Practices
Implementing Best Practices in Operational Management	0,323	0,186	0,178	0,167	0,174
Strengthening Corporate Governance through Continuous Training	0,162	0,272	0,165	0,192	0,16
Social Awareness and Responsibility Improvement Programs	0,116	0,131	0,254	0,146	0,18
Enhancing Communication of Sustainable Leadership Vision	0,162	0,188	0,135	0,226	0,154

Implementing Innovative Environmental Sustainability Practices	0,088	0,101	0,159	0,146	0,201
Evaluating and Adjusting Transformation Strategy for Maximum Impact	0,149	0,122	0,109	0,123	0,132

These alternatives play a crucial role in achieving the goals of the Business Transformation Strategy for Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk). The highest-priority strategy for improving operational efficiency is Implementing Best Practices in Operational Management (0.323), while for improving corporate governance, the priority strategy is Strengthening Corporate Governance through Continuous Training (0.272). For increasing social awareness, the top strategy is Social Awareness and Responsibility Improvement Programs (0.254), and for enhancing leadership, it is Enhancing Communication of Sustainable Leadership Vision (0.226). Lastly, for strengthening environmental sustainability, Implementing Innovative Environmental Sustainability Practices is the top priority (0.201). The overall analysis of alternative weights for strategies in the Business Transformation Strategy for Achieving Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk) is presented in Table 5 below.

Table 5: Business Transformation Strategy Alternatives for Achieving Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk)

No.	Policy Alternatives	Priority Vector	Rank
1	Implementation of Best Practices in Operational Management	0.209	3
2	Strengthening Corporate Governance through Continuous Training	0.196	1
3	Social Awareness and Responsibility Improvement Programs	0.160	2
4	Enhancing Communication of Sustainable Leadership Vision	0.174	5
5	Implementation of Innovative Environmental Sustainability Practices	0.134	4
6	Evaluation and Adjustment of Transformation Strategy for Maximum Impact	0.127	6

In the context of the Business Transformation Strategy for Achieving Sustainable Corporate Performance at PT Pupuk Indonesia (Tbk), three strategic alternatives are considered the most feasible and top priorities, based on various justifications and factors.

The first alternative, with the highest weight of 0.209, is the Implementation of Best Practices in Operational Management. This aims to enhance efficiency, productivity, and quality across the company's value chain. By adopting modern methodologies and technologies such as lean manufacturing, six sigma, and automation, the company seeks to optimize processes, reduce waste, and improve competitiveness. Implementing these best practices provides a solid foundation for sustainable business transformation and achieving superior performance. Research by Muhammad et al. (2022) shows that Lean and Six Sigma implementation can improve corporate performance in terms of efficiency, growth, and profitability, although sustainability does not significantly impact these dimensions. Additionally, a study by Huang et al. (2023) emphasizes that applying Lean Six Sigma with data-driven decision-making can improve sustainable manufacturing practices by enhancing environmental performance. Chiarini and Kumar (2020) also identify the integration of Lean Six Sigma with Industry 4.0 technologies as an effective approach to achieving operational excellence through synchronized automation processes and enhanced data analytics.

The second alternative, with a weight of 0.196, is Strengthening Corporate Governance through Continuous Training. This alternative is based on the understanding that strong corporate governance is the foundation for sustainable business transformation. Continuous training for management and staff on good governance principles and practices will enhance transparency, accountability, and effectiveness in decision-making. This creates a conducive environment for the successful implementation of business transformation strategies.

The third alternative, with a weight of 0.174, is Strengthening Communication of the Sustainable Leadership Vision. Consistent communication from top leadership regarding sustainability vision and strategy is a critical factor in aligning all elements of the organization. Through effective communication, leaders can facilitate the adoption of a sustainability mindset among employees and enhance engagement and innovation within the company.

The fourth alternative, with a weight of 0.160, is the Social Awareness and Responsibility Improvement Program. This program aims to integrate sustainability and social responsibility values throughout the organization. By implementing awareness campaigns, training programs, and strategic CSR initiatives, the company seeks to align its operations with stakeholder expectations and contribute positively to society and the environment.

The fifth alternative, with a weight of 0.134, is the Implementation of Innovative Environmental Sustainability Practices. This approach focuses on developing and applying innovative solutions to mitigate the environmental impact of the company's operations.

The sixth alternative, with a weight of 0.127, is Evaluating and Adjusting the Transformation Strategy for Maximum Impact. Business transformation is a dynamic and continuous process, making ongoing evaluation of the effectiveness of implemented strategies crucial. Through systematic performance monitoring, comprehensive impact analysis, and feedback from stakeholders, the company can identify areas needing improvement and implement corrective actions accordingly.

These findings emphasize the importance of developing a robust feedback mechanism to maintain the relevance of business transformation strategies amidst the evolving dynamics of the business environment.

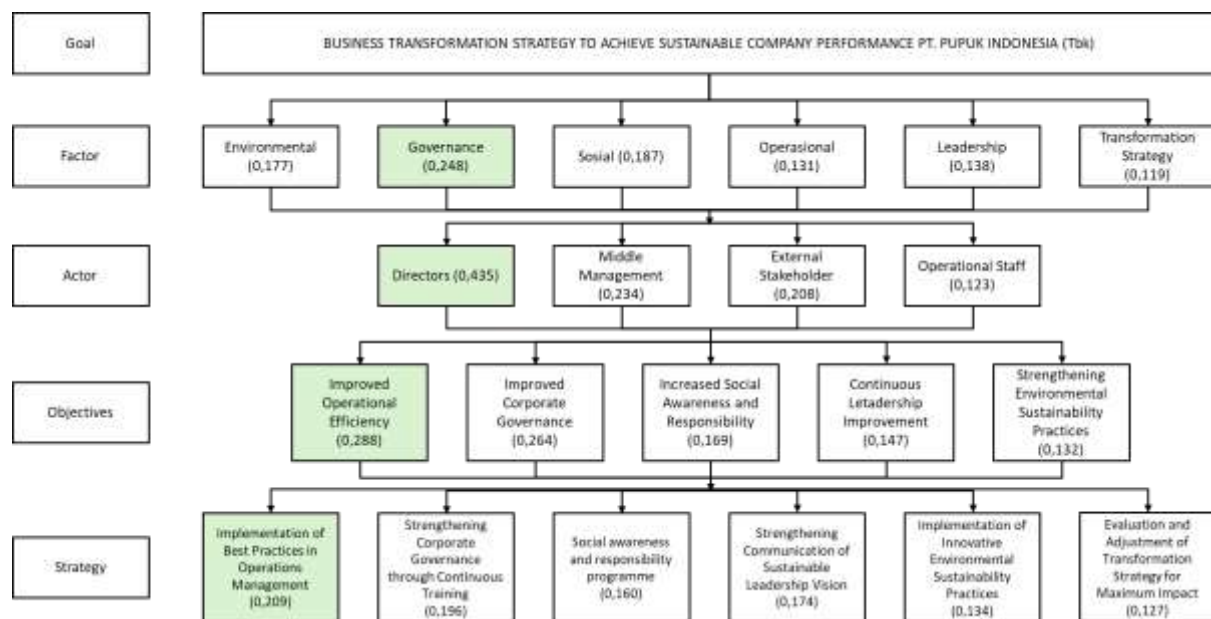


Figure 3 Hierarchical structure of AHP processing results

The main priorities in the Business Transformation Strategy to Achieve Sustainable Company Performance of PT Pupuk Indonesia (Tbk) can be seen in Figure 3 and concluded as follows:

1. Factor Level. The main factor in the Business Transformation Strategy to Achieve Sustainable Company Performance of PT Pupuk Indonesia (Tbk) is Governance with a weighting value of 0.248.

2. Actor Level. The most important actor for the Business Transformation Strategy to Achieve Sustainable Company Performance of PT Pupuk Indonesia (Tbk) is the Board of Directors with a weighting value of 0.435.
3. Goal Level. The goal that most wants to be achieved in the Business Transformation Strategy to Achieve Sustainable Company Performance of PT Pupuk Indonesia (Tbk) is to Increase Operational Efficiency with a weighting value of 0.288.
4. Alternative Level. The most important alternative for the Business Transformation Strategy to Achieve Sustainable Company Performance of PT Pupuk Indonesia (Tbk) is the Implementation of Best Practices in Operational Management with a weighting value of 0.209.

The hierarchical structure of AHP processing results, as illustrated in Figure 3, provides a clear framework for PT Pupuk Indonesia's sustainable business transformation strategy by organizing key elements into prioritized levels. At the top, the ultimate goal of Achieving Sustainable Corporate Performance serves as the guiding focus. Directly supporting this are the highest-priority factors identified through AHP: Governance, Social Responsibility, and Environmental Sustainability, each essential for long-term sustainability. Below these are the influential Actors—with Directors at the forefront, followed by Middle Management, External Stakeholders, and Operational Staff—who are each responsible for enacting transformation at various organizational levels. The hierarchy then cascades to Objectives such as Operational Efficiency and Corporate Governance, which directly address sustainability goals, and finally to Strategic Alternatives like Best Practices in Operational Management and Governance Training, which provide actionable pathways. This structured hierarchy enables PT Pupuk Indonesia to systematically address and implement each level, ensuring that all aspects of sustainability are integrated into their operations, leadership, and strategic practices.

This research highlights the critical elements and structured approach needed for PT Pupuk Indonesia to successfully achieve sustainable corporate performance. By prioritizing governance, social responsibility, and environmental sustainability, and by empowering key actors such as Directors and Middle Management, the company is well-positioned to implement impactful and sustainable transformation strategies. The AHP framework provides a clear roadmap for aligning operational efficiency, robust governance, and best practices, ensuring that sustainability becomes an integral part of the organization's growth and competitive edge. This approach not only strengthens PT Pupuk Indonesia's industry leadership but also sets a benchmark for sustainable practices within the sector.

Conclusions

The Business Transformation Strategy for achieving sustainable corporate performance at PT Pupuk Indonesia (Tbk) has been comprehensively analyzed using the Analytical Hierarchy Process (AHP). The analysis identified governance as the most critical factor, with a priority weight of 0.248, emphasizing the importance of robust governance structures in promoting transparency, accountability, and effective decision-making across the organization. The Directors emerged as the most influential actors in this transformation, holding a significant priority weight of 0.435. Their leadership in setting strategic direction and making key decisions is essential for driving the company's transformation efforts, while middle management and external stakeholders also play supportive roles in implementation. Improving operational efficiency was ranked as the top objective, with a weight of 0.288, reflecting the company's focus on optimizing processes, reducing waste, and enhancing productivity to achieve sustainable performance.

The Implementation of Best Practices in Operational Management was identified as the most important strategic alternative, with a weight of 0.209, emphasizing the need to adopt modern methodologies such as Lean and Six Sigma to enhance efficiency and competitiveness. In conclusion, PT Pupuk Indonesia's successful business transformation hinges on strengthening governance, the active role of leadership, a strong commitment to operational efficiency, and the adoption of best practices. These elements collectively position the company to achieve long-term sustainability and maintain its competitive edge in the fertilizer industry.

The top priority for PT Pupuk Indonesia should be to Strengthen Corporate Governance. This involves implementing continuous governance training to enhance decision-making, transparency, and accountability across the organization. Effective governance will provide a solid foundation for sustainable corporate performance, ensuring that all strategies and operations are aligned with best practices and ethical standards. To drive this initiative, the company should appoint a Chief Governance Officer (CGO), responsible for leading governance reforms and ensuring that sustainability is fully integrated into the corporate strategy. This move will not only improve governance but also position PT Pupuk Indonesia as a leader in sustainable business transformation.

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