

Achieving Sustainable Operations: Challenges, Countermeasures, and the Case of Unilever

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Abstract. This paper explores the challenges and countermeasures companies face in achieving sustainable operations. There are many challenges to achieving sustainable operations, which include financial constraints, strategic transformation, institutional and cultural influences, and financial pressures. This paper proposes that companies can overcome these challenges by formulating a clear sustainability strategy, improving resource efficiency, enhancing supply chain management, promoting environmental innovation, and strengthening social responsibility as countermeasures. Meanwhile, the paper takes Unilever as an example to analyze its remarkable progress in achieving sustainable operations. Unilever has achieved many results by implementing nine health, hygiene, nutrition, greenhouse gases, water resources and waste commitments and setting more than 50 targets. Unilever has also responded positively to the challenge of achieving sustainable operations by working with suppliers, driving waste reduction and implementing carbon-neutral targets. The research in this paper will provide useful lessons and insights for companies to achieve sustainable operations.

1 Introduction

Sustainable development is a vital global concern for businesses, requiring a delicate balance between economic interests and environmental and social impacts [1]. As a management concept, sustainable operations aim to preserve resources and ecosystems for the future [2]. However, they face challenges that must be addressed for successful implementation. Financial constraints pose an initial obstacle, with environmental investments demanding substantial capital and long payback periods [3]. Embracing new technologies presents another challenge, requiring companies to navigate uncertainties [4]. Compliance with legal and regulatory changes is essential to uphold sustainability objectives. Additionally, supply chain management involves intricate logistics and compliance issues. To achieve sustainable operational goals and foster future growth, businesses must devise comprehensive sustainability strategies and collaborate with stakeholders to overcome these challenges.

To implement sustainable operations successfully, businesses can adopt various strategies. Firstly, integrating sustainability into core operations by establishing clear goals, action plans and incorporating them into strategic planning is crucial. Secondly, resource efficiency can be improved by minimizing energy, water, and raw material wastage through energy-saving technologies and production process optimization. Thirdly, promoting green technologies such as

renewable energy and environmentally conscious products can significantly reduce environmental impact.

Moreover, businesses should strengthen supply chain management by collaborating with suppliers to ensure sustainability standards are met throughout the supply chain. Furthermore, enhancing employee engagement by providing training and fostering a culture of sustainability is vital. Co-operating with stakeholders, including government, NGOs, and communities, can address challenges collectively and gain wider support for sustainable initiatives. Lastly, establishing a monitoring system to assess and report sustainable progress and results regularly will help businesses track their performance.

By adopting these integrated approaches, companies can achieve sustainable success, positively contributing to economic growth, environmental preservation, and social well-being.

2 Theoretical background

Theoretical and practical research on sustainable operations involves promoting sustainability in business practices. Key directions in this field include the Triple Bottom Line (TBL) theory, Circular Economy, Sustainable Supply Chain Management (SSCM), and Sustainability Assessment and Reporting (SAR).

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The TBL theory, proposed by Elkington in 1998, advocates integrating economic, environmental, and social aspects in business operations [3]. IHG, a leading hotel group, successfully applied this theory through its Corporate Responsibility program, achieving financial savings, customer and employee satisfaction, and reduced environmental impact [5].

The Circular Economy emphasizes resource recycling and waste reduction, as exemplified by Philips' Light as a Service model and H&M's "Closed Loop" program [6]. This approach reduces resource consumption, cost savings, and lower environmental impact.

Sustainable Supply Chain Management considers the supply chain's environmental, social, and economic factors. IKEA and Nike are successful examples of this approach, with IKEA setting sustainability requirements for suppliers and Nike assessing environmental performance and sourcing sustainable materials [7, 8].

Sustainability Assessment and Reporting involve evaluating and reporting corporate sustainability performance. Organizations like UN Global Compact, OECD, and rating agencies such as Dow Jones and FTSE4Good offer standardized frameworks and promote sustainability practices [9].

In summary, sustainability assessment plays an important role in sustainable business operations, and the involvement of international organizations, standards and rating agencies promotes the implementation of sustainability and reporting practices for sustainable development. These theories and case practice studies provide guidance and references for companies to help them better drive sustainable development in practice. By combining theory and practice, businesses can more effectively implement sustainable operations and achieve economic, environmental, and social success.

3 Impact of implementing sustainable operations

Achieving sustainable operations helps companies to gain a competitive advantage and enhance brand value while increasing market acceptance. Consumers increasingly demand sustainable products and services, and environmentally and socially responsible companies are more likely to be favored by consumers. By implementing sustainable operations, companies can build their image in the sustainability sector and increase brand awareness and loyalty.

Improving environmental and social responsibility issues can reduce production costs, e.g., optimizing the supply chain can improve raw material utilization, reducing energy consumption through energy-saving measures, firms can reduce their energy bills and improve efficiency, and reduce waste disposal costs. Some studies have analyzed empirical data and concluded a significant positive correlation between

environmental management and business performance. This suggests that sustainable operations can improve a company's economic performance, such as reducing costs, improving product quality, enhancing brand value, etc. O'Rourke suggests that implementing sustainable operations can also positively impact a company's internal organization and processes, such as increasing employee satisfaction, reducing turnover, and enhancing teamwork. A business is perceived to be more socially and environmentally conscious by achieving sustainable operations. The business will create a good image in the minds of consumers and increase brand value. All these impacts contribute to the performance and innovation of the organization [10].

By implementing sustainable operations, companies can reduce economic losses, improve long-term stability, and better adapt to challenges that may arise in the future. At the same time, focusing on sustainability can help attract consumers, investors and talented employees, enhancing a company's attractiveness and competitive advantage. Overall, sustainable operations give businesses comprehensive control over future risks, driving them toward sustainable growth and long-term prosperity.

Sustainable operations encourage enterprises to seek new business opportunities and innovative solutions. By promoting the application of green technologies and renewable energy, companies can open new market segments and meet the growing demand for sustainable products and services. Sustainability challenges inspire businesses to innovate in product design, the circular economy and environmental management.

More and more employees are concerned about the sustainability performance of their organizations and are more willing to work for socially and environmentally responsible organizations. Implementing sustainable operations attracts and retains talented people and increases employee satisfaction and loyalty. Employee involvement in sustainability programs can also stimulate innovative thinking and teamwork. Implementing sustainable operations has a wide range of positive impacts on organizations, including competitive advantage and increased brand value, resource efficiency and cost savings, risk management and compliance benefits, innovation and market opportunities, and increased employee recruitment and satisfaction. Companies can achieve long-term business success and social value by promoting sustainable development.

4 Challenges and countermeasures in sustainable operations

4.1 Challenges

Businesses operating sustainably may encounter various internal challenges that hinder their efforts. These challenges encompass resource constraints, strategic

transformations, institutional and cultural influences, and financial pressures.

Resource Constraints: Enterprises may face human resources, financial capabilities, and organizational culture limitations. A scarcity of talent or skills mismatch can affect productivity and innovation. Financial constraints and economic instability can impede investment in sustainable practices. A culture that neglects sustainability may hinder implementation.

Strategic Transformation and Investment: Achieving sustainability often demands strategic shifts and investments. Upgrading production processes with environmentally friendly technologies, introducing sustainable products and services, and investing in green projects are necessary for an eco-friendly direction.

Institutions and Culture: Institutional and cultural factors significantly impact a company's sustainability strategy. Establishing internal systems, sound management practices, and complying with regulations are essential for successful implementation. Cultivating a change-ready culture is vital to embrace sustainability practices.

Financial Pressure: Pursuing sustainability involves costs and financial pressures. Financial considerations include initial investments for sustainable measures, increased operating costs, regulatory compliance, and market competitiveness.

While facing these challenges, enterprises must take proactive measures. Efficient resource usage, diversifying supply chains, technology innovation, and cooperation in sustainable initiatives can help overcome obstacles. A clear sustainability strategy, cooperative relationships with stakeholders, and leadership commitment are essential to drive companies toward sustainable success. With proper planning and engagement, businesses can surmount internal challenges and achieve sustainable operational goals.

4.2 Countermeasures

To meet the challenges of sustainable operations, enterprises can take the following countermeasures:

Developing a Clear Sustainability Strategy: Integrate sustainability into core values and operations. Set measurable goals using the SMART rule and create detailed action plans for environmental protection, clean energy promotion, and supply chain optimization. Implement monitoring and evaluation mechanisms to track progress.

Establishing a Dedicated Sustainability Team: Create a specialized team with defined goals and responsibilities. Encourage interdisciplinary collaboration and effective communication to tackle multi-disciplinary challenges. Provide training to deepen understanding of sustainability and foster innovation and improvement.

Increasing Resource Efficiency: Adopt energy conservation, water management, and circular economy practices to reduce resource consumption, environmental impacts, and costs. Utilize energy-efficient technologies, promote a circular economy, and implement energy conservation policies.

Promoting Supply Chain Sustainability: Ensure suppliers meet standards and prioritize sustainable suppliers. Consider environmental impacts in purchasing decisions and optimize resource usage. Set internal sustainability standards and use technology like IoT and big data to enhance supply chain sustainability.

Promoting Environmental Innovations and Technologies: Adopt environmentally friendly innovations and invest in research and development of environmental technologies. Establish incentive mechanisms and raise public awareness of environmental technologies.

Strengthening Social Responsibility: Comply with laws, respect human and labor rights, and focus on social and environmental ethics. Build good community relationships and support sustainable development through charitable and volunteer activities.

Enhancing Consumer Education: Guide environmentally and socially responsible choices through education and publicity. Use environmental labeling and certification to help consumers identify sustainable products.

Co-operation with Stakeholders: Collaborate with governments, NGOs, investors, and consumers to develop and implement sustainability goals. Establish collaborative platforms for knowledge sharing and cooperative research and development.

By implementing these measures, enterprises can effectively address the challenges of sustainable operations, achieve economic, social, and environmental benefits, and create a foundation for long-term development.

4.3 Case study of Unilever

Unilever, a global consumer goods company, launched its "Sustainability Action Plan" in 2010, committing to achieve three ambitious goals by 2020: "Help 1 billion people to be healthier; halve the negative environmental impact of our products; and source 100% of our raw materials from sustainable agriculture." This comprehensive plan encompassed nine commitments, covering health, hygiene, nutrition, greenhouse gases, water, waste, sustainable sourcing, workplace fairness, and gender inclusion, with over 50 targets spanning social, environmental, and economic aspects across its entire value chain.

Unilever made significant progress towards its goals, as demonstrated in the *Sustainability Action Progress Report*: Over 1.3 billion people benefited from Unilever's health and hygiene programs; Consumer

waste from Unilever products reduced by 32%, and all factories achieved zero waste to landfill; Greenhouse gas emissions from Unilever's manufacturing processes decreased by 50%, and 100% renewable electricity was achieved in major markets; The sugar content of sugary tea drinks reduced by 23%, while 56% of the food portfolio met high nutritional standards; Over 2.34 million women participated in Unilever's programs to improve their safety, skills, and career opportunities, contributing to gender balance in the workplace, with women comprising 51% of global management positions.

Unilever also faced challenges in its pursuit of sustainable operations. Consumer Behavior: Shifting consumer behavior towards sustainability remained a challenge, with impacts beyond direct control; Supply Chain Management: Unilever's extensive global supply chain required coordination and harmonization to meet sustainability requirements; Environmental Impacts and Carbon Emissions: Unilever aimed to address environmental impacts across its product life cycle and reduce carbon emissions throughout the value chain; Conceptual Change: Some leaders questioned the compatibility of sustainability with traditional capitalist principles.

Unilever also took a multi-faceted approach to address the challenges of implementing sustainable operations. Firstly, they promote sustainable lifestyles by raising consumer awareness through advertising, promotional campaigns, and educational initiatives. They encourage consumers to opt for sustainable products, reducing waste and resource consumption. Unilever's commitment to sustainability is exemplified in its decision to relinquish exclusive rights to lightweight packaging technology, aiming to reduce environmental impact and encourage its adoption across the Fast-Moving Consumer Goods (FMCG) industry [11].

Secondly, Unilever focuses on product and technology innovations to minimize energy and resource consumption. They develop greener and more sustainable products to cater to the increasing demand for eco-friendly solutions. Launching various brands with eco-friendly cleaners, sustainable food, and health and beauty products exemplifies their dedication to sustainability. Unilever also optimizes supply chain and logistics management using efficient equipment and processes while prioritizing the reduction of environmental impact through sustainable packaging solutions, such as recyclable plastic bottles and cardboard boxes.

Thirdly, Unilever ensures supply chain transparency by monitoring its suppliers' environmental and social responsibility. They implement sustainability standards and conduct regular audits and assessments to achieve transparency. Establishing a visual supply chain network and integrating digital technologies and data management systems enables Unilever to gain comprehensive insights into raw materials, production processes, and distribution channels, identifying potential risks and opportunities for improvement.

Fourthly, Unilever builds strong partnerships with suppliers, customers, governments, and NGOs. Collaborating on cross-industry and cross-sector initiatives, they share best practices and drive sustainable actions within the supply chain. These partnerships provide additional support and oversight to improve supply chain transparency and responsible operations continuously.

Furthermore, Unilever actively engages in waste reduction initiatives. For instance, under the Rex brand, they launched the "Green Hatta Initiative" to combat desertification of the Tibetan Plateau by artificially planting grass, contributing to ecological protection. Initiatives like the "China Intelligent Water Saving Valve" and the "China Smart Water Saving Valve" were introduced to help consumers save water during product use. Moreover, Unilever successfully reduced greenhouse gas emissions in their Chinese factories by 8% and 49% compared to 2014 and 2008, respectively.

Lastly, Unilever sets a carbon-neutral target to reduce direct and indirect greenhouse gas emissions by 50% each from their factories and operations by 2030. They improve energy efficiency, increase renewable energy usage, and introduce greener and lower carbon footprint products to achieve this. Additionally, they plan to offset remaining carbon emissions through sustainable projects, such as forest conservation, ecological restoration, and renewable energy development.

By integrating sustainability into corporate strategy and operations, Unilever achieves a win-win outcome for the economy, environment, and society. Their commitment to sustainable product innovation, supply chain sustainability, environmentally friendly manufacturing, social responsibility, inclusiveness, and education on sustainable consumption helps maintain their leading position in the field of sustainability.

5 Conclusion

Sustainable operations face several business practice challenges that must be addressed proactively. Financial constraints may limit the ability of enterprises to invest and act on sustainable operations. Adopting new technologies and innovative solutions requires enterprises to invest time and resources and face the challenges of business model immaturity and learning to adapt. Businesses need to comply with environmental, social and governance regulations and standards in different countries and regions and respond to the changing regulatory environment. Building partnerships with suppliers and promoting sustainability requires addressing supply chain management. However, by developing a comprehensive sustainability strategy and working closely with stakeholders, companies can overcome these challenges and achieve the goal of operating sustainably. By addressing these challenges, organizations can gain a competitive advantage, reduce costs, manage risks, explore opportunities for innovation,

and gain recognition and support from employees and consumers. Sustainable operations are, therefore, an ethical and social responsibility and a key element in achieving long-term business success.

Authors Contribution

All the authors contributed equally,
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