

The Competitive Edge of Sustainability Operational Management as a Driver of Firm Value

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Abstract

Sustainability has emerged as a key factor to enhance a firm's competitive advantage. The role of operations management in achieving sustainability business practices that bring firm value remains to be studied. By means of a Systematic Literature Review approach, this paper discusses the role operations management plays in creating firm value for its competitive strategies and globalization strategy. Findings of this research indicate that firms can enjoy better financial performance from higher integration environmental practices in their day-to-day business practices. An improved reputation, brand recognition among customers and increased confidence among stakeholders will result. However, effective operations management is more efficient in use of resources and thereby lower costs or environmental footprints. This suggests those results that sustainability is not simply a demand for compliance but an asset which helps make companies more competitive in the long term. This means companies should strive to strengthen operational sustainability management at all times if they are to gain the most and best firm value in dynamic, fast-moving markets.

Keywords: Sustainability, Operational Management, Competitive, Firm Value, Systematic Literature Review.

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1. Introduction

Since 1978, the United Nations has used the term sustainable as a substitute for ecological development. Sustainability is expected to prevail as a critical megatrend affecting companies (as well as consumers) in the decades to come [1]. The concept of sustainability in business has gained significant attention over the years. Sustainability involves incorporating environmental, social, and economic considerations into business operations to ensure long-term success and minimize negative environmental and societal impacts. This approach not only benefits the planet but also enhances a company's reputation and stakeholder relationships.

The systematic review was conducted to address gaps in existing knowledge and resolve disagreements in the literature regarding the impact of sustainability on firm value. While some studies suggest that sustainability practices can lead to competitive advantages and increased firm value, others argue that the costs associated with implementing these practices may outweigh the benefits [2]. For example, Inman and Green demonstrated a beneficial relationship between eco-friendly practices (such as green product development, green design, green procurement, and green supplier collaboration) and environmental sustainability results (such as waste reduction and emission reductions). Likewise, Shah and Soomro [3] found that working with suppliers on recycling and remanufacturing helps lower pollution and enhances company reputation. Conversely, Sancha et al [4] found that overseeing suppliers through formal selection and evaluation or conducting environmental

and social audits adversely affects sustainability outcomes, underscoring the potential drawbacks of environmental assessments. Similarly, Yildiz Çankaya and Sezen [5] did not identify any significant connections between various green supply chain management practices (like green purchasing) and sustainability performance.

The purpose of this study is to examine how operational management practices that incorporate sustainability can drive firm value. By systematically reviewing existing literature, the study aims to identify key factors that contribute to the competitive edge gained through sustainable practices and provide insights for businesses looking to enhance their value through sustainability. Sustainability has grown in importance for organizations to stay relevant and competitive in the modern world. Similar to digital transformation, promoting sustainability necessitates transforming all aspects of a business [6]. Nowadays, integrating sustainability into corporate strategy is essential. Sustainability in organizations is reflected in the well-known acronym ESG, which stands for Environment, Social, and Governance [7]. The increasing awareness of climate change, resource depletion, and social inequalities has put pressure on companies to adopt more sustainable practices. Governments, consumers, and investors are demanding greater transparency and responsibility from businesses regarding their environmental and social impacts. The urgency of sustainability is further underscored by the potential for regulatory changes, market shifts, and the need to maintain a positive corporate image.

Operations management plays a pivotal role in the integration of sustainability into business practices. By

optimizing processes, reducing waste, and improving resource efficiency, companies can achieve significant environmental and economic benefits. It is important for business to adopt eco-friendly practices to address these challenges [8]. Sustainable operations management involves incorporating principles of sustainability into various aspects of operations, such as supply chain management, production processes, and product design. This not only helps in reducing the ecological footprint but also enhances operational efficiency and cost-effectiveness.

The primary objectives of this discussion are to explore the importance of sustainability in business and its impact on firm value and to analyze how operational management practices can drive sustainability and contribute to competitive advantage. The scope of this discussion includes a review of existing literature on the topic, an examination of case studies and real-world examples, and the identification of emerging trends and challenges in sustainable operations management. By providing a comprehensive analysis, the discussion aims to offer valuable insights and practical recommendations for businesses looking to enhance their sustainability efforts and achieve long-term success.

2. Research Method

According to Xiao & Watson [9] the authors employed a systematic literature review (SLR) as a structured and robust research methodology to explore and evaluate literature related to the dynamic integration of sustainability within operations management. This review aims to systematically locate and assess existing work to better understand how operations management can foster sustainability-driven competitive advantage. The process, grounded in the concept of sustainability in business, seeks to survey, assess, and synthesize previous research that connects strategic operations with long-term corporate value. As Linares-Espinós et al emphasized [10], the systematic nature of the review ensures that key questions are revisited and analyzed across multiple dimensions, ranging from sustainable operations practices to their actual impact on corporate performance. In this investigation, the SLR follows a carefully staged process illustrated in Figure 1.



Figure 1. SLR Follows A Carefully Staged Process Illustrated

To begin, carefully formulated research questions are developed to specifically investigate the multidimensional impact of sustainable business strategies on both consumer behavior and corporate competitiveness. These questions serve as the intellectual foundation of the systematic literature review and are crafted to uncover how the integration

of sustainability into business operations reshapes consumer expectations, purchasing decisions, brand loyalty, and overall market dynamics. One central question posed in this study is how does the operationalization of sustainability focused strategies influence consumer transaction behaviors, and in what ways does this behavioral shift contribute to the enhancement of firm value through operational management.

This inquiry targets not only consumer response but also explores internal organizational shifts such as changes in supply chain processes, resource allocation, and employee engagement that collectively contribute to a firm's sustainable competitive positioning. Aligned with this objective, the second stage of the review process involves designing and refining a systematic review protocol. This protocol acts as a methodological blueprint ensuring that each step from article selection to data synthesis is conducted with transparency, reproducibility, and academic rigor. It outlines specific parameters such as the scope of the review, target industries, and key themes including environmental stewardship, circular economy principles, and stakeholder value creation. The protocol is especially vital when evaluating the role of operations management, as it ensures that the analysis remains tightly focused on how operational functions [11] serve as levers for achieving long-term sustainability goals and enhancing corporate value.

In the third stage, a comprehensive literature search is undertaken using academic databases such as Google Scholar, Scopus, and Web of Science. This process employs a combination of targeted keywords and operators to systematically capture relevant peer-reviewed articles, case studies, and industry reports published within the last decade. The objective is to gather robust and diverse academic evidence that addresses how sustainability-oriented operational strategies influence performance metrics like profit margins, customer retention, and brand equity. By conducting a wide-reaching search, the review ensures inclusivity and comprehensiveness, capturing both theoretical and empirical insights across different sectors and geographic regions. The fourth step entails the meticulous application of inclusion and exclusion criteria, which are essential to filter and refine the literature to only the most pertinent sources. Inclusion criteria might specify that studies must be peer-reviewed, written in English, published between 2013-2024, and directly address intersections among sustainability, operations, and corporate strategy.

Finally, the review progresses to data analysis and synthesis, where extracted information is thematically coded and organized to reveal dominant patterns, strategic approaches, and existing knowledge gaps. The studies are analyzed for recurring themes such as green innovation, lean manufacturing, carbon footprint reduction, and integration of ESG (Environmental, Social, and Governance) criteria into core operations. The synthesis not only uncovers best practices adopted

by leading firms but also exposes areas where theoretical models lack empirical support or where implementation remains fragmented. Importantly, this phase provides critical insights into the causal relationships between sustainable operations and measurable corporate value—such as improved financial performance, enhanced stakeholder trust, and long-term risk mitigation. The outcomes of this stage establish a framework for actionable strategies and contribute to the development of a research agenda that can guide future empirical studies and managerial applications. By illuminating the strategic role of operations in achieving sustainability, this study underscores its potential as a primary driver of sustainable competitive advantage in the evolving global business landscape.

3. Result and Discussion

The concept of sustainability is defined as an approach that seeks to achieve and maintain long-term well-being and efficiency. This effort is realized through responsible resource management, which comprehensively considers several interrelated aspects, namely the environment, economy, and society [12]. The application of the concept of sustainability in the business world requires companies to balance economic interests with social and environmental responsibilities, by minimizing negative impacts, avoiding excessive exploitation, and contributing to improving the quality of life of all stakeholders. The development of sustainable business practices sustainability and Corporate Social Responsibility has reached a stage where both are integral components of today's modern corporate strategy. And the main goal of these practices is to mitigate negative impacts on the environment and optimize social-economic benefit for all stakeholders. Next Triple Bottom Line People, Planet, Profit on Figure 2.

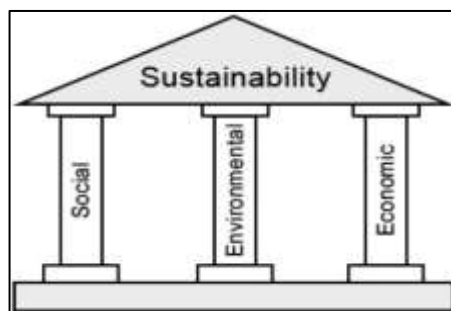


Figure 2. Triple Bottom Line People, Planet, Profit

A management expert by Elkington [13], introduced the Triple Bottom Line concept that pushes the traditional business paradigm that focuses solely on financial gain. Elkington argues that business should not only focus on profit. However, companies must apply a more holistic approach, namely considering the impact on three interrelated aspects, namely: Human (Social) which includes the interaction between institutions and society, human values, aspirations, and ethical issues in collective decision making. The focus of this dimension is on social justice for all parties and

ensuring that everyone has equal access to resources and opportunities. Second, Planet (Environment) emphasizes the importance of protecting the environment, including sustainable management of natural resources, reducing carbon emissions, and innovation in environmentally friendly practices. Finally, Profit (Economy) remains an element that cannot be ignored, but in the context of sustainability, profit must be obtained through ethical means and not harm social or environmental aspects [14].

In its implementation, various global regulations and standards have been developed to ensure that sustainability principles can be effectively implemented by companies in various industrial sectors. Several international regulations that serve as the main guidelines in sustainability practices include the Sustainable Development Goals (SDGs) set by the United Nations (UN), which include 17 sustainable development goals that must be adopted by countries and companies. In addition, there are various other standards such as the Global Reporting Initiative (GRI), which is a reference in corporate sustainability reporting, and Environmental, Social, and Governance (ESG) which is used to assess corporate performance in environmental, social, and corporate governance aspects. [15].

At the national policy level, many countries have adopted regulations that require companies to implement sustainability principles in their operations, whether through waste management policies, energy efficiency, or involvement in corporate social responsibility. With increasing awareness of the importance of sustainability in the business world, companies are able to integrate sustainability principles into their business strategies will not only gain the trust of stakeholders, but also create stronger competitiveness in the long term. All existing standards and regulations are built on the recognition and disclosure of the impacts of various sectors on the company's environment, social, and economy [16].

Sustainable operational management is an approach to managing business processes that aims to improve operational efficiency while minimizing negative impacts on the environment and society. In the context of sustainability, operational management not only focuses on optimizing production, distribution, and service processes, but also ensures that each operational stage is aligned with the principles of sustainability. The main role of operational management in sustainability is to create a balance between productivity, cost efficiency, and environmental responsibility, so that companies can run their businesses sustainably without sacrificing resources for future generations [17].

To achieve sustainability goals, various operational strategies can be implemented to increase efficiency and reduce environmental impact. One of the main strategies is the implementation of the lean manufacturing concept which focuses on reducing waste in the production process, whether in the form of

raw materials, energy, or time. In addition, the principle of circular economy is increasingly being adopted by companies, where the production process is designed to produce as little waste as possible, by reusing or recycling the materials used [18]. In addition, optimizing sustainable supply chains is also a crucial aspect, where companies choose suppliers who implement environmentally friendly practices and ensure that the raw materials used come from responsible sources. Energy efficiency and reducing carbon emissions in the production process are also key strategies, which can be achieved through the use of energy saving technologies and the transition to renewable energy [19].

Technology and innovation play a fundamental role in achieving sustainable operations. Advances in digital technologies, such as automation and artificial intelligence, enable companies to optimize resource use with greater precision, reducing waste and increasing efficiency. The use of the Internet of Things (IoT) in industrial operations enables real-time monitoring of energy and resource use, enabling companies to make continuous improvements based on the data obtained [20]. In addition, environmentally friendly technologies such as renewable energy, technology-based waste management systems, and innovative biodegradable materials are key factors in supporting operational sustainability. Innovation in logistics management is also growing, with companies adopting environmentally friendly transportation systems and more efficient distribution models to reduce their carbon footprint. With the increasing demand for socially and environmentally responsible businesses, companies that are able to integrate sustainable technologies and operational strategies will have a stronger competitive edge and can contribute to global efforts to achieve long-term sustainability [21].

Sustainability plays a pivotal role in creating a competitive edge in today's landscape. By adopting sustainable practices, businesses can make meaningful contributions to the environment and society while reaping substantial advantages that distinguish them from their competitors. Sustainable practices create a competitive advantage, attracting environmentally conscious consumers willing to pay a premium for eco-friendly products. Ethical branding also strengthens customer loyalty. Sustainable practices encompass environmental, social, and economic dimensions influencing consumer perceptions, trust, and brand loyalty [22]. Innovation has a positive impact on sustainability performance [23]. Innovation and sustainability form an important link in the pursuit of environmental, economic, and social development [24]. Companies often develop new products, processes, or business models that are both eco-friendly and commercially viable, keeping them ahead of competitors.

A study from Bodhanwala & Bodhanwala [25] find a significant positive relationship between sustainability and firm performance measures (return on invested

capital, return on equity, return on assets and earnings per share). Adopting energy-efficient technologies and reducing waste can lower operational costs. Sustainability is also closely related to innovation. Sustainability-focused organizations can often secure loans with lower interest rates through sustainability-linked loans (SLLs) or green financing programs. These loans are designed to incentivize organizations to meet specific sustainability performance targets (SPTs), such as reducing carbon emissions or improving energy efficiency. When these targets are achieved, the borrower is rewarded with reduced interest rates. Conversely, failing to meet the targets may result in higher rates [26].

Furthermore, governments and international bodies are increasingly enforcing environmental and social regulations. Companies that proactively embrace sustainability are better positioned to comply with regulations and avoid potential fines or reputational damage [27]. A commitment to sustainability is often a key factor for employees and investors when choosing organizations to work with or support. An effective sustainability strategy can help businesses attract skilled professionals and secure investment or collaborative opportunities [28].

Sustainable operational management has a significant impact on company value, especially in increasing profitability and long-term business growth. By implementing operational costs through better resource management, energy efficiency, and optimization of environmentally friendly supply chains. Reducing production waste and using more sustainable raw materials not only reduces the burden of costs, but also helps companies avoid the risk of increasingly stringent regulations related to environmental issues [29]. Sustainability can also open new market opportunities by attracting consumers who are increasingly concerned about the environmental impact of the products and services they consume. This drives more stable and sustainable business growth, where companies can build customer loyalty and strengthen their position in the industry [30].

To increasing profitability, the implementation of sustainable operational management also contributes to increasing investor confidence and access to green funding sources. Investors are increasingly considering Environmental, Social, and Governance (ESG) factors in making investment decisions, so companies that demonstrate a commitment to sustainability tend to be more attractive to capital owners [31]. Companies with responsible business practices often achieve higher ESG scores, which are a critical indicator for institutional investors and financial institutions in assessing the risk and growth potential of a business. In addition, various green financing mechanisms, such as green bonds, sustainable loans, and ESG-based investment funds, provide companies with access to more competitive financing. This allows companies to further invest in green innovation, energy efficiency,

and digital transformation that support the sustainability of their operations [32].

Several global companies have proven that implementing sustainable operational management can significantly increase the company's value. According to responses from Judianto [33]. Unilever has adopted a Sustainable Living Plan strategy that focuses on waste reduction, energy efficiency, and more sustainable resources throughout its supply chain. As a result, the company has not only experienced increased profitability but also gained greater trust from consumers and investors. Likewise, Tesla has shown how innovation in sustainability, such as the development of electric vehicles and renewable energy, can drive tremendous business growth and attract large amounts of investment. In addition, Patagonia, an outdoor clothing company, has succeeded in building a strong reputation as an environmentally conscious brand by implementing a circular economy-based business model, where the products produced can be recycled and reused. This case study shows that companies that implement sustainable operational strategies are not only able to increase profitability but also strengthen the company's competitiveness and value in the eyes of stakeholders. Thus, sustainable operational management is not only a business strategy, but also a key factor in creating greater economic, social, and environmental value in the long term [34].

Operations management (OM) plays an essential role in enhancing a firm's value by optimizing various aspects of its operations. It drives cost efficiency through better resource utilization, process standardization, and waste reduction, directly improving profit margins and overall business value [35]. Furthermore, OM ensures consistent product quality through robust quality control and efficient supply chain practices, fostering customer satisfaction and loyalty, which ultimately contribute to revenue growth [36]. Effective capacity planning allows firms to meet market demand without over- or under-investing in resources, supporting scalability and maintaining financial stability. Additionally, OM optimizes supply chain operations by minimizing delays, reducing inventory costs, and managing disruptions, thereby improving cash flow and financial performance [37]. By leveraging advanced technologies such as automation and blockchain, OM drives innovation, streamlines workflows, and enhances decision-making, offering competitive advantages that appeal to stakeholders [38]. Finally, incorporating sustainability into OM reduces environmental impact, aligns with ethical consumer demands, and strengthens brand reputation, creating value for investors and customers alike [39]. These multifaceted benefits underscore the critical influence of operations management on a firm's success and long-term profitability.

Most importantly, it is the high initial cost that stands in the way of integrating sustainability into operational

management, businesses can save money in the short run but spend big later on things like sustainable raw materials, energy efficient equipment and today's cutting-edge technologies all of which are more expensive than their traditional counterparts [40]. Moreover, extensive staff training programs are a frequent prerequisite for moving towards sustainability in practice. Personnel need to be skilled in new techniques if they are ever to succeed with them. While these retraining sessions do bring long term benefits, they also place enormous demands on funding. Sustainability initiatives may offer financial and environmental benefits, but the computer needs time before that can be realized. Because of it takes time for energy saving or waste reduction to make money. It can be years before savings from waste reduction or energy efficiency pay off Allcott, H., & Greenstone, M. [41]. The setbacks in taking on a project bring you may see immediate financial results when you adjust the level of reward money to reflect what may coach will be saved, this waiting for return on investment can be a problem for companies with low profit margins and those in need of immediate gains to show shareholders and investors.

A company's corporate culture plays a very important part in how successful sustainability initiatives can be implemented. Many enterprises operate on deep seated models of profit first thinking, which makes it hard to shift their perspective toward long term aspiration or say even responsibility for society [42]. Staff or managers who have become accustomed to doing things in the old way might not be able to look ahead sensibly and see environmental matters as an unavoidable disruption rather than potential gold mine. They may not even understand how it will benefit them. One of the major reasons for resistance to change is staff unfamiliarity with sustainable practices and their relative benefits in the long term [43]. Employees at all levels of a company may not comprehend how much money sustainable operations save for their company, how much more efficient they make it, or what a major factor they are in keeping up the company's reputation. When companies do not try to teach their own employees this knowledge or turn it into daily practice, then anything.

Some corporation's leaders participate in a crucial way for sustainability, but if the company's top management does not whole heartedly commit, projects lose support and resources without which they cannot be carried out successfully [44]. According those responsible, some business leaders may be a little reluctant to invest in sustainability. Uncertainty as to the financial impact of environmental concerns and a preference for traditional practices can lead them away from taking action on this front. In the global supply chain [45], perhaps the most crucial question of all is just the extent of protection given to workers. Many companies transfer manufacturing or even entire plants into areas which have lower wage levels than elsewhere in their own country. These regions usually but not always give workers weak protections for labor rights, leading to

allegations that people are being taken advantage of in order to generate economic growth at the array of kids hungry and searching through trash cans as competitive salvagers.

A chain of suppliers guarantees that sustainability around the whole circuit requires an unbelievable amount of resources to check, technology providers and development experts, however, can help greatly in this area technological advance has made investment productive for industries of all shapes and descriptions [46]. Blockchains provide a secure, albeit open way to check the authenticity of materials or to trace their progress away from troublesome countries ensure that every subcontractor respect rules both environmental and ethical.

Implementing sustainability in a firm is both vital and complex, offering long-term benefits but presenting numerous challenges along the way [47]. One significant barrier is the high initial cost associated with investing in new technologies, infrastructure, and workforce training, which can be especially burdensome for small and medium enterprises (SMEs). Resistance to change from both employees and management is another hurdle, often stemming from established habits or fear of disruption [48]. Navigating diverse and evolving sustainability regulations adds further complexity, requiring firms to divert resources to ensure compliance. Moreover, the lack of expertise in specialized areas like renewable energy and green supply chains often slows progress [49]. Supply chain barriers pose additional challenges, as firms struggle with uncommitted or under-resourced suppliers [50]. Finally, while consumers increasingly favor sustainable brands, many are unwilling to pay the premium prices that often accompany eco-friendly products, creating a delicate balance for firms aiming to align with demand. Overcoming these obstacles requires strategic planning, strong leadership, and innovative solutions.

4. Conclusion

This article underscores the pivotal role of sustainable operational management in enhancing firm value and maintaining a competitive edge in modern business environments. Through a systematic literature review of relevant academic sources, the research identifies a strong correlation between sustainability initiatives and long-term business success. Companies that effectively integrate sustainability into their operational frameworks benefit from cost reductions, enhanced efficiency, risk mitigation, and improved corporate reputation. These advantages not only strengthen financial performance but also foster stakeholder trust, leading to greater customer loyalty, investor confidence, and employee engagement. Moreover, the article reveals that sustainability driven operational management contributes to regulatory compliance and environmental responsibility, reducing exposure to legal and reputational risks. Firms that fail to embrace sustainability may face challenges such as declining consumer trust, regulatory penalties, and competitive

disadvantages. Therefore, sustainable operational strategies should be viewed not merely as a compliance necessity but as a core business strategy that secures long-term profitability and corporate resilience. But still there are some gaps in these results. Only large corporations have been researched, so small and medium sized businesses are largely ignored in sustainability writing. In addition, although theoretical models extol the virtues of sustainability, there have been relatively little systematic study evaluating impacts of green operations on an enterprise's level profits. These lacunae suggest that we must explore still further whether sustainability strategies are economically valuable.

References

- [1] Lichtenthaler, U. (2023). Why Being Sustainable Is Not Enough: Embracing A Net Positive Impact. *Journal of Business Strategy*, 44(1), 13–20. DOI: <https://doi.org/10.1108/JBS-09-2021-0153>
- [2] Aleixo, A. M., Leal, S., & Azeiteiro, U. M. (2018). Conceptualization of Sustainable Higher Education Institutions, Roles, Barriers, and Challenges for Sustainability: An Exploratory Study In Portugal. *Journal of Cleaner Production*, 172, 1664–1673. DOI: <https://doi.org/10.1016/j.jclepro.2016.11.010>
- [3] Aliyah, A. R., & Tyowati, S. S. (2024). Analisis Sustainable dalam Meningkatkan Kegiatan Operasional LKMS Prespektif Manajemen Syari'ah. *Jurnal Ilmiah Ekonomi Islam*, 10(1), 821. DOI: <https://doi.org/10.29040/jiei.v10i1.11903>
- [4] Álvarez Jaramillo, J., Zartha Sossa, J. W., & Orozco Mendoza, G. L. (2019). Barriers to Sustainability for Small and Medium Enterprises In The Framework of Sustainable Development-Literature Review. *Business Strategy and the Environment*, 28(4), 512–524. DOI: <https://doi.org/10.1002/bse.2261>
- [5] Atnafu, D., & Balda, A. (2018). The Impact of Inventory Management Practice on Firms' Competitiveness and Organizational Performance: Empirical evidence from Micro and Small Enterprises in Ethiopia. *Cogent Business and Management*, 5(1), 1–16. DOI: <https://doi.org/10.1080/23311975.2018.1503219>
- [6] Bodhanwala, S. and Bodhanwala, R. (2018). Does corporate sustainability impact firm profitability? Evidence from India. *Management Decision*, 56(8), pp. 1734–1747. DOI: <https://doi.org/10.1108/MD-04-2017-0381>
- [7] Burlacu, S., Alpopi, C., Mitrită, M., & Popescu, M.-L. (2019). Sustainable e-Governance and Human Resource Development. *European Journal of Sustainable Development*, 8(5), 16. DOI: <https://doi.org/10.14207/ejsd.2019.v8n5p16>
- [8] Sancha, C., Wong, C. W. Y., & Gimenez, C. (2019). Do Dependent Suppliers Benefit from Buying Firms' Sustainability Practices?. *Journal of Purchasing and Supply Management*, 25(4). DOI: <https://doi.org/10.1016/j.pursup.2019.100542>
- [9] Christian Pohl, Gregor Schüler, Dirk Schiereck, Borrower- and Lender-Specific. (2023). Determinants In The Pricing of Sustainability-Linked Loans. *Journal of Cleaner Production*, 385, 135652, ISSN 0959-6526, DOI: <https://doi.org/10.1016/j.jclepro.2022.135652>
- [10] De Oliveira, U.R., Menezes, R.P. & Fernandes, V.A. A. (2024). Systematic Literature Review On Corporate Sustainability: Contributions, Barriers, Innovations and Future Possibilities. *Environ Dev Sustain*, 26, 3045–3079. DOI: <https://doi.org/10.1007/s10668-023-02933-7>
- [11] Dolgui, A., & Ivanov, D. (2022). 5G In Digital Supply Chain And Operations Management: Fostering Flexibility, End-To-End Connectivity And Real-Time Visibility Through Internet-of-Everything. *International Journal of Production*

- Research, 60(2), 442-451. DOI: <https://doi.org/10.1080/00207543.2021.2002969> .
- [12] Edson Kuzma, Luccas Santin Padilha, Simone Sehnem, Dulcimar José Julkovski, Darlan José Roman. (2019). The Relationship Between Innovation and Sustainability: A Meta-Analytic Study. *Journal of Cleaner Production*, 259, 120745, ISSN 0959-6526, DOI: <https://doi.org/10.1016/j.jclepro.2020.120745>.
- [13] Elkington, J. (1998). Partnerships from Cannibals With Forks: The Triple Bottom Line of 21st-Century Business. *Environmental Quality Management*, 8(1), 37-51. DOI: <https://doi.org/10.1002/tqem.3310080106> .
- [14] Deu, & Eryc Indasari. (2024). Integrasi Teknologi Digital dan Ai dalam Memperkuat Akuntabilitas Pada Operasi Manajemen Rantai Pasokan: Analisis Literatur Sistematis. *Tekmedia*, 5(2). DOI: <https://doi.org/10.46764/teknimedia.v5i2.219> .
- [15] Sutandi, S. (2018). Pengaruh Big Data dan Teknologi Blockchain terhadap Model Bisnis Sektor Logistik dengan Pendekatan Business Model Canvas. *Jurnal Logistik Indonesia*, 2(1), 9-20. DOI: <https://doi.org/10.31334/jli.v2i1.214> .
- [16] Govindan, K., & Hasanagic, M. (2018). A Systematic Review On Drivers, Barriers, and Practices Towards Circular Economy: A Supply Chain Perspective. *International Journal of Production Research*, 56(1-2), 278-311. DOI: <https://doi.org/10.1080/00207543.2017.1402141> .
- [17] Gürses, A., Güneş, K., & Şahin, E. (2021). Environmentally Sound Textile Wet Processing. *Green Chemistry for Sustainable Textiles: Modern Design and Approaches*, 77-91. DOI: <https://doi.org/10.1016/B978-0-323-85204-3.00008-7> .
- [18] Hasan, G., Si, M., Benny, S. E., Syaharni, D. S., Fauzi, E. G., Then, L., Sirait, S., Flesya, V., & Batam, U. I. (2023). Analisis Manajemen Operasional, Customer Relationship Management, dan Digital Marketing Pada PT. Indofood Sukses Makmur, Tbk. *Jurnal Minfo Polgan*, 12(2). DOI: <https://doi.org/10.33395/jmp.v12i2.12509> .
- [19] Hawn, O., Chatterji, A. K., & Mitchell, W. (2018). Do investors actually value sustainability? New evidence from investor reactions to the Dow Jones Sustainability Index (DJSI). *Strategic Management Journal*, 39(4), 949-976. DOI: <https://doi.org/10.1002/smj.2752> .
- [20] Ivanov, D., Tsipoulaniadis, A., Schönberger, J. (2021). Basics of Supply Chain and Operations Management. In: *Global Supply Chain and Operations Management. Springer Texts in Business and Economics*. Springer, Cham. DOI: https://doi.org/10.1007/978-3-030-72331-6_1 .
- [21] Kumar, P., Singh, R. K., & Kumar, V. (2021). Managing Supply Chains For Sustainable Operations In The Era of Industry 4.0 and Circular Economy: Analysis of Barriers. *Resources, Conservation and Recycling*, 164(March 2020), 105215. DOI: <https://doi.org/10.1016/j.resconrec.2020.105215> .
- [22] Linares-Espinós, E., Hernández, V., Domínguez-Escrig, J. L., Fernández-Pello, S., Hevia, V., Mayor, J., Padilla-Fernández, B., & Ribal, M. J. (2018). Methodology of A Systematic Review. *Actas Urológicas Españolas (English Edition)*, 42(8), 499-506. DOI: <https://doi.org/10.1016/j.acuroe.2018.07.002> .
- [23] Melnyk, S. A., Stewart, D. M., & Swink, M. (2004). Metrics and Performance Measurement In Operations Management: Dealing With The Metrics Maze. *Journal of Operations Management*, 22(3), 209-218. DOI: <https://doi.org/10.1016/j.jom.2004.01.004> .
- [24] Mitra, S., Karathanasopoulos, A. Firm Value and the Impact of Operational Management. *Asia-Pac Financ Markets* 26, 61-85 (2019). DOI: <https://doi.org/10.1007/s10690-018-9258-1> .
- [25] Naufal Baginda, A., Fauzi, A., Yulius Caesar, L. A., Widjaja, A., Putra, I., Atriliano, R. A., Larasati, S., & Utami, S. N. (n.d.). Analisis Strategi Keberlanjutan pada Perusahaan Unilever. *Jurnal Ilmu Manajemen Terapan*, 5(3), 208-217. DOI: <https://doi.org/10.38035/jimt.v5i3> .
- [26] Nejati, M., Rabiei, S., & Chiappetta Jabbour, C. J. (2017). Envisioning The Invisible: Understanding The Synergy Between Green Human Resource Management and Green Supply Chain Management In Manufacturing Firms In Iran In Light Of The Moderating Effect of Employees' Resistance to Change. *Journal of Cleaner Production*, 168, 163-172. DOI: <https://doi.org/10.1016/j.jclepro.2017.08.213> .
- [27] Telaumbanua, B., Dewi, C. K., Rao, R. H., & . S. (2024). Masalah dalam Perencanaan Organisasi dan Kontrol Operasi Pemasaran Global. *Jurnal Ekonomi Manajemen dan Bisnis (JEMB)*, 3(1), 9-13. DOI: <https://doi.org/10.47233/jemb.v3i1.1477> .
- [28] Trusculescu, A., Draghici, A., & Albulescu, C. T. (2015). Key Metrics and Key Drivers in the Valuation of Public Enterprise Resource Planning Companies. *Procedia Computer Science*, 64, 917-923. DOI: <https://doi.org/10.1016/j.procs.2015.08.608> .
- [29] Veiga Ávila, L., Beuron, T. A., Brandli, L. L., Damke, L. I., Pereira, R. S., & Klein, L. L. (2019). Barriers to Innovation and Sustainability In Universities: An International Comparison. *International Journal of Sustainability in Higher Education*, 20(5), 805-821. DOI: <https://doi.org/10.1108/IJSHE-02-2019-0067> .
- [30] Wan, L., Wang, C., Wang, S. et al. (2022). How Can Government Environmental Enforcement and Corporate Environmental Responsibility Consensus Reduce Environmental Emergencies?. *Environ Geochem Health*, 44, 3101-3114. DOI: <https://doi.org/10.1007/s10653-021-00916-z> .
- [31] Xiao, Y., & Watson, M. (2019). Guidance on Conducting a Systematic Literature Review. *Journal of Planning Education and Research*, 39(1), 93-112. DOI: <https://doi.org/10.1177/0739456X17723971> .
- [32] Zahra Ahmadi-Gh, Alejandro Bello-Pintado. (2022). Why Is Manufacturing Not More Sustainable? The Effects of Different Sustainability Practices on Sustainability Outcomes and Competitive Advantage. *Journal of Cleaner Production*, Volume 337, 130392, ISSN 0959-6526, DOI: <https://doi.org/10.1016/j.jclepro.2022.130392> .
- [33] Birkel, H. S., Veile, J. W., Müller, J. M., Hartmann, E., & Voigt, K. I. (2019). Development of A Risk Framework for Industry 4.0 In The Context of Sustainability for Established Manufacturers. *Sustainability (Switzerland)*, 11(2). DOI: <https://doi.org/10.3390/su11020384> .
- [34] Sancha, C., Wong, C. W. Y., & Gimenez, C. (2019). Do Dependent Suppliers Benefit from Buying Firms' Sustainability Practices?. *Journal of Purchasing and Supply Management*, 25(4). DOI: <https://doi.org/10.1016/j.pursup.2019.100542> .
- [35] Pohl, C., Schüler, G., & Schiereck, D. (2023). Borrower and Lender Specific Determinants in The Pricing of Sustainability-Linked Loans. *Journal of Cleaner Production*, 385. DOI: <https://doi.org/10.1016/j.jclepro.2022.135652> .
- [36] Mårtensson, A., Snyder, K., & Ingelsson, P. (2019). Interlinking Lean and Sustainability: How Ready Are Leaders?. *TQM Journal*, 31(2), 136-149 DOI: <https://doi.org/10.1108/TQM-04-2018-0046> .
- [37] Ding, B. (2018). Pharma Industry 4.0: Literature Review and Research Opportunities In Sustainable Pharmaceutical Supply Chains. *Process Safety and Environmental Protection*, 119, 115-130. DOI: <https://doi.org/10.1016/j.psep.2018.06.031> .
- [38] Dolgui, A., & Ivanov, D. (2022). 5G In Digital Supply Chain and Operations Management: Fostering Flexibility, End-To-End Connectivity and Real-Time Visibility Through Internet-Of-Everything. *International Journal of Production Research*, 60(2), 442-451. DOI: <https://doi.org/10.1080/00207543.2021.2002969> .
- [39] Santos Martín, Á. C., & Vaquero, Á. S. (2023). Architectural Career of Alonso De Covarrubias. *Lino*, 29(29), 41-50. DOI: <https://doi.org/10.17811/li.29.2023.41-50> .
- [40] Book reviews. (2001). *R&D Management*, 31(1), 101-108. DOI: <https://doi.org/10.1111/1467-9310.00200> .

- [41] Presley, A., Presley, T., & Blum, M. (2018). Sustainability and Company Attractiveness: A study of American College Students Entering the Job Market. *Sustainability Accounting, Management and Policy Journal*, 9(4), 470–489. DOI: <https://doi.org/10.1108/SAMPJ-03-2017-0032> .
- [42] Ogrea, C. (2023). Interplays Between Artificial Intelligence and Sustainability in Business / Management. A Bibliometric Analysis. *Studies in Business and Economics*, 18(2), 336–357. DOI: <https://doi.org/10.2478/sbe-2023-0041> .
- [43] Barakat, B., Milhem, M., Naji, G. M. A., Alzoraiki, M., Muda, H. B., Ateeq, A., & Abro, Z. (2023). Assessing the Impact of Green Training on Sustainable Business Advantage: Exploring the Mediating Role of Green Supply Chain Practices. *Sustainability (Switzerland)*, 15(19). DOI: <https://doi.org/10.3390/su151914144> .
- [44] Barakat, B., Milhem, M., Naji, G. M. A., Alzoraiki, M., Muda, H. B., Ateeq, A., & Abro, Z. (2023). Assessing the Impact of Green Training on Sustainable Business Advantage: Exploring the Mediating Role of Green Supply Chain Practices. *Sustainability (Switzerland)*, 15(19). DOI: <https://doi.org/10.3390/su151914144> .
- [45] Chou, T. Y. (2016). A study on international trade risks of ocean freight forwarders. *Journal of Marine Science and Technology (Taiwan)*, 24(4), 771–779. DOI: <https://doi.org/10.6119/JMST-016-0311-1> .
- [46] Mal, H., Varma, M., & Vishvakarma, N. K. (2023). An Empirical Study to Prioritize The Determinants of Corporate Sustainability Performance Using Analytic Hierarchy Process. *Measuring Business Excellence*, 27(2), 193–210. DOI: <https://doi.org/10.1108/MBE-10-2021-0133> .
- [47] Nguyen, X. H., Nguyen, K. L., Nguyen, T. V. H., Nguyen, T. T. H., & Ta, V. L. (2023). The Impact of Green Organizational Capabilities on Competitive Advantage of Construction Enterprises in Vietnam: The Mediating Role of Green Innovation. *Sustainability (Switzerland)*, 15(16). DOI: <https://doi.org/10.3390/su15161237> .
- [48] Szász, L., & Seer, L. (2018). Towards An Operations Strategy Model of Servitization: The Role of Sustainability Pressure. *Operations Management Research*, 11(1–2), 51–66. DOI: <https://doi.org/10.1007/s12063-018-0132-0> .
- [49] Adu-Yeboah, S. S., Jiang, Y., Frempong, M. F., Hossin, M. A., & Amoako, R. (2022). Corporate Sustainability and Firm Performance In Small and Medium Enterprises In Ghana: Mediating Role of Green Innovation. *Journal of Psychology in Africa*, 32(4), 311–318. DOI: <https://doi.org/10.1080/14330237.2022.2066341> .
- [50] Azadnia, A. H., Saman, M. Z. M., Wong, K. Y., Ghadimi, P., & Zakuan, N. (2012). Sustainable Supplier Selection based on Self-organizing Map Neural Network and Multi Criteria Decision Making Approaches. *Procedia - Social and Behavioral Sciences*, 65, 879–884. DOI: <https://doi.org/10.1016/j.sbspro.2012.11.214> .