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Understanding of Green Supply Chain Management in Iraq and its Impact on Green Manufacturing

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Abstract
This study seeks to explore the activities of green supply chain management (GSCM) and how it affects the green manufacturing requirements of industrial organisations. The case study focuses on Al-Hakama Pharmaceutical and Medical Supplies. The objective is to elucidate the impact of the correlation between the dimensions of the green supply chain and green manufacturing. This research aims to evaluate managers' comprehension of GSCM and its activities, as well as their awareness of green industrialization. In addition, it seeks to assess whether managers perceive GSCM activities as beneficial for achieving green industrialization and explore the relationship and impact of GSCM activities on green manufacturing. For statistical analysis, a total of 120 valid responses were collected. We processed the data using SEM and the statistical programme SPSS. Positive correlations were observed between the green supply chain and green manufacturing, indicating a relationship between the two. Further, the impact of the green supply chain on green manufacturing was also identified. This study highlights the strategic advantage of adopting green manufacturing in the context of global competition. It emphasises the importance of GSCM activities as key drivers of organisational success.

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Introduction

The relationship between green industrialization and eco-environmental performance, as well as their impact on growth, is uncertain, but they do promote the development of green manufacturing. The influence of green supply chain management (GSCM) on environmental performance varies between developed and developing countries. Researchers have extensively studied the barriers to GSCM implementation in developed countries, as well as the moderating effects of environmental culture, internal management practices, and procurement effectiveness (Govindan et al., 2014; Moreira, Ribau, & Rodrigues, 2022; Phawitpiriyakliti et al., 2020). However, in developing countries, GSCM faces greater challenges and receives less attention, often resulting in neglect of sustainable development. This is attributed to issues such as corruption and political instability.

Managers worldwide understand the importance of incorporating environmental considerations into sourcing, production, transportation, and distribution in order to strike a balance between environmental impact and economic sustainability. Understanding can be influenced by a range of factors, including environmental regulations, corporate sustainability initiatives, and cultural attitudes. The implementation of GSCM is heavily influenced by the industry context. Sectors such as manufacturing or agriculture tend to place a higher priority on it. However, GSCM principles can be applied to various industries including retail, logistics, healthcare, and technology. Surveys often address topics such as environmental practices, procurement, and sustainability in order to evaluate knowledge of GSCM. These aspects are not commonly explored in the study of challenges faced by supply chain managers in Iraq. They include infrastructure, security, regulatory compliance, and obstacles arising from geopolitical instability and resource constraints (Ali et al., 2023).

It is challenging to achieve green industrialization when managers are not familiar with GSCM practices or green manufacturing. This study aims to explore the understanding of GSCM, its practices, and its impact on green industrialization among Iraqi managers.

Literature Review

Green Supply Chain Management

GSCM is a model of modern management that focuses on the environmental impact and resource efficiency of the entire supply chain, encompassing supply, manufacturing, and logistics (Esmaeilian et al., 2020; Kasarda, 2017). This practice involves the seamless integration of industrial processes, encompassing everything

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from material extraction to the creation of the final product (Yanju, Fengying, & Zhenglong, 2020). It is a strategic approach that aims to minimise the environmental impact of industries, while still maintaining high standards in terms of quality, cost, reliability, performance, and energy efficiency (Dubey, Gunasekaran, & Ali, 2015). Generally, GSCM involves addressing operational issues and implementing effective environmental management practices that have a tangible impact on the outside world.

Research on GSCM has gained significant attention as governments, environmental organisations, and customers are increasingly pressuring firms to focus on their suppliers' environmental performance. Many companies are now recognising the importance of environmental concerns in order to mitigate risks and cut costs (Thomas & Mishra, 2022). Undoubtedly, the practices of GSCM can offer strategic and competitive advantages that enhance a brand's reputation, foster better relationships with stakeholders, and boost employee motivation.

There are several challenges that can hinder the implementation of GSCM. These include a lack of established green practices and information technology, a lack of commitment from senior management, a lack of organisational encouragement, a shortage of skilled human resources, limited environmental awareness among customers, uncertainties in competitive markets, a lack of government support systems (Luthra et al., 2011), resistance to adopting new technologies, and supplier reluctance to change (Rizzi et al., 2014). In general, the factors that influence GSCM can be grouped into four primary categories: supply chain, suppliers, economy, and external factors.

Green Procurement

Green purchases are focused on environmental considerations, like reducing, reusing, and recycling materials during the procurement process. They are significant for businesses that prioritise environmental conservation and aim to make their products less harmful to the environment (Rizzi et al., 2014). These criteria are important for decision-makers who prioritise environmental considerations, including their own impact and that of their suppliers and primary resources (Ike et al., 2019).

While procurement is a crucial aspect of achieving business goals, numerous organisations also see it as a potential green initiative that can help minimise waste. Organisations can evaluate their purchasing functions to enhance their environmental performance and understand the significance and influence of implementing a green procurement strategy (Govindan et al., 2014). GP involves a strong emphasis on adopting eco-friendly practices, such as minimising resource consumption, waste reduction, recycling, reusing, and finding cleaner alternatives without compromising the availability of resources. Organisations that adopt GP can establish environmental standards in their supplier procurement policies, incorporating management priorities into supplier selection, evaluation, and relationship building (Phawitpiriyakliti et al., 2020). They can also prioritise suppliers based on their commitment to sustainability,

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environmental practices, and green management capabilities (Govindan et al., 2014). GP initiatives primarily prioritise the acquisition of supplies that possess environmentally favourable attributes, such as the ability to be reused, recycled, and free from hazardous materials.

Green Marketing

Green marketing (GM) emphasises the importance of catering to environmentally conscious consumers and maintaining customer loyalty through post-sale efforts. Recent legislation has brought attention to the importance of recycling products, leading organisations to recognise the potential of GM in GSCM efforts. As a result, they are reallocating resources to gain a competitive edge. By incorporating environmental concepts, fostering customer collaboration, optimising resource selection, and promoting supplier collaboration strategies, organisations with a focus on excellence can improve their reputation and surpass their rivals (Bahuguna, Srivastava, & Tiwari, 2023). Green customer management, consumption, packaging, and environmentally friendly purchasing are also part of GM and are gaining more recognition (Chan, He, & Wang, 2012). With the growing emphasis on sustainability, it is crucial for organisations to prioritise green management. This not only enhances their reputation and profitability but also ensures that their strategies result in environmentally friendly practices with positive economic, social, and environmental impacts.

Green Design

Green design, also known as design for the environment or sustainable design, involves incorporating environmental factors into product planning, development, and design processes. This approach results in products that decrease resource and energy usage, encourage reuse and recycling, reduce the use of harmful substances, and improve overall environmental sustainability (Rana & Arya, 2024). Green design encompasses various aspects such as product design, buildings and architecture, resource consumption and operating costs reduction, economic benefits of social responsibility, and improved health and safety standards (Bhardwaj, 2016). Green design promotes sustainability and a circular economy by enabling product reusability, recyclability, and disassembly at the end of their lifecycle (Adamkiewicz et al., 2022; Kwarteng, Simpson, & Agyenim-Boateng, 2022; Pomponi & Moncaster, 2017).

Green Manufacturing

The correlation between green product innovation and green manufacturing processes is crucial for organisations to achieve a competitive advantage. Green manufacturing emphasises supply chain decisions that prioritise the use of renewable resources, environmentally friendly practices, and innovative waste reduction (Lee, 2009). The adoption of green manufacturing practices can reduce environmental impact and improve organisational efficiency and profitability. Green manufacturing

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practices are crucial for conserving materials and energy, eliminating hazardous substances, and reducing waste production as manufacturing continues to generate pollution and consume resources. GSCM practices enable organisations to enhance their environmental and economic performance by promoting collaboration among suppliers and factories in the design and production of eco-friendly products, thereby minimising environmental harm during manufacturing. Recent research has emphasised the efficacy of agile manufacturing in addressing pollution, promoting responsible resource utilisation, and reducing waste (Costantini & Mazzanti, 2012).

Reverse Logistics

Logistics involves various practices in supply chains, such as material and product access, delivery, cost efficiency, flexibility, and speed. Green reverse logistics (GRL) encompasses the retrieval, recycling, and reuse of products to benefit individuals and ecosystems. It can help mitigate environmental issues such as traffic congestion, infrastructure strain, and vehicle emissions (De Souza et al., 2022). Traditional logistics primarily deals with the movement of products to customers. However, Green Reverse Logistics (GRL) focuses on recycling and reusing resources. This new approach necessitates the creation of processing centers and businesses that prioritize recycling. Consequently, organisations (Nureen et al., 2022; Srivastava, 2008) need to take proactive environmental responsibility. People view the GRL as a key component of GSCM, emphasizing a holistic approach to sustainability (Dev, Shankar, & Qaiser, 2020).

Green Manufacturing Requirements

Improving Process Techniques

Continuous performance improvement in industrial organisations is achieved by integrating manufacturing practices and environmental standards, which leads to enhanced competitiveness and reduced environmental impact (Moreira et al., 2022). Effective frameworks for integrating these approaches to reduce waste generation and emissions include just-in-time (JIT) production and Kaizen.

The JIT production system aims to enhance productivity and minimise environmental impact by continuously reducing waste materials and energy (Kasarda, 2017; O'Donnell, 2012; Weng et al., 2022). The Just-in-Time (JIT) approach, when combined with Kaizen, which emphasises incremental improvements in areas such as organisation, tidiness, cleanliness, maintenance, and discipline, is in line with the principles of green manufacturing. Kaizen's philosophy of incremental improvement aligns with pollution prevention initiatives and environmental sustainability (Sundararajan & Terkar, 2022). The successful implementation of JIT in Iraq has demonstrated its effectiveness in optimising manufacturing processes (Gabrow, 2022).

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Opting for Social Responsibility

Social responsibility encompasses both internal and external dimensions within an organisation. Internally, it entails responsibility towards individuals and resources, aiming to enhance the organization's performance and employees' well-being. Externally, it involves addressing societal issues, challenges, and negative influences on society. This involves actively participating in problem-solving and fostering positive social values and patterns in the wider community (Râmniceanu, 2022).

Applying a Knowledge-Based Approach

Expert systems are a type of artificial intelligence (AI) that consist of rule-based systems. These systems serve as frameworks for the AI to acquire, integrate, organise, describe, and utilise knowledge. The rules are based on a collection of proven ideas (Phawitpiriyakliti et al., 2020). AI systems have enhanced green manufacturing, specifically in the design phase. Green design incorporates social and technical factors into the product lifecycle and addresses environmental impact at this stage (Dwivedi et al., 2021).

AI-based technologies have the potential to greatly improve supply chain efficiency and sustainability through various mechanisms. Through the use of AI, processes such as routing, scheduling, and inventory management can be optimised, resulting in streamlined operations and a decreased environmental footprint. With the power of predictive analytics, organisations gain the ability to forecast demand, anticipate risks, and take proactive measures to address environmental challenges (e.g., SAS Supply Chain Intelligence and Oracle's AI-driven supply chain management). Real-time monitoring (e.g., EcoVadis and Sourcemap) provides insights into resource utilization, energy consumption, and emissions, enabling timely interventions to improve sustainability. AI also contributes to energy efficiency and waste reduction (e.g., Ecolane, Wasteless.ai), supplier collaboration (e.g., Transparency-One, Sourcemap, Assent Compliance), risk management, compliance monitoring (e.g., Assent Compliance and Verisk Maplecroft), and continuous improvement initiatives (e.g., IBM Sterling Supply Chain Insights, AIMMS SC Navigator), which can help GSCM to achieve long-term sustainability goals (Gong, 2023; Kim & Lee, 2021; Veeramanju, 2022).

The increasing global awareness of environmental preservation is driving the need for policies, legislation, and regulations in industrial and pharmaceutical organisations to adopt long-term ecologically conscious strategies.

Research Method

The adoption of environmentally friendly practices within the pharmaceutical industry in Iraq faces numerous obstacles including insufficient infrastructure, regulatory compliance challenges, difficulty in supplier engagement, financial

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constraints, political instability, lack of awareness, resource availability issues, limited market demand, capacity-building constraints, and cultural factors.

Al-Hakama, a company focused on pharmaceuticals and medical supplies, was founded in early 2003. It received incorporation certificate PDC/9433 from the Companies Registrar Department on 26/2/2003. The company initially had a capital of 8000 million Iraqi dinars. The General Company for the Manufacture of Medicines and Medical Supplies/Samarra acquired 22% of its shares, attracting 447 shareholders. The company emphasises the production of high-quality pharmaceuticals that meet global standards. They follow protocols such as GMP and ISO 9001:2008 throughout the entire production process, from evaluating raw materials to distributing the final products. The company, which has 150 employees across different departments, imports packaging materials and 90% of raw materials directly from foreign sources. The research model tests the following hypotheses, which are illustrated in Figure 1.

H1: Green supply chain management positively influence green manufacturing requirements.
H2: Green design positively impacts green manufacturing requirements.
H3: Green manufacturing positively correlates with green manufacturing requirements.
H4: Green reverse logistics positively contributes to green manufacturing requirements.
H5: Green Purchases positively contributes to green manufacturing requirements.

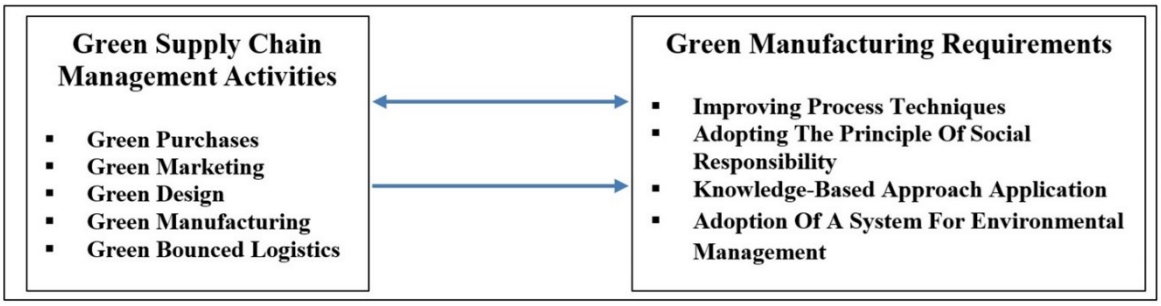

Figure 1: Research Model.

Results and Discussion

The analysis of management activities and green manufacturing requirements involved the use of mean, standard deviation, and percentage metrics. Dimensions with scores higher than 3 and percentages exceeding 60% were considered acceptable. The study found that green design and environmental management systems were the highest-ranked dimensions, while GRL ranked the lowest. The independent variable GSCM showed a significant mean and percentage weight.

This study examines the correlation between the independent variable, green supply chain management, and the dependent variable, green manufacturing requirements. The researcher used the Pearson correlation coefficient to measure their relationship, as presented in Table 1.

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Table 1: Results of Correlations.

Construct	Correlation Coefficient	*P*
Green Purchases	0.61	0.000
Green Marketing	0.63	0.000
Green Design	0.53	0.000
Green Manufacturing	0.64	0.000
Green Reverse Logistics	0.66	0.000
Green Supply Chain Management	0.78	0.000

The hypothesis proposed a positive correlation between green supply chain management and green manufacturing requirements. The analysis involved linking the relevant paragraphs and calculating the correlation coefficient. The results indicated a correlation coefficient of 0.78 ($P < 0.000$), providing support for the hypothesis. The correlation between the two variables was found to be positive ($r = 0.63$, $p < 0.05$). The obtained significance level of 0.000 supports the significance of this relationship, thus accepting the hypothesis. The third hypothesis suggested a positive correlation between green design and green manufacturing requirements, supported by a correlation coefficient of 0.53 ($P < 0.05$). The fourth hypothesis posited a significant positive correlation ($r = 0.66$, $p < 0.05$) between green reverse logistics and green manufacturing requirements, providing support for this hypothesis. The fifth hypothesis proposed a significant positive correlation ($r = 0.61$, $p < 0.05$) between green purchase and green manufacturing requirements, supporting its acceptance.

The R^2 value suggests a significant relationship between green supply chain management and green manufacturing requirements, as it indicates that 60% of the variance in the latter can be attributed to the former. The F value of 46.9 at the 0.05 significance level confirms the adequacy of the regression model in explaining the relationship. The regression coefficient of 0.78, tested using the t-test with a calculated value of 6.85, supports the hypothesis and indicates a significant impact of green supply chain management on green manufacturing requirements (Table 2).

Table 2: Path Analysis for the Constructs.

Construct	R^2	F	*P*	Regression Coefficient Beta	T	*P*
Green Purchases	0.37	17.9	0.000	0.61	4.23	0.000
Green Marketing	0.37	17.9	0.000	0.63	4.38	0.000
Green Design	0.37	17.9	0.000	0.53	3.44	0.000
Green Manufacturing	0.37	17.9	0.000	0.64	4.54	0.000
Green Reverse Logistics	0.37	17.9	0.000	0.66	4.82	0.000

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The adjusted R^2 suggests that 37% of the variation in green manufacturing requirements can be accounted for by the dimensions of green supply chain management. This finding indicates a strong correlation between these dimensions and the demands of green manufacturing. The F value of 17.9 at the 0.05 significance level confirms the adequacy of the regression model in explaining the relationship between the dimensions of green supply chain management and meeting green manufacturing requirements.

This study examined the impact of green marketing on the demands of green manufacturing. The calculated t-value of 4.38 exceeded the tabular value of 1.96 at the research sample level, indicating statistical significance (Table 2). The study found that the marginal propensity for green marketing ($\beta=2$ = -0.63) indicates that a one-unit increase in green marketing has a positive effect on green manufacturing requirements. This supports the hypothesis being tested.

Similarly, an investigation was conducted to examine the influence of green design on the requirements of green manufacturing. The calculated t-value of 3.44 exceeded the tabular value of 1.96, indicating statistical significance. The negative coefficient (β= -0.53) for green design indicates that a one-unit increase in green design leads to a positive impact on green manufacturing requirements, thereby supporting the hypothesis.

Furthermore, this study examined the impact of green manufacturing on green manufacturing requirements at the aggregate level. The calculated t-value of 4.54 exceeded the tabular value of 1.96, indicating statistical significance. The negative coefficient (β= -0.64) of the marginal propensity for green manufacturing suggests that an increase in green manufacturing positively affects the demand for green manufacturing, thus supporting the hypothesis.

Lastly, an analysis was conducted on the impact of green reverse logistics on green manufacturing requirements at the aggregate level. The calculated t-value of 4.81 exceeded the tabular value of 1.96, indicating statistical significance. The negative coefficient (β= -0.66) for green logistics indicates that an increase in green logistics leads to a decrease in green manufacturing requirements, thus supporting the hypothesis.

Conclusions

Understanding the implications of climate-related risks, including reputational and competitive aspects, is crucial for the sustainability and resilience of Iraqi organisations due to their limited resources and infrastructure, as well as the unique challenges they face. This understanding becomes even more important in the context of global trends. The focus on green procurement and design highlights the importance for Iraqi companies to implement sustainable practices in their supply chains. Organisations can enhance their competitiveness in domestic and international markets by prioritising these approaches and aligning with global

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environmental standards. The exploration of green logistics and environmental management activities is relevant in the Iraqi context due to pressing concerns about resource utilisation and waste management. Investing in these areas offers Iraqi companies the chance to tackle environmental challenges and potentially access new markets for recycled materials and sustainable products. The study's findings on organisational environmental orientation and wasteful practices provide valuable insights for Iraqi companies aiming to enhance their environmental performance. Organisations can enhance their ability to navigate the complexities of sustainability in Iraq's industrial landscape by addressing these deficiencies and fostering a culture of environmental responsibility.

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References

Adamkiewicz, J., Kochańska, E., Adamkiewicz, I., & Łukasik, R. M. (2022). Greenwashing and sustainable fashion industry. *Current Opinion in Green and Sustainable Chemistry, 38*, 100710. https://doi.org/10.1016/j.cogsc.2022.100710

Ali, H. H., Kalf, H. A. I., Shaikhan, M. H., Al_Lami, G. K., Shatawi, H. H., Abdulaali, H. S., Hrand, T., Qusai, N., & Hanoon, T. M. (2023). Investigating The Integration of Environmentally Friendly Practices and Green Materials Throughout the Construction Supply Chain. *International Journal of Construction Supply Chain Management, 13*(1), 276-288. https://doi.org/10.14424/jcscm2023130116

Bahuguna, P. C., Srivastava, R., & Tiwari, S. (2023). Two-decade journey of green human resource management research: a bibliometric analysis. *Benchmarking: An International Journal, 30*(2), 585-602. https://doi.org/10.1108/BIJ-10-2021-0619

Bhardwaj, B. R. (2016). Role of green policy on sustainable supply chain management: a model for implementing corporate social responsibility (CSR). *Benchmarking: An International Journal, 23*(2), 456-468. https://doi.org/10.1108/BIJ-08-2013-0077

Chan, H. K., He, H., & Wang, W. Y. C. (2012). Green marketing and its impact on supply chain management in industrial markets. *Industrial Marketing Management, 41*(4), 557-562. https://doi.org/10.1016/j.indmarman.2012.04.002

Costantini, V., & Mazzanti, M. (2012). On the green and innovative side of trade competitiveness? The impact of environmental policies and innovation on EU exports. *Research Policy, 41*(1), 132-153. https://doi.org/10.1016/j.respol.2011.08.004

De Souza, E. D., Kerber, J. C., Bouzon, M., & Rodriguez, C. M. T. (2022). Performance evaluation of green logistics: Paving the way towards circular economy. *Cleaner Logistics and Supply Chain, 3*, 100019. https://doi.org/10.1016/j.clscn.2021.100019

International Journal of Instructional Cases
ISSN: 2399-830x

Dev, N. K., Shankar, R., & Qaiser, F. H. (2020). Industry 4.0 and circular economy: Operational excellence for sustainable reverse supply chain performance. *Resources, Conservation and Recycling, 153*, 104583. https://doi.org/10.1016/j.resconrec.2019.104583

Dubey, R., Gunasekaran, A., & Ali, S. S. (2015). Exploring the relationship between leadership, operational practices, institutional pressures and environmental performance: A framework for green supply chain. *International Journal of Production Economics, 160*, 120-132. https://doi.org/10.1016/j.ijpe.2014.10.001

Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., & Eirug, A. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management, 57*, 101994. https://doi.org/10.1016/j.ijinfomgt.2019.08.002

Esmaeilian, B., Sarkis, J., Lewis, K., & Behdad, S. (2020). Blockchain for the future of sustainable supply chain management in Industry 4.0. *Resources, Conservation and Recycling, 163*, 105064. https://doi.org/10.1016/j.resconrec.2020.105064

Gabrow, R. Y. (2022). The Application of Just-in-Time production by using Fishbone Diagram: A Case study in the Baghdad Soft drinks company (IBSD). *Res Militaris, 12*(2), 5386-5397. https://resmilitaris.net/uploads/paper/7d83c66276062cb595966884938e38a0.pdf

Gong, S. (2023). Digital transformation of supply chain management in retail and e-commerce. *International Journal of Retail & Distribution Management,* (ahead-of-print). https://doi.org/10.1108/IJRDM-02-2023-0076

Govindan, K., Kaliyan, M., Kannan, D., & Haq, A. N. (2014). Barriers analysis for green supply chain management implementation in Indian industries using analytic hierarchy process. *International Journal of Production Economics, 147*, 555-568. https://doi.org/10.1016/j.ijpe.2013.08.018

Ike, M., Donovan, J. D., Topple, C., & Masli, E. K. (2019). A holistic perspective on corporate sustainability from a management viewpoint: Evidence from Japanese manufacturing multinational enterprises. *Journal of Cleaner Production, 216*, 139-151. https://doi.org/10.1016/j.jclepro.2019.01.151

Kasarda, J. D. (2017). Logistics Is about Competitiveness and More. *Logistics, 1*(1), 1. https://doi.org/10.3390/logistics1010001

Kim, H. K., & Lee, C. W. (2021). Relationships among healthcare digitalization, social capital, and supply chain performance in the healthcare manufacturing industry. *International Journal of Environmental Research and Public Health, 18*(4), 1417. https://doi.org/10.3390/ijerph18041417

Kwarteng, A., Simpson, S. N. Y., & Agyenim-Boateng, C. (2022). The effects of circular economy initiative implementation on business performance: the moderating role of organizational culture. *Social Responsibility Journal, 18*(7), 1311-1341. https://doi.org/10.1108/SRJ-01-2021-0045

Lee, K. H. (2009). Why and how to adopt green management into business organizations? The case study of Korean SMEs in manufacturing industry. *Management Decision, 47*(7), 1101-1121. https://doi.org/10.1108/00251740910978322

International Journal of Instructional Cases
ISSN: 2399-830x

Luthra, S., Kumar, V., Kumar, S., & Haleem, A. (2011). Barriers to implement green supply chain management in automobile industry using interpretive structural modeling technique: An Indian perspective. *Journal of Industrial Engineering and Management (JIEM), 4*(2), 231-257. https://doi.org/10.3926/jiem.v4n2.p231-257

Moreira, A. C., Ribau, C. P., & Rodrigues, C. d. S. F. (2022). Green supply chain practices in the plastics industry in Portugal. The moderating effects of traceability, ecocentricity, environmental culture, environmental uncertainty, competitive pressure, and social responsibility. *Cleaner Logistics and Supply Chain, 5*, 100088. https://doi.org/10.1016/j.clscn.2022.100088

Nureen, N., Liu, D., Ahmad, B., & Irfan, M. (2022). Exploring the technical and behavioral dimensions of green supply chain management: a roadmap toward environmental sustainability. *Environmental Science and Pollution Research, 29*(42), 63444-63457. https://doi.org/10.1007/s11356-022-20352-5

O'Donnell, M. P. (2012). Erosion of our moral compass, social trust, and the fiscal strength of the United States: income inequality, tax policy, and well-being. *American Journal of Health Promotion: AJHP, 26*(4), iv-xi. https://doi.org/10.4278/ajhp.26.4.iv

Phawitpiriyakliti, C., Keawkunti, B., Saisama, C., & Sangma, W. (2020). Towards Environmental Sustainability: a Case Study of Green Supply Chain Management Practice. *Journal of Security and Sustainability Issues, 9*(3), 747-763. https://doi.org/10.9770/jssi.2020.9.3(2)

Pomponi, F., & Moncaster, A. (2017). Circular economy for the built environment: A research framework. *Journal of Cleaner Production, 143*, 710-718. https://doi.org/10.1016/j.jclepro.2016.12.055

Râmniceanu, V.-T. (2022). European Union Initiatives and Regulations on Sustainable Corporate Governance. *International Investment Law Journal, 2*(1), 83-92. https://www.investmentlaw.adjuris.ro/articole/An2v1/5.%20Vicentiu%20Ramniceanu.pdf

Rana, G., & Arya, V. (2024). Green human resource management and environmental performance: mediating role of green innovation–a study from an emerging country. *Foresight, 26*(1), 35-58. https://doi.org/10.1108/FS-04-2021-0094

Rizzi, F., Frey, M., Testa, F., & Appolloni, A. (2014). Environmental value chain in green SME networks: the threat of the Abilene paradox. *Journal of Cleaner Production, 85*, 265-275. https://doi.org/10.1016/j.jclepro.2014.09.001

Srivastava, S. K. (2008). Network design for reverse logistics. *Omega, 36*(4), 535-548. https://doi.org/10.1016/j.omega.2006.11.012

Sundararajan, N., & Terkar, R. (2022). Improving productivity in fastener manufacturing through the application of Lean-Kaizen principles. *Materials Today: Proceedings, 62*, 1169-1178. https://doi.org/10.1016/j.matpr.2022.04.350

Thomas, A., & Mishra, U. (2022). A green energy circular system with carbon capturing and waste minimization in a smart grid power management. *Energy Reports, 8*, 14102-14123. https://doi.org/10.1016/j.egyr.2022.10.341

International Journal of Instructional Cases
ISSN: 2399-830x

Veeramanju, K. T. (2022). Innovations in the Indian Automobile Industry: An Industry Analysis of Maruti Suzuki India Limited. *International Journal of Case Studies in Business, IT and Education (IJCSBE), 6*(2), 862-876. https://doi.org/10.47992/IJCSBE.2581.6942.0237

Weng, W., Chen, J., Zheng, M., & Fujimura, S. (2022). Realtime scheduling heuristics for just-in-time production in large-scale flexible job shops. *Journal of Manufacturing Systems, 63*, 64-77. https://doi.org/10.1016/j.jmsy.2022.01.006

Yanju, Z., Fengying, H., & Zhenglong, Z. (2020). Study on joint contract coordination to promote green product demand under the retailer-dominance. *Journal of Industrial Engineering and Management (JIEM), 34*(2), 194–204. https://doi.org/10.13587/j.cnki.jieem.2020.02.021