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Green Economy and Environmental Innovation Strategies: A Review of the Literature

✉ **Maharani Putri Rabbani[1], Sofie Yunida Putri[2], Maheran Zakaria[3]**

[1,2]Universitas Pembangunan Nasional Veteran Jawa Timur, Surabaya.
Jl. Rungkut Madya No.1, Gn. Anyar, Kec. Gn. Anyar, Surabaya, Jawa Timur 60294, Indonesia
[3]Universiti Teknologi Mara Cawangan Kelantan, Kelantan
Bukit Ilmu 18500 Machang, Kelantan Darul Naim Malaysia

A B S T R A C T

The research places a strong emphasis on the influence of stakeholder theory in shaping strategies for eco-innovation, while also highlighting the pivotal role of technological innovation and well-crafted environmental policies in driving the advancement of green growth. Additionally, the studies recognized the significance of regional context and the necessity for tailored approaches to facilitate a comprehensive transition towards a green economy. Furthermore, the study's literature review delves comprehensively into the existing body of knowledge and research at the juncture of the green economy and green technology. In the application named "Publish or Perish", the authors searched for articles with these keywords and filtered it to 20 articles that fit the criteria. It offers a comprehensive overview of the scholarly landscape by bringing attention to key themes and emerging trends across various disciplines. Overall, the collective findings of the research consistently underscore the paramount importance of both the green economy and innovations in green technology in the pursuit of sustainable development.

Keywords: *Eco-innovation; Environmental Innovation; Green Economy; Literature Review.*

Corresponding author email: ✉ [1] 21013010344@student.upnjatim.ac.id, [2]sofie.yunida.ak@upnjatim.ac.id, [3]maheran_642004@yahoo.com

INTRODUCTION

The concept of the *Green Economy* has gained significant importance in recent years due to growing concerns about environmental sustainability and the need for a transition to a more sustainable and equitable future (D'Amato & Korhonen, 2021; Sohag et al., 2019). It represents a shift in economic systems and practices that prioritize the efficient use of natural resources, the reduction of greenhouse gas emissions, and the promotion of social inclusivity and well-being. The Green Economy aims to decouple economic growth from environmental degradation by promoting renewable energy, sustainable agriculture, waste reduction, and eco-friendly innovations. It addresses critical global challenges such as climate change, biodiversity loss, and resource scarcity. By embracing the principles of the Green Economy, we can create a pathway towards a more resilient and environmentally conscious society, while also fostering economic growth, creating green jobs, and enhancing social welfare (Söderholm, 2020). It offers an opportunity to address the urgent need for sustainable development and ensures a better quality of life for present and future generations. Embracing the Green Economy is crucial now to mitigate the impacts of climate change, protect natural resources, and promote a more sustainable and inclusive future for all.

In Indonesia, the concept of the Green Economy is of utmost importance given the country's rich biodiversity, extensive natural resources, and growing concerns about environmental degradation. The nation faces significant challenges such as deforestation, air and water pollution, habitat loss, and the impacts of climate change. Embracing the principles of the Green Economy provides an opportunity to address these challenges and pave the way for a sustainable future. By embracing the Green Economy, Indonesia can unlock numerous benefits. It can attract investments in renewable energy projects, creating green jobs and driving economic growth (Yuan et al., 2020). Additionally, a focus on sustainable tourism can help preserve Indonesia's iconic natural landscapes while providing economic opportunities for local communities. Furthermore, a transition to a green and low-carbon economy can help Indonesia fulfill its commitments under the *Paris Agreement* and contribute to global efforts in mitigating climate change (Gomez-Echeverri, 2018). The Green Economy approach aligns with the Sustainable Development Goals (SDGs), allowing Indonesia to make progress towards achieving targets related to environmental sustainability, poverty reduction, and social equity (Durán-Romero et al., 2020).

Environmental Innovation Strategies play a critical role in advancing the Green Economy concept in Indonesia, aligning with the country's commitment to the Sustainable Development Goals (SDGs). These strategies involve the development and implementation of innovative solutions to address environmental challenges and promote sustainable practices across various sectors (Gomez-Echeverri, 2018). By investing in eco-friendly technologies, renewable energy, and sustainable resource management, Indonesia can reduce greenhouse gas emissions, protect its rich biodiversity, and ensure the responsible use of natural resources. Moreover, such innovation-driven approaches can spur economic growth by creating new opportunities for green businesses and industries, contributing to job creation and poverty reduction, which are important targets under the SDGs (Cainelli et al., 2020). Integrating Environmental Innovation Strategies into Indonesia's policies and practices can lead to tangible benefits, including improved public health, enhanced resilience to climate change, and a more equitable society. These efforts demonstrate Indonesia's dedication to building a greener and more sustainable future, in line with the global vision set by the SDGs.

The Green Economy and Environmental Innovation Strategies are of paramount importance in addressing the urgent global challenges of environmental degradation and climate change (Durán-Romero et al., 2020; Gomez-Echeverri, 2018). The Green Economy offers a pathway to achieve sustainable development by promoting resource efficiency, reducing carbon emissions, and fostering social inclusivity. By transitioning to a green and low-carbon economy, we can safeguard natural ecosystems, preserve biodiversity, and secure essential resources for future generations (Blomsma et al., 2019; Mavi & Mavi, 2019). Environmental Innovation Strategies play a crucial role in driving this transition, encouraging the development and adoption of cutting-edge technologies and sustainable practices (Liu & Dong, 2021). These strategies promote eco-friendly innovations across industries, leading to improved environmental

performance, reduced ecological footprints, and enhanced resilience to climate impacts. Moreover, the Green Economy and Environmental Innovation Strategies create new economic opportunities, stimulate job growth, and bolster sustainable economic development. By embracing these approaches, we can ensure a healthier, more equitable, and prosperous future for all, safeguarding the planet and its ecosystems while fostering human well-being and progress.

Implementing the ideas of the Green Economy and adopting Environmental Innovation Strategies is crucial for companies to secure their future success and contribute to a sustainable world. As environmental concerns escalate, consumers and stakeholders increasingly demand responsible and eco-friendly products and practices (Demirel & Danisman, 2019). Companies that integrate green principles into their products and plans can gain a competitive advantage, attract environmentally conscious customers, and build stronger brand loyalty. Embracing sustainable practices can also lead to cost savings through resource efficiency and reduced waste. Moreover, as governments and regulatory bodies tighten environmental regulations, companies that proactively adopt green strategies will be better positioned to comply with evolving requirements, avoiding potential penalties and reputational risks. By investing in Environmental Innovation Strategies, companies can drive continuous improvement, spur creativity, and discover new revenue streams in the green market. Furthermore, taking a leadership role in sustainability can enhance a company's reputation and appeal to investors focused on long-term value and ESG considerations (Kasayanond et al., 2019). Overall, embracing the Green Economy and Environmental Innovation Strategies is not only an ethical imperative but also a prudent business decision that ensures the company's relevance, resilience, and positive impact on the environment and society.

Tesla Inc. serves as a remarkable case study for successfully implementing Green Economy and Environmental Innovation Strategies in the automotive industry. As a leading electric vehicle manufacturer, Tesla has revolutionized transportation by prioritizing sustainability and environmental stewardship (Maradin et al., 2022). The company's core mission is to accelerate the world's transition to sustainable energy, and it has achieved this by integrating innovative green technologies into its products. Tesla's success has not only transformed the automotive industry but also set a benchmark for other companies to follow. Its market leadership and brand loyalty demonstrate that embracing Green Economy principles and Environmental Innovation Strategies can lead to profitable business outcomes while contributing to a greener, more sustainable future (Hysa et al., 2020). As Tesla continues to inspire innovation and drive the global transition towards sustainable energy, it remains a compelling case study for companies seeking to make a positive environmental impact through transformative and forward-thinking strategies.

LITERATURE REVIEW

Stakeholder theory is a management and business concept that focuses on the recognition and engagement of various individuals and groups who have a vested interest in an organization's activities and outcomes (Hazarika & Zhang, 2019). Unlike traditional shareholder-centric models, which prioritize the interests of shareholders above all else, stakeholder theory emphasizes the importance of considering a broader range of stakeholders. These stakeholders may include employees, customers, suppliers, communities, government entities, and even the environment. The theory suggests that successful businesses should take into account the needs, concerns, and expectations of all these stakeholders, as they can significantly impact the organization's performance and long-term sustainability. By actively engaging with and fulfilling the interests of stakeholders, businesses can foster positive relationships, build trust, mitigate risks, and enhance overall societal well-being, ultimately leading to more inclusive and responsible business practices. Moreover, the theory underscores the importance of responsible corporate citizenship and social responsibility, urging businesses to be conscious of their impact on society and the environment. By embracing the stakeholder approach, organizations can foster a more inclusive and ethical business environment, promoting mutual benefits for all stakeholders and contributing to a more sustainable and harmonious society.

The stakeholders theory and the Green Economy are closely interconnected, as both concepts emphasize the importance of considering a broader set of interests beyond solely financial gains. The Green

Economy, with its focus on sustainability and environmental responsibility, aligns with the stakeholder theory's recognition of the significance of various stakeholders, including communities, environmental groups, and future generations. In a Green Economy, companies must not only consider the needs of shareholders but also take into account the concerns and interests of all stakeholders impacted by their operations, products, and services (Shuai & Fan, 2020). The stakeholders theory and the Green Economy are closely interconnected, as both concepts emphasize the importance of considering a broader set of interests beyond solely financial gains. The Green Economy, with its focus on sustainability and environmental responsibility, aligns with the stakeholder theory's recognition of the significance of various stakeholders, including communities, environmental groups, and future generations. In a Green Economy, companies must not only consider the needs of shareholders but also take into account the concerns and interests of all stakeholders impacted by their operations, products, and services.

The stakeholders theory and Environmental Innovation Strategies are closely intertwined, as both concepts emphasize the significance of engaging and considering various stakeholders in driving sustainable change and fostering environmental responsibility. Environmental Innovation Strategies seek to develop and implement innovative solutions to address environmental challenges and promote sustainable practices across industries. In this context, stakeholders play a critical role as they encompass individuals and groups who are affected by a company's environmental initiatives or are influential in shaping its sustainability efforts. Furthermore, the stakeholders theory highlights the importance of building strong relationships with stakeholders based on trust and mutual benefit. Environmental Innovation Strategies that actively engage stakeholders in the decision-making process can generate greater support and collaboration from these groups. Such support is crucial in overcoming potential obstacles, gaining regulatory approvals, and securing funding for sustainable projects. Moreover, stakeholders can act as advocates for companies implementing Environmental Innovation Strategies, helping to create awareness and promote positive perceptions of the organization's commitment to environmental stewardship. A positive reputation as a responsible and environmentally conscious company can enhance brand value, attract customers, and differentiate the company in a competitive market.

RESEARCH METHOD

This research adopts a literature review as its primary research method. A literature review involves a systematic analysis and synthesis of existing scholarly works, publications, and relevant sources on the chosen topic. Through this approach, the research aims to gather comprehensive and up-to-date information, insights, and findings related to the subject matter. By critically examining various studies, theories, and empirical evidence, the literature review offers a well-rounded understanding of the research topic and identifies gaps in knowledge that may require further investigation. Moreover, this method allows the research to build upon the existing body of knowledge and draw relevant conclusions based on a comprehensive review of the literature. By employing a literature review as the research method, this study seeks to provide valuable insights and contribute to the existing knowledge on the topic in a rigorous and evidence-based manner.

This research utilizes the Scopus database as a valuable resource to search for relevant articles related to the topics of "Green Economy" and "Green Technology." In the application named "Publish or Perish", the authors search for articles with these keywords and filtered it to 20 articles fit the criteria. Scopus is a comprehensive academic database that covers a wide range of disciplines, making it an ideal platform to explore scholarly literature on these subjects. The researchers will conduct a systematic search using the specified keywords to retrieve articles, research papers, conference proceedings, and other relevant publications that are directly related to the Green Economy and Green Technology. By employing Scopus, the research ensures a thorough and extensive collection of relevant literature, helping to establish a comprehensive understanding of the current state of research in these fields. The selected articles will be critically reviewed and analyzed to synthesize key insights, identify trends, and address research gaps, ultimately contributing to a well-informed and evidence-based study on the subjects of Green Economy and Green Technology.

This research utilizes 20 articles as the primary data source to examine and analyze the chosen research topic thoroughly, all the article is written in table 1.

Table 1. Literature Review

No.	Author and Year	Title	Methodology	Findings
1	Jesus et al. (2019)	Eco-innovation pathways to a circular economy: Envisioning priorities through a Delphi approach	Quantitative (The Delphi Method)	This research delves into the profound challenges and opportunities presented by the transition to a Circular Economy (CE) as a pathway towards sustainability. It recognizes that the prevailing societal organization, heavily reliant on continuous input flows, requires transformative change to accommodate a more regenerative and circular approach. This study, grounded in innovation studies, sought to examine the role of pro-CE eco-innovation dynamics in propelling this transition, contributing to both theoretical understanding and practical application.
2	Kasayanond et al. (2019)	Environmental Sustainability and its Growth in Malaysia by Elaborating the Green Economy and Environmental Efficiency	Quantitative (Regression Analysis)	The results highlight a significant proportion of companies that invest in energy use improvement, driven by a combination of confidence in its benefits and legal requirements. Moreover, the study underscores the positive relationship between Green Economy Awareness (GEA), knowledge, and environmental sustainability improvement. The alignment of firms' conceptualization of environmental sustainability and the green economy contributes to the enhancement of sustainability initiatives.
3	Mensah et al. (2019)	Technological innovation and green growth in the Organization for Economic Cooperation and Development economies	Quantitative (Multiple Linear Regression)	This study finds that the impact of climate change technologies on various sectors, such as energy generation and supply, production and processing of goods, and technologies for transportation, within twenty-eight OECD economies. This investigation employs rigorous empirical analyses and categorizes economies into sub-regions to derive nuanced insights. The findings carry substantial implications for shaping policy, encouraging innovation, and fostering sustainable development.
4	D'Amato & Korhonen (2021)	Integrating the green economy, circular economy and bioeconomy in a strategic sustainability framework	Literature Review Descriptive Analysis (GE, CE And BE Focused)	This study critically assesses three sustainability narratives: Green Economy (GE), Circular Economy (CE), and Bioeconomy (BE), revealing that each offers distinct solutions to address sustainability challenge. The analysis underscores that none of the narratives takes a clear stance on the desirable level of substitutability between natural capital and human-made capital, despite the absence of concrete evidence for absolute decoupling between economic growth and environmental impacts.

No.	Author and Year	Title	Methodology	Findings
5	Hysa et al. (2020)	Circular Economy Innovation and Environmental Sustainability Impact on Economic Growth: An Integrated Model for Sustainable Development	Quantitative (Multiple Linear Regression)	The study reaffirms the critical importance of the circular economy's three fundamental components—environmental, social, and economic—for driving economic growth within the EU28. The findings resonate with prior research indicating that environmental taxes play a significant role in fostering economic growth. Furthermore, the positive influence of recycling rates, environmental innovation, and trade in recyclable raw materials on sustainable development and economic growth mirrors the results of other studies.
6	Chien et al. (2021)	The effects of green growth, environmental-related tax, and eco-innovation towards carbon neutrality target in the US economy	Quantile Autoregressive Distributed Lag (QARDL)	The study's key findings reveal a significant and negative relationship between the studied variables. The USA's successful maintenance of green growth and robust environmental measures has led to a negative association between the predictors and CO_2 emissions. The QARDL model demonstrates that green growth, its square, environmental taxes, and renewable energy play vital roles in lowering CO_2 emissions in the long run.
7	Blomsma et al. (2019)	Developing a circular strategies framework for manufacturing companies to support circular economy-oriented innovation	Design Research Methodology (Drm)	This paper makes a significant contribution to the advancement of circular economy (CE) oriented innovation and its practical implementation. Through a structured approach, it achieves four key goals, ultimately enhancing the understanding and application of circular strategies in the manufacturing context. the Circular Strategies Scanner, serves as a practical tool for Circular Oriented Innovation (COI). It empowers practitioners within the manufacturing sector to contextualize the CE concept, map ongoing CE initiatives, and generate ideas for enhanced circularity
8	Durán-Romero et al. (2020)	Bridging the gap between circular economy and climate change mitigation policies through eco-innovations and Quintuple Helix Model	Literature Review Descriptive Analysis (Quintuple Helix Model)	The study underscores the significance of eco-innovations in advancing CE and climate change mitigation objectives. These eco-innovations, characterized by efficient resource utilization and recycling practices, have the potential to transform industries, production methods, and consumer behaviors. Companies play a crucial role by adopting cleaner production methods, renewable energy sources, and influencing consumer choices toward CE principles.
9	Cainelli et al. (2020)	Resource efficient eco-innovations for a circular economy: Evidence from EU firms	Quantitative Multiple Linear Regression	This paper sheds light on the dynamics of clean technology adoption within the context of the Circular Economy (CE). The findings underscore the nuanced and gradual nature of this transformative process, characterized more by reform than revolution. Through the analysis of key drivers, specifically environmental policies and market demand, this study contributes valuable insights to our understanding of how CE-related innovations are fostered.

No.	Author and Year	Title	Methodology	Findings
10	Yuan et al. (2020)	How does manufacturing agglomeration affect green economic efficiency?	Quantitative Multiple Linear Regression	This study find that the promotion of cleaner energy production and use emerges as a key avenue for enhancing GEG. Governments are encouraged to facilitate cleaner energy integration into the energy mix, bolstering the sustainability of the economy over time. Secondly, the pivotal role of cleaner energy as a driving force for GEG calls for governmental support and private sector engagement to incentivize cleaner energy production.
11	Sohag et al. (2019)	Green economic growth, cleaner energy and militarization: Evidence from Turkey	ARDL And NARDL Methods	The study underscores the significance of cleaner energy production and use as significant catalysts for GEG in the long run. It highlights the asymmetric nature of these coefficients, indicating that positive and negative shocks related to cleaner energy production and use yield distinct impacts on GEG. Furthermore, technological innovation is identified as a positive driving force for GEG, underscoring the importance of promoting green technology initiatives through financial market reforms.
12	Hao et al. (2021)	Green growth and low carbon emission in G7 countries: How critical the network of environmental taxes, renewable energy and human capital is?	Panel Data Methods	The study underscores the significance of well-developed human capital for the successful implementation of these policies. Enhancing human capital through investment and education can foster awareness among individuals, promoting the adoption of eco-friendly technologies. Overall, the research provides actionable insights for policymakers aiming to address climate change and achieve sustainable development goals, highlighting the critical role of integrated strategies that encompass green growth, eco-innovation, and environmental pricing.
13	Belmonte-Urena et al. (2021)	Circular economy, degrowth and green growth as pathways for research on sustainable development goals: A global analysis and future agenda	Bibliometric Literature Review Descriptive Analysis	This study offers a comprehensive assessment of the contributions made by different knowledge domains, namely CE (Circular Economy), DG (Degrowth), GG (Green Growth), and SDGR (Sustainable Development Goals and Global Reporting), to research aligned with the UN Sustainable Development Goals (SDGs). The findings reveal that while all four domains have made significant contributions, each domain tends to focus on specific SDGs, with SDG 3, SDG 12, SDG 8, and SDG 13 receiving particular attention.
14	Mavi & Mavi (2019)	Energy and environmental efficiency of OECD countries in the context of the circular economy: Common weight analysis for malmquist productivity index	Quantitative (Data Envelopment Analysis [DEA])	The findings revealed that Switzerland exhibited the highest efficiency during 2012-2014, while Ireland led in 2015. Analysis of the Malmquist productivity index indicated that Ireland and the USA consistently improved their energy and environmental efficiency over the study period, showcasing steady progress. Notably, despite facing significant undesirable variables, the USA demonstrated the highest overall efficiency improvement, reflecting the effectiveness of its energy and environmental programs.

No.	Author and Year	Title	Methodology	Findings
15	Söderholm (2020)	The green economy transition: the challenges of technological change for sustainability	Case Study Research	This article underscores the intricate and multifaceted nature of societal challenges arising from climate and environmental hazards, particularly in the context of sustainable technological change.
16	Demirel & Danisman (2019)	Eco-innovation and firm growth in the circular economy: Evidence from European small- and medium-sized enterprises	Quantitative Multiple Linear Regression	This study underscores the complexity of the relationship between different types of circular economy initiatives, investment levels, external financing, and SME growth. The results emphasize the significance of focusing on specific dimensions of circular economy activities, particularly ECO-DESIGN, and the threshold levels of investment for achieving growth outcomes.
17	Shuai & Fan (2020)	Modelling the role of environmental regulations in regional green economy efficiency of China: Empirical evidence from super efficiency DEA-Tobit model	Panel Data Methods	The study employs a Super-SBM model to assess green economy efficiency while accounting for undesired output within resource and environmental constraints. The findings reveal a temporal evolution in China's green economy efficiency across its eastern, central, and western regions, marked by an upward trend over time, albeit with significant spatial variations. Notably, despite regional differences, a consistent upward trajectory in green economy efficiency is observed across all regions, reflecting the broader trend of national green development efforts.
18	Khan et al. (2021)	Technological Innovation and Circular Economy Practices: Business Strategies to Mitigate the Effects of COVID-19	Quantitative Linear Regression	The findings underscore the adverse impact of the COVID-19 outbreak on the performance of food product firms in Ecuador, leading to closures and disruptions in operations. Notably, the study demonstrates that big data analytics mechanisms and technology integration have substantial positive effects on firms' practices and performance. The integration of technology, particularly through the implementation of big data analytics, enhances firms' capabilities to adopt Circular Economy (C.E.) practices. The efficient utilization of information helps in resource optimization, reducing costs, and subsequently improving profit margins .
19	Liu & Dong (2021)	How technological innovation impacts urban green economy efficiency in emerging economies: A case study of 278 Chinese cities	Quantitative Multiple Linear Regression	This study finds that china's government should consider implement this policies, such as: Urban transformation, industrial competition through technological innovation, upgraded green standards, and increased green consumption should be focal points for the eastern region's efforts to accelerate urban green economy construction.

No.	Author and Year	Title	Methodology	Findings
20	Fernando et al. (2019)	Pursuing green growth in technology firms through the connections between environmental innovation and sustainable business performance: Does service capability matter?	Quantitative (Multiple Linear Regression)	The study finds that eco-innovation is positively correlated with sustainable business performance, reinforcing the idea that eco-innovation plays a pivotal role in driving business practices toward sustainability. Various aspects such as regulations, technology, cross-functional coordination, and market focus are shown to positively influence economic and social performance.

Source: Prior Researches

RESULTS AND DISCUSSION

Results

These articles highlight the increasing importance of transitioning to a green economy to achieve sustainable development and address environmental challenges. The studies emphasize the role of eco-innovation, circular economy principles, and technological advancements in promoting green growth, resource efficiency, and climate change mitigation. Additionally, policy instruments, such as environmental regulations and green business practices, are explored as essential drivers of sustainable economic development. Overall, majority of the article above suggest that the transition to a green economy requires collaboration among various stakeholders, including governments, businesses, academia, and civil society. It involves adopting multidimensional policies, integrating social and behavioral considerations, and addressing real political trade-offs to drive deep and systemic eco-innovation. Many studies also highlight the need to foster sustainable technological change and consider the mediating effect of service innovation capability to enhance business sustainability.

According to Belmonte-Urena et al. (2021), Fernando et al. (2019) and Mensah et al. (2019), Pursuing green growth in technology firms through the connections between environmental innovation and sustainable business performance is of utmost importance for a company. Environmental innovation involves developing and implementing eco-friendly technologies, processes, and practices that reduce the company's environmental impact and promote sustainability. By integrating environmental innovation into their business strategies, technology firms can achieve several significant benefits. Furthermore, integrating sustainable business practices and environmental innovation can enhance employee morale and attract top talent. Many employees are increasingly motivated to work for companies that align with their personal values and contribute to a sustainable future. In conclusion, pursuing green growth in technology firms through environmental innovation and connecting it to sustainable business performance is not only crucial for addressing environmental challenges but also beneficial for the company's financial success, reputation, and competitiveness. By adopting sustainable practices and investing in eco-friendly technologies, technology firms can create a positive impact on society, foster innovation, and secure their long-term success in a rapidly changing and environmentally conscious world.

According to Chien et al. (2021) and Hao et al. (2021), the Environmental-related taxes play a crucial role in incentivizing businesses and individuals to adopt environmentally friendly practices and technologies. By imposing taxes on activities that generate carbon emissions or deplete natural resources, the government can encourage the adoption of greener alternatives and reduce the overall carbon footprint. This type of tax is levied on activities or products that have a negative impact on the environment, such as carbon emissions, pollution, waste generation, and resource depletion. The primary objective of environmental-related taxes is to internalize the external costs associated with environmental degradation, encouraging businesses and individuals to adopt eco-friendly alternatives and reduce their ecological

footprint. By imposing higher taxes on environmentally harmful activities and products and providing tax incentives for green practices, governments aim to influence behavior, drive innovation towards cleaner technologies, and create financial incentives for sustainable practices.

According to Khan et al. (2021), Liu and Dong (2021), the green economy transition represents a critical shift towards sustainable practices and technologies to address pressing environmental issues. It entails adopting renewable energy, sustainable production methods, and eco-friendly innovations to reduce the ecological footprint and promote a circular economy. While the transition is essential for addressing climate change and promoting environmental stewardship, it poses significant challenges, primarily centered around technological change. Technological change is at the core of the green economy transition, driving innovation and creating new opportunities for sustainability. However, this transition also comes with challenges, such as the high costs of adopting and implementing new green technologies. Many sustainable innovations require substantial initial investments, making it difficult for some businesses and industries to take the leap towards eco-friendly practices.

Discussion

The transition towards a circular economy (CE) and the adoption of eco-innovations have gained significant attention in the context of sustainable development (Jesus et al., 2019). However, there is a noticeable research gap in understanding how small and medium-sized enterprises (SMEs) can effectively integrate circular strategies and eco-innovations to enhance their green economic efficiency (GEE) and overall sustainability performance. While various studies have highlighted the importance of CE for sustainable development, the focus has primarily been on macro-level analysis at the national or regional level, leaving the micro-level dynamics within firms and industries largely unexplored. The potential research gap lies in the lack of studies specifically investigating how SMEs, as critical players in the economy, can adopt and diffuse eco-innovations to contribute to the circular economy. SMEs often face unique challenges, including limited resources and capacity, which may hinder their ability to adopt sustainable practices and innovations.

According to Fernando et al. (2019), In response to greater environmental awareness among stakeholders, companies have become increasingly interested in practices such as eco-innovation. Despite the expanding literature on eco-innovation, scholars have so far paid little attention to the study of eco-innovation and its impact on business sustainability, particularly considering the mediating effect of service innovation capability. The research findings explore the relationship between eco-innovation, service innovation capability, and business sustainability. The study investigates the mediating effect of service innovation capability on the relationship between sustainable organizational performance and environmental innovation, which is directly related to stakeholder theory. The research emphasizes the importance of considering the interests of stakeholders (in this case, stakeholders concerned about environmental issues) in shaping eco-innovation strategies and achieving sustainable business outcomes.

CONCLUSION

In conclusion, the research findings collectively underscore the critical role of the green economy and green technology in achieving sustainable development. The novelty of these findings lies in the insights they provide into stakeholder engagement, technological innovation, and the impact of environmental policies on the transition to a green economy. The implications of these findings are far-reaching, calling for collaboration among stakeholders, investment in research and development, and the development of tailored policies to drive sustainable practices. By embracing these insights, societies can pave the way for a resilient and environmentally conscious future that promotes economic growth while safeguarding the planet for generations to come.

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