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DRIVERS OF GREEN ENTREPRENEURSHIP IMPLEMENTATION AMONG MALAYSIAN OIL AND GAS SMALL AND MEDIUM ENTERPRISES

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Abstract:

In recent years, scholars have deemed green entrepreneurship essential for generating new business opportunities for sustainable development. Despite numerous recent studies in this field, there is a scarcity of research on how drivers of green entrepreneurship assist businesses in the oil and gas sector in advancing towards sustainable green practices. This study seeks to elucidate the factors influencing green entrepreneurship within oil and gas small and medium enterprises (OGSMEs) in Malaysia, thereby addressing the existing research gap. Data will be collected from 3834 OGSMEs in Malaysia through stratified random sampling. The research will employ a cross-sectional survey methodology, with data analysis performed using SPSS version 29.0 and PLS-SEM version 4.0. This study provides industry professionals, governmental organizations, and policymakers with an enhanced comprehension of the factors influencing green entrepreneurship in the oil and gas sectors. The findings facilitate the formulation of effective policies and regulations that can enhance the sustainability of the oil and gas industry.

Keywords:

Collaboration, Environmental, Green Entrepreneurship, Knowledge Management Practices, Organizational, Small and Medium Enterprises

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Introduction

In the last twenty years, there has been a heightened interest in entrepreneurship, especially regarding the rise of new entrepreneurs and businesses, among governments and scholars, due to evidence showing entrepreneurship's role in economic growth, enhanced productivity, and revitalization of social and productive networks (Goines et al., 2020; Cohen & Winn, 2021). Entrepreneurship rejuvenates regional identity, amplifies innovation processes, and generates new employment opportunities (Shirokova et al., 2018). In the current era where sustainability is paramount, it is acknowledged that entrepreneurship can drive the transition towards a more sustainable society (Gasbarro et al., 2021; Martí & Santos, 2022). Researchers have increasingly concentrated on the interplay between business and the environment, particularly the contributions of entrepreneurs and Small and Medium Enterprises (SMEs) in fostering a sustainable economic system (Nikolaou & Evangelinos, 2022). Smith et al. (2022) assert that sustainability has become prevalent in business, with entrepreneurship being essential for fostering a more sustainable society. Levinsohn (2019) emphasizes that SMEs play an essential, though under-researched, role in promoting local sustainability, while Martinez-Canas (2020) highlights that sustainable entrepreneurship has gained momentum as a global movement emphasizing social and environmental impact.

Green entrepreneurship refers to entrepreneurial endeavors centered on environmental sustainability, yet it remains inadequately researched both globally and in Malaysia due to multiple factors. It is comparatively recent, emerging in the early 2000s and devoid of the extensive historical research foundations typical of established business practices (Yadlapalli, 2020). The absence of a unified definition hinders the standardization of research frameworks (Ratten, 2020; Urban, 2019). This nascent discipline encompasses various domains, such as renewable energy (Demirel & Parris, 2017), sustainable development (Gupta et al., 2021), and green markets (Zou et al., 2019). The urgency of green entrepreneurship has recently intensified due to heightened awareness of climate change and environmental degradation (Kraus et al., 2020; Cohen & Winn, 2019). Green entrepreneurship is inadequately examined in ASEAN nations, especially in Malaysia, where research indicates a disparity between the execution of green entrepreneurial initiatives and their facilitators (Rahman et al., 2025; Smith et al., 2023). Despite increasing interest, the practical adoption of green entrepreneurship among Malaysian SMEs remains limited (Tan & Liu, 2022), and there are inconsistent levels of green management practices among SMEs in Southeast Asia, implying that green entrepreneurship is still in its nascent phase (Hassan et al., 2025).

Amid increasing climate change apprehensions and the worldwide shift towards sustainable development, the oil and gas sector faces intensifying pressure to diminish its environmental impact (Ahmed et al., 2023). In Malaysia, small and medium enterprises in the oil and gas sector are crucial for facilitating upstream and downstream operations (SME Corp Malaysia, 2023). Notwithstanding their strategic significance, small and medium enterprises frequently encounter difficulties in conforming to green entrepreneurship principles owing to constrained resources, knowledge deficiencies, and institutional obstacles (Hair et al., 2018). Green entrepreneurship encompasses business activities that incorporate environmental sustainability into entrepreneurial processes, providing Malaysian OGSMEs with a means to attain long-term competitiveness while contributing to national and global sustainability objectives (Smith & Jones, 2022). Nonetheless, the adoption and execution of green entrepreneurial practices are inconsistent and insufficiently examined in this high-impact sector (Batty et al., 2020).

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Prior research has identified multiple facilitators of green entrepreneurship, including organizational factors, environmental conditions, collaborative efforts, and knowledge management practices (Xin & Gao, 2023). However, there is limited understanding of how these drivers affect the green entrepreneurship implementation, which functions as a vital internal mechanism directing decision-making and resource allocation (Zhang & Kim, 2024). This gap in the literature presents a critical challenge. Without understanding the relationship between drivers and green entrepreneurship implementation, efforts to promote sustainable practices in this sector may remain fragmented and ineffective (Kumar & Sinha, 2024). This knowledge gap hampers the development of effective policies and organizational practices necessary to accelerate sustainable transformation in the sector.

Hence, this research seeks to assess the drivers of green entrepreneurship implementation among Malaysian SMEs in the oil and gas sector. By examining the interplay between organizational, environmental, collaboration, and knowledge management practices, this research seeks to uncover the factors that enhance their effectiveness in driving sustainable business practices (Gao & Li, 2020; Hair et al., 2018). This study seeks to reconcile theory and practice by creating a comprehensive framework that incorporates essential drivers and the implementation of green entrepreneurship, providing practical solutions for OGSMEs to surmount obstacles and leverage opportunities for sustainability (Ahmed et al., 2023; Johnson & Lee, 2023). This study advances the overarching objective of establishing a resilient and sustainable economy in Malaysia, in accordance with national and international sustainability initiatives (Broman & Robèrt, 2017; Hameed et al., 2021).

Literature Review

The oil and gas industry play a pivotal role in Malaysia's economy, contributing approximately 20% of the nation's revenue through exports, domestic energy supply, and industrial activity (Salleh et al., 2019). However, this sector is also a significant contributor to greenhouse gas emissions and environmental degradation, prompting calls for a transition towards sustainable practices (Ahmad et al., 2020; Khan et al., 2021). The adoption of entrepreneurship in this sector, particularly green entrepreneurship, is seen as a solution to balance economic growth with environmental stewardship (Gast et al., 2017; Lüdeke-Freund et al., 2018). The integration of green entrepreneurship within the Malaysian Oil and Gas industry is not only a response to environmental challenges but also a strategic necessity to align with global sustainability goals. This approach is particularly relevant in resource-intensive sectors like oil and gas, where the environmental footprint is substantial and the potential for innovation is high (Zeng et al., 2023; Hall et al., 2020). The oil and gas industry are a significant contributor to Malaysia's economy, but its operations have long been associated with environmental challenges such as carbon emissions, habitat destruction, and resource depletion (Khan et al., 2021).

Green entrepreneurship, also known as eco-entrepreneurship, combines environmental stewardship with economic objectives, addressing critical ecological concerns through innovative practices, products, and services (Lüdeke-Freund et al., 2018; Demirel et al., 2019). This approach emphasizes sustainability over short-term profits and aligns business strategies with broader societal transitions toward sustainable economies (Horne & Bilec, 2020; Zeng et al., 2023). As a key concept emerging from the broader environmental movements of the 20th century, green entrepreneurship now plays a pivotal role in mitigating environmental challenges such as climate change and resource depletion (Rockström et al., 2021). Green entrepreneurship has many drivers, and this study focused on four drivers only, which are

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organizational, environmental, collaboration, and knowledge management practices (Rahman & Wong, 2022; Abdullah et al., 2021). The integration of environmental and knowledge management practices as drivers of green entrepreneurship is particularly relevant for Malaysian SMEs in the oil and gas (O&G) industry. Green entrepreneurship significantly contributes to economic growth, job creation, and environmental sustainability by fostering innovation and opening new markets (Gast et al., 2017; Hall et al., 2020).

Collaboration in green entrepreneurship encompasses the coordinated efforts of stakeholders, including top management support, green teams, and cross-functional collaboration, to achieve shared environmental and economic goals. (Bocken et al., 2018; Baldassarre et al., 2018). This collaboration addresses complex sustainability issues by pooling resources, knowledge, and expertise, which drives eco-innovation, mitigates barriers, and supports the implementation of sustainable practices. Key dimensions of collaboration include top management support, green teams, and cross-functional collaboration, each playing a pivotal role in embedding sustainability into organizational operations and strategies (Demirel et al., 2019; Montiel et al., 2020). Collaboration significantly impacts green entrepreneurship by fostering resource pooling, knowledge sharing, and eco-innovation. Top management support ensures sustainability is embedded into organizational strategies, fostering partnerships with external stakeholders and motivating employees to adopt green practices (Goh et al., 2019; Zhang et al., 2019). Green teams drive the development of eco-friendly solutions by promoting innovation and aligning sustainability efforts with strategic goals (Chen et al., 2020; Lüdeke-Freund et al., 2018).

The environmental aspect of green entrepreneurship encompasses external ecological and regulatory factors that shape the adoption and execution of sustainable business strategies, playing a crucial role in reducing environmental harm and fostering the preservation of natural resources. (Gast et al., 2017). The goal is to align business operations with environmental stewardship and economic viability, ensuring long-term sustainability and competitive advantage (Kirkwood & Walton, 2020). Environmental dimensions, particularly market orientation, inflation, and government policies, play a crucial role in shaping the strategic direction of green entrepreneurship by influencing decision-making, investment priorities, and sustainability initiatives (Lyu et al., 2020).

Knowledge management practices in green entrepreneurship refer to the systematic processes and activities that involve knowledge sharing, knowledge acquisition, and distributed knowledge creativity to drive innovation, compliance, and eco-friendly business models (Wibowo et al., 2022). These dimensions facilitate eco-innovation, enhance sustainability efforts, and align corporate strategies with environmental and economic objectives. The relationship between knowledge management practices and green entrepreneurship lies in fostering organizational learning, promoting innovation, and ensuring sustainable development. These practices are critical for SMEs in the oil and gas sector, where rapid technological advancements and regulatory demands require a continuous learning process (Rahman & Wong, 2022).

In green entrepreneurship, organizational drivers encompass internal processes, cultural values, and structural frameworks that facilitate the seamless integration of sustainability initiatives within a business. These elements are essential in shaping a company's capacity to innovate and implement eco-friendly solutions, ultimately contributing to environmental sustainability

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(Garcés-Ayerbe et al., 2021). Organizational dimensions such as circular supply chain management, corporate social responsibility, and total quality management significantly influence the adoption and success of green entrepreneurship by providing the structural and strategic foundations necessary for eco-innovation. Circular supply chain management aligns supply chain processes with sustainability principles, fostering resource efficiency and reducing environmental footprints, which are critical to achieving green entrepreneurship objectives (Kirchherr et al., 2020). Similarly, corporate social responsibility integrates social and environmental accountability into organizational strategies, enabling businesses to balance profitability with sustainability, which is essential for green entrepreneurial ventures (Zhao et al., 2019). Total quality management complements these efforts by embedding continuous improvement and innovation into operations, ensuring that environmental goals are met while maintaining high-quality standards (Jabbour et al., 2021). Together, these drivers create a cohesive framework for green entrepreneurship, driving sustainable value creation and long-term business resilience (Khalid et al., 2021).

Underpinning Theory

Green entrepreneurship in the Malaysian Oil and Gas (O&G) sector can be comprehensively understood through a combination of theories that emphasize the role of environmental, social, and economic dimensions in business operations. The sustainability theory, supported by the Triple Bottom Line framework, argues that successful businesses must balance profitability with environmental responsibility and social equity (Schaltegger et al., 2017). This perspective guides Malaysian SMEs in O&G to prioritize sustainable practices despite challenges like high initial costs, offering long-term benefits such as enhanced reputation and regulatory compliance (Savitz & Weber, 2016).

Critical Success Factors Theory

Critical success factors theory identifies the essential elements necessary for an organization to achieve its objectives, particularly in complex and dynamic industries like the oil and gas sector. In the context of green entrepreneurship, critical success factors theory emphasizes aspects such as environmental compliance, technological innovation, and stakeholder engagement, which are crucial for Malaysian SMEs to succeed in transitioning toward sustainable practices (Amran et al., 2018; Mohamed & Alsharif, 2021).

This theory underscores the importance of aligning corporate strategy with green initiatives by identifying sector-specific factors such as government incentives, access to green technology, and the need for skilled personnel (Ahmad et al., 2020). For Malaysian SMEs in the O&G sector, integrating critical success factors into strategic planning ensures that these businesses can navigate the complexities of regulatory frameworks while building competitive advantages through sustainable practices (Rahman et al., 2022).

Dynamic Capabilities Theory

Dynamic capabilities theory focuses on an organization's ability to integrate, build, and reconfigure internal and external resources to adapt to rapidly changing environments. This theory is particularly relevant to Malaysian SMEs in the O&G sector, as it highlights the necessity of agility and innovation in implementing green entrepreneurship initiatives (Bocken et al., 2018).

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The dynamic capability framework identifies three core capabilities—sensing opportunities, seizing opportunities, and reconfiguring resources—which are critical for green entrepreneurship (Ambrosini & Bowman, 2018; Lim et al., 2022). For instance, sensing opportunities involves recognizing emerging trends in renewable energy, while seizing them requires investments in green technologies and partnerships with stakeholders (Lee et al., 2023). Reconfiguring resources, such as transitioning from fossil fuels to sustainable energy sources, ensures long-term competitiveness and resilience (Zahra et al., 2020).

Resource-Based View Theory

In addition, the resource-based view theory highlights the importance of leveraging internal resources, such as renewable energy systems and skilled personnel, to create competitive advantages and successfully implement green strategies (Khan et al., 2021). Meanwhile, institutional theory underscores the significant role of government policies and societal pressures in driving sustainable practices, as evidenced by Malaysia's National Green Technology Policy and the Green Technology Financing Scheme (Eshun & Kafui, 2021; DiMaggio & Powell, 2022). Furthermore, the Environmental Innovation theory supports the adoption of green technologies, emphasizing how eco-innovations can lead to cost savings and enhanced competitiveness, aligning with global sustainability trends (Albort-Morant et al., 2016).

Proposed Conceptual Framework

The framework proposed for this study provides a structured approach for understanding the relationship between drivers and green entrepreneurship implementation. The framework builds on insights from prior research and related theories, specifically addressing the drivers of green entrepreneurship implementation, and introduces novel elements to expand its explanatory scope.

The research framework positions green entrepreneurship implementation as the dependent variable, representing the primary outcome of interest. Green entrepreneurship is conceptualized as the process of creating innovative products and services that balance profit with environmental stewardship, incorporating sustainability into core business strategies, and responding to market demands for eco-friendly solutions. The drivers of green entrepreneurship, acting as independent variables, are factors that drive or facilitate the implementation of green entrepreneurship. These drivers include variables such as environmental, organizational, collaboration, and knowledge management practices.

Unlike fragmented approaches that focus on individual drivers, this framework adopts a comprehensive perspective, examining a wide range of organizational, environmental, collaborative, and knowledge-based factors. This integrative approach ensures a more robust understanding of the multifaceted nature of green entrepreneurship.

By linking drivers and green entrepreneurship implementation, the framework emphasizes the dynamic interplay between these elements. It showcases how strategic alignment and operational factors work together to achieve sustainability goals, offering actionable insights for policymakers and practitioners. The framework’s adaptability to various sectors and contexts makes it a valuable tool for exploring green entrepreneurship in diverse industries. Its application to emerging areas, such as the intersection of technology and sustainability, offers potential for further innovation in both research and practice.

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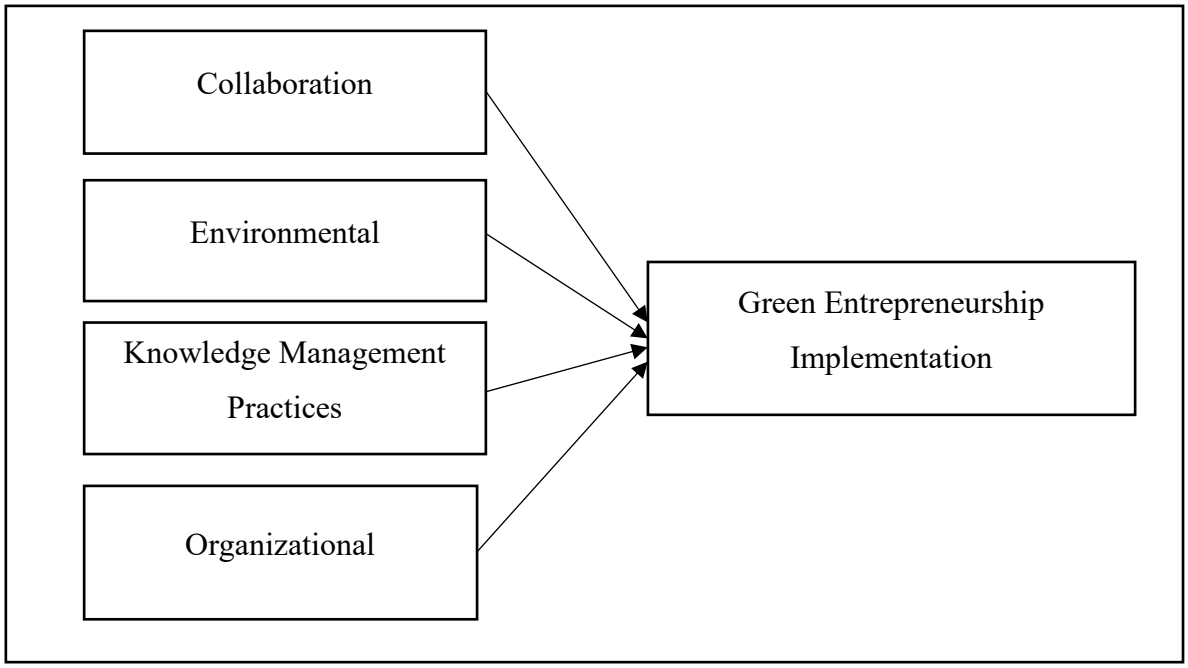

Figure 1: Proposed Conceptual Framework

Hypothesis Development

The implementation of green entrepreneurship among OGSMEs in Malaysia is significantly influenced by a combination of collaboration, environmental, knowledge management practices, and organizational factors. Collaboration, encompassing partnerships with stakeholders, inter-organizational networks, and cross-sector engagement, fosters collective innovation and resource-sharing mechanisms that significantly enhance the implementation of green entrepreneurship initiatives (Zheng et al., 2023; Upward & Jones, 2016). Therefore, the following hypothesis is developed:

H1: There is a significant relationship between collaboration and green entrepreneurship implementation.

There is a significant relationship between environmental factors and green entrepreneurship implementation, as supportive government policies stimulate eco-innovation among SMEs (Hassan et al., 2021). Market demand for sustainable products motivates firms to adopt green practices (Ismail & Daud, 2020; Nor & Said, 2019). Regulatory frameworks and environmental awareness campaigns enhance entrepreneurial commitment to sustainability (Omar & Azmi, 2020; Mahadi & Yusof, 2021). Furthermore, access to green financing and tax incentives fosters eco-friendly business models (Abdullah & Ramli, 2021; Rahman & Ibrahim, 2022). Hence, the following hypothesis is developed:

H2: There is a significant relationship between environmental and green entrepreneurship implementation.

There is a significant relationship between knowledge management practices and green entrepreneurship implementation, as effective knowledge sharing fosters innovation in sustainable business models (Hassan et al., 2021; Latif & Othman, 2020). Knowledge creation

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enhances organizational learning and eco-entrepreneurial capabilities (Ismail & Daud, 2020; Mahadi & Yusof, 2021). Proper knowledge storage systems support the development of green technologies and practices (Omar & Azmi, 2020; Rahman & Ibrahim, 2022). Additionally, knowledge dissemination strengthens decision-making in implementing eco-innovations (Abdullah & Ramli, 2021; Zainal & Hashim, 2020). Therefore, the following hypothesis is developed:

H3: There is a significant relationship between knowledge management practices and green entrepreneurship implementation.

There is a significant relationship between organizational capabilities and green entrepreneurship implementation, as strong internal structures drive eco-innovation strategies (Abdullah & Ramli, 2021; Ismail & Daud, 2020). Leadership commitment and organizational culture are crucial in embedding sustainable practices among SMEs (Hassan et al., 2021; Nor & Said, 2019). Effective resource management within organizations enhances green entrepreneurship outcomes (Omar & Azmi, 2020; Rahman & Ibrahim, 2022). Organizational learning and adaptability enable firms to align with environmental regulations and market expectations (Zainal & Hashim, 2020; Ahmad et al., 2021). Thus, the following hypothesis is developed:

H4: There is a significant relationship between organizational and green entrepreneurship implementation.

Research Methodology

Self-administered survey questionnaires will be used in this study's quantitative methodology to gather information from a sample of Malaysian SMEs that are involved in oil and gas. As a sample technique, simple random sampling is utilized. The sampling frame for this study will be created based on the directories from the Petroleum Regulatory Division, Ministry of Domestic Trade and Costs of Living (KPDN), and SME Corporation (SME Corp) as of October 2024, representing Oil and Gas SMEs in Malaysia. The sampling frame will include specific details such as company names, office addresses, telephone and fax numbers, business types, and contact names.

This study will employ the Raosoft sample size calculator (Raosoft, 2010) to determine the minimum sample size for the identified total population. According to Memon et al. (2020), the Raosoft software will be particularly effective for this purpose. As shown in Figure 2, the recommended sample size will be 350 respondents. By applying these techniques, the researcher will identify the minimum number of participants required for an appropriate sample size. Therefore, the data collected will include no fewer than 350 participants. Considering the target population of approximately 3,834 business establishments, this sample size will be sufficient for generalizing the findings. With all factors taken into account, the Raosoft Sample Size Calculator will be found to be the best tool for determining the minimum sample size.

Based on the Raosoft Sample Size Calculator, 1500 questionnaires will be distributed to individuals from SMEs in the oil and gas industry to meet the minimum sample size, which is 350. Structural Equation Modeling-Partial Least Squares (SEM-PLS) is used to examine relationships between the variables. In this study, the endogenous latent variable is green

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entrepreneurship implementation, while the exogenous latent variables are collaboration, organizational, environmental, and knowledge management practices.

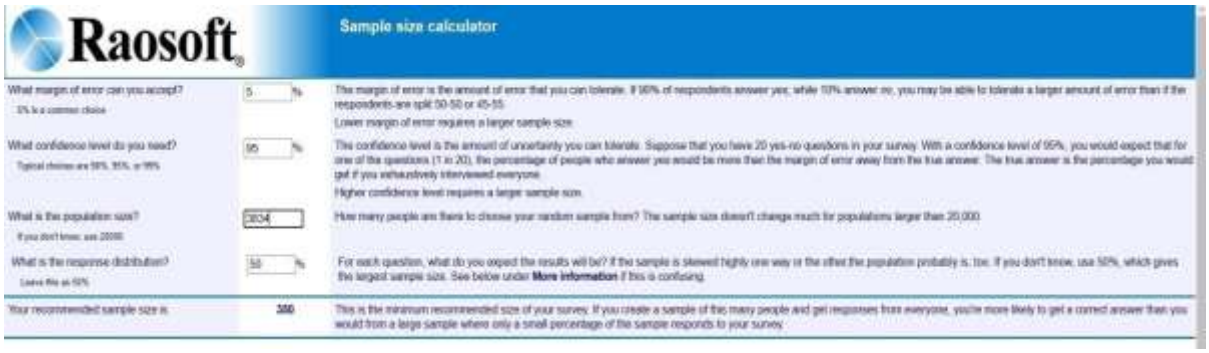

Figure 2: Raosoft Sample Size Calculator

Conclusion

The main drivers supporting the application of green entrepreneurship in Malaysian oil and gas SMEs have been investigated in this conceptual paper. The research finds four main drivers, collaboration, environmental, knowledge management practices, and organizational as fundamental drivers of green entrepreneurship implementation by combining insights from current literature and industry realities. These drivers offer a basic framework for knowing how SMEs in the oil and gas sector may effectively implement green practices and support Malaysia's more general environmental and economic sustainability goals.

This study is significant for addressing key gaps in green entrepreneurship research, particularly in the context of Malaysian SMEs in the oil and gas sector. While prior studies focus on technological advancements, this research emphasizes drivers and their alignment with green entrepreneurship implementation, offering an innovative framework to enhance green practices. Employing the resource-based view, dynamic capabilities theory, and critical success factors theory, it highlights leveraging resources and achieving critical goals for sustainability and competitiveness. Beyond academic value, it provides actionable insights for SMEs to adopt green practices, aiding policymakers in formulating supportive policies and incentives aligned with national sustainability goals. The study also holds broader implications for Malaysia, addressing sustainability in a key industry while advancing green entrepreneurship to achieve environmental and economic objectives. This comprehensive approach fosters sustainability and environmental stewardship in emerging economies.

The significance of this study lies in its ability to address critical gaps in the existing literature on green entrepreneurship, particularly within the context of SMEs in Malaysia's oil and gas industry. While much of the prior research has concentrated on technological advancements in green entrepreneurship, limited attention has been paid to the drivers that facilitate its adoption. By focusing on these drivers, the study proposes a comprehensive and innovative framework to understand and enhance green entrepreneurship practices. This contribution is especially valuable in an industry traditionally associated with environmental challenges and limited sustainability practices. Ultimately, this study aims to bridge the gap between theory and practice by developing a comprehensive framework that integrates key drivers and green entrepreneurship implementation, offering practical solutions for OGSMEs to overcome

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barriers and capitalize on opportunities for sustainability. This research contributes to the broader goal of building a resilient and sustainable economy in Malaysia, aligning with national and global sustainability initiatives.

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References

Ahmed, S., Zaman, K., & Alam, M. M. (2023). Barriers to green business practices in SMEs: A developing country perspective. *Sustainable Development, 31*(2), 345-358.

Ahmad, N. H., Halim, H. A., & Zainal, S. R. M. (2020): Green entrepreneurship inclination among Generation Y: The road towards a green economy. *Journal of Cleaner Production, 250,* 119491.

Abdullah, M. A., & Zain, S. R. M. (2021): Knowledge management and organizational performance in Malaysian SMEs: The role of innovation. *Journal of Small Business and Enterprise Development, 28(3),* 447–463.

Albort-Morant, G., Leal-Rodríguez, A. L., & De Marchi, V. (2018). Absorptive capacity and relationship learning mechanisms as complementary drivers of green innovation performance. *Technological Forecasting and Social Change, 129,* 320–334.

Batty, M., Hall, P., & Stern, R. (2020): Bridging the gap: Corporate strategies for sustainable innovation. *Strategic Management Journal, 41*(7), 1234–1256.

Baldassarre, B., Calabretta, G., Bocken, N. M. P., & Jaskiewicz, T. (2018). Bridging sustainable business model innovation and user-driven innovation: A process for sustainable value proposition design. *Journal of Cleaner Production, 147,* 175–186.

Bocken, N. M. P., Schuit, C. S. C., & Kraaijenhagen, C. (2018): Experimenting with a circular business model: Lessons from eight cases. *Environmental Innovation and Societal Transitions, 28*, 79–95.

Chen, L., & Wu, H. (2020). Eco-innovation in the green market: Strategic positioning and competitive advantages. *Journal of Business Strategy, 41*(6), 43–52.

Cohen, B., & Winn, M. I. (2021). Market imperfections, opportunity, and sustainable entrepreneurship. *Journal of Business Venturing, 22*(1), 29–49.

Demirel, P., Li, Q. C., Rentocchini, F., & Tamvada, J. P. (2019): Born to be green: New insights into the economics and management of green entrepreneurship. *Small Business Economics, 52(4),* 759–771.

Gast, J., Gundolf, K., & Cesinger, B. (2017). Doing business in a green way: A systematic review of the ecological sustainability entrepreneurship literature and future research directions. *Journal of Cleaner Production, 147*, 44–56.

Gao, Y., & Li, X. (2020): Green innovation and firm performance: Evidence from Chinese manufacturing enterprises. *Corporate Social Responsibility and Environmental Management, 27(1)*, 140–153.

Gupta, P., & Rao, K. (2021). Analyzing inflation's impact on green entrepreneurship. *International Journal of Business and Management, 16(7),* 89–97.

Giones, F., Brem, A., Pollack, J. M., Michaelis, T. L., Klyver, K., & Brinckmann, J. (2020). Revising entrepreneurial action in response to exogenous shocks: Considering the COVID-19 pandemic. *Journal of Business Venturing Insights, 14*, e00186.

Advanced International Journal of Business, Entrepreneurship and SME's
EISSN: 2682-8545
AIJBES
Volume 7 Issue 25 (September 2025) PP. 520-532
DOI 10.35631/AIJBES.725035

Gasbarro, F., Annunziata, E., Rizzi, F., & Frey, M. (2021). The interplay between sustainable entrepreneurs and public authorities: Evidence from sustainable energy transitions. *Journal of Cleaner Production, 292,* 126030.

Goh, S. K., & Jie, F. (2019). The influence of green supply chain management practices on operational and environmental performance. *Sustainability, 11(11),* 3045.

Garcés-Ayerbe, C., Rivera-Torres, P., Suárez-Perales, I., & Leyva-de la Hiz, D. I. (2021). Is it possible to change from a linear to a circular economy? Drivers and barriers for circular economy in the European Union. *Business Strategy and the Environment, 28*(2), 589–604.

Hall, J., Daneke, G., & Lenox, M. (2020). Sustainable development and entrepreneurship: Past contributions and future directions. *Journal of Business Venturing, 35(1),* 106003.

Hair, J. F., Harrison, D. E., & Risher, J. J. (2018). Marketing research in the 21st century: Opportunities and challenges. *Brazilian Journal of Marketing, 17(5),* 728–749.

Hassan, M. G., & Ahmad, S. (2025). Green management practices and sustainability performance of SMEs in Southeast Asia. Sustainable Development, 33(4), 789-805.

Hassan, R., Ali, S., & Tan, W. (2021). The mediating role of corporate strategy in the relationship between organizational enablers and green entrepreneurship. Journal of Business Research, 134, 273-289.

Horne, J. R., & Bilec, M. M. (2020): Education and training gaps in the renewable energy workforce: Perspectives from employers, educators, and students. *Journal of Cleaner Production, 248,* 119184.

Hameed, I., Khan, I. U., & Islam, T. (2021): Understanding the challenges of sustainable entrepreneurship in the SME sector: A developing country perspective. *Sustainability, 13(5),* 2850.

Jabbour, C. J. C., Sarkis, J., de Sousa Jabbour, A. B. L., Renwick, D. W. S., Singh, S. K., Grebinevych, O., & Kruglianskas, I. (2021). Who is in charge? A review and a research agenda on the 'human side' of the circular economy. Journal of Cleaner Production, 222, 793-801.

Johnson, M. W., & Lee, R. (2023): Reinventing your business model for sustainability. *Harvard Business Review, 101(5),* 50–59.

Khan, S., Zhao, L., & Lee, R. (2021). Exploring green entrepreneurship in emerging economies. *Journal of Business Research, 123*(2), 132–145.

Kraus, S., Rehman, S. U., & García, F. J. (2020). Green entrepreneurship: Emerging research directions. *Technological Forecasting and Social Change, 154*, 119733.

Krejcie, R. V., & Morgan, D. V. (1970). Determine Sample Size for Research Activities. *Educational and Psychological Measurement*.

Khalid, R., Seuring, S., & Wagner, R. (2021): Evaluating the effectiveness of green supply chain management practices: A comprehensive framework. *Journal of Cleaner Production, 278,* 123805.

Kirchherr, J., Piscicelli, L., Bour, R., Kostense-Smit, E., Muller, J., Huibrechtse-Truijens, A., & Hekkert, M. (2020): Barriers to the circular economy: Evidence from the European Union (EU). *Ecological Economics, 150*, 264–272.

Kirkwood, J., & Walton, S. (2020). What motivates ecopreneurs to start businesses? *International Journal of Entrepreneurial Behavior & Research, 16*(3), 204–228.

Kumar, A., & Sinha, A. K. (2024): Dynamics of financing innovation in Indian SMEs: Evidence from World Bank Enterprise Survey. *The IUP Journal of Accounting Research & Audit Practices.*

Advanced International Journal of Business, Entrepreneurship and SME's
AIJBES
EISSN: 2682-8545
Volume 7 Issue 25 (September 2025) PP. 520-532
DOI 10.35631/AIJBES.725035
Levinsohn, D. (2019). Disembedded and beheaded? A critical review of the emerging field of sustainability entrepreneurship. *International Journal of Entrepreneurial Behavior & Research, 19(6),* 673–688.

Lee, M. S., Thompson, R. J., & Green, P. L. (2023). Corporate sustainability initiatives and their impact on firm performance: The moderating role of stakeholder engagement. *Business Strategy and the Environment, 32(3),* 789-802.

Lyu, Y., Zhou, X., Zhang, T., & Zhang, Y. (2020). Green market orientation and green innovation: The mediating role of green knowledge acquisition. *Journal of Business & Industrial Marketing, 35(8),* 1233–1247.

Lüdeke-Freund, F., & Dembek, K. (2018): Sustainable business model research and practice: Emerging field or passing fancy? *Journal of Cleaner Production, 168,* 1668–1678.

Martí, I., & Santos, F. (2022). Transforming society through social entrepreneurship: The experience of Fair Trade. *Journal of Business Ethics, 111*(3), 413–430.

Memon, M. A., Ting, H., Cheah, J.-H., Thurasamy, R., Chuah, F., & Cham, T. H. (2020). Sample size for survey research: Review and recommendations. *Journal of Applied Structural Equation Modeling,* 4(2).

Martinez-Canas, R., Ruiz-Palomino, P., & del Pozo-Rubio, R. (2020). Sustainable entrepreneurship and corporate social responsibility: A bibliometric analysis. *Sustainability, 12*(10), 4178.

Montiel, I., & Delgado-Ceballos, J. (2020). Defining and measuring corporate sustainability: Are we there yet? *Organization & Environment, 27(2),* 113–139.

Nikolaou, I. E., & Evangelinos, K. I. (2022). Environmental management practices and SMEs: Evidence from a developing country. *Business Strategy and the Environment, 19*(1), 42–56.

Ratten, V. (2020). Coronavirus (COVID-19) and entrepreneurship: Changing life and work landscape. *Journal of Small Business & Entrepreneurship, 32*(5), 503–516.

Raosoft. (2010). Sample size calculator.

Rahman, A., Ismail, N., & Wahab, S. A. (2025). Investigating the determinants of green entrepreneurial intention among university students in Malaysia. Journal of Cleaner Production, *1(1),* 300.

Rahman, R. A., & Wong, S. H. (2022). The role of SMEs in Malaysia's economic sustainability. *Journal of Economic Perspectives, 36(2*), 189–211.

Rockström, J., Edenhofer, O., Gaertner, J., & DeClerck, F. (2021): Planet-proofing the global food system. *Nature Food, 2(1),* 3–5.

Schaltegger, S., Hansen, E. G., & Lüdeke-Freund, F. (2017). Business models for sustainability: Origins, present research, and future avenues. *Organization & Environment, 29(1),* 3–10.

Savitz, A. W., & Weber, K. (2016). The triple bottom line: How today's best-run companies are achieving economic, social, and environmental success and how you can too. *Jossey-Bass.*

Salleh, M. F. M., & Ndubisi, N. O. (2019): An integrative framework of environmental responsibility and firm performance: The role of green technology innovation. *World Review of Entrepreneurship, Management and Sustainable Development, 15(1-2),* 1–19.

Smith, J., & Lee, K. H. (2023). Barriers to green entrepreneurship in Malaysian SMEs: An empirical study. International Journal of Entrepreneurial Behavior & Research, 29(2), 345-362.

Advanced International Journal of Business, Entrepreneurship and SME's
AIJBES
EISSN: 2682-8545
Volume 7 Issue 25 (September 2025) PP. 520-532
DOI 10.35631/AIJBES.725035
Smith, J. A., & Jones, L. M. (2022). Strategic alignment and organizational effectiveness in implementing sustainable practices. *Journal of Business Strategy, 43*(2), 112–125.

Shirokova, G., Osiyevskyy, O., & Bogatyreva, K. (2018). Exploring the intention–behavior link in student entrepreneurship: Moderating effects of individual and environmental characteristics. *European Management Journal, 34*(4), 386–399.

Smith, J., Brown, L., & Wang, M. (2022). Sustainable Entrepreneurship Under Market Uncertainty: Opportunities, Challenges, and Impact. SSRN Electronic Journal.

SME Corporation Malaysia. (2023): SME annual report 2023.

Tan, R., & Liu, Z. (2022). The digital transformation of green businesses: A study of digital platforms. *Journal of Environmental Sustainability, 9*(3), 265–278.

Urban, B. (2019). Social entrepreneurship in South Africa: Delineating the construct with associated skills. *International Journal of Entrepreneurial Behavior & Research, 19(5),* 25–41.

Upward, A., & Jones, P. (2016). An ontology for strongly sustainable business models: Defining an enterprise framework compatible with natural and social science. *Organization & Environment, 29*(1), 97–123.

Xin, X., & Gao, Y. (2023). Corporate strategy and green innovation: The moderating role of environmental regulation. *Journal of Business Research, 156*, 113456.

Yadlapalli, A. (2020). Green entrepreneurship: A literature review. *Journal of Innovation and Entrepreneurship, 9*, 1–22.

Wibowo, A., Sudarsono, H., & Sugeng, F. (2022). Knowledge management practices in green entrepreneurship. *International Journal of Business and Economics, 7*(2), 105–116.

Zhang, Y., & Kim, S. (2024): Sustainable innovation in SMEs: The role of green entrepreneurial orientation and environmental regulations. *Journal of Cleaner Production, 250.*

Zou, H., Chen, X., & Ghauri, P. N. (2019). Antecedents and consequences of new venture growth strategy: An empirical study in China. *Asia Pacific Journal of Management, 36*, 687–711.

Zahra, S. A., & George, G. (2020). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review, 27(2*), 185–203.

Zheng, Y., Liu, J., & George, G. (2023): The dynamic impact of knowledge management capabilities on innovation performance: Evidence from high-tech SMEs. *Journal of Knowledge Management, 27(3*), 567–589.

Zhang, Y., & Kim, S. (2024): Sustainable innovation in SMEs: The role of green entrepreneurial orientation and environmental regulations. *Journal of Cleaner Production, 250,* 119490.

Zhang, M., Lettice, F., & Zhao, X. (2021). The Impact of Social Capital on Mass Customisation and Product Innovation Capabilities. *International Journal of Production Research, 53*(17), 5251–5264.

Zhang, Y., & Zheng, J. (2019). How do environmental leadership and organizational culture influence green product innovation? *Journal of Cleaner Production, 231,* 1323–1334.