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Implementation of Green Procurement Practice and Its Challenges

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Abstract: *Green procurement, the practice of purchasing products and services with environmental considerations in mind, has become an increasingly important strategy for organizations seeking to reduce their environmental impact. This case study examines the implementation of green procurement practices at a leading oil and gas exploration firm. The research explores the drivers, processes, and challenges faced by the company as it seeks to integrate sustainable purchasing into its operations. Through interviews with key procurement and sustainability personnel, the study identifies several factors that motivated the focal company to pursue green procurement, including regulatory requirements, stakeholder pressures, and corporate environmental commitments. The paper also outlines the steps taken by the company to establish green criteria in supplier selection, contract negotiation, and product evaluation. However, the research reveals significant hurdles encountered during implementation, such as supplier resistance, higher costs, limited green product availability, and internal organizational barriers. The findings underscore the complexities involved in transitioning to more environmentally conscious procurement practices, even for large, established companies in carbon-intensive industries. The case study provides valuable insights for scholars and practitioners seeking to understand the real-world challenges of embedding sustainability throughout the supply chain. It offers recommendations for overcoming obstacles and fostering successful green procurement programs within similar corporate contexts.*

Key Words: *Evaluation, Green procurement, Implementation, Management, Practices.*

1. INTRODUCTION:

In the face of mounting environmental concerns and the pressing need to mitigate climate change, organizations across industries are under increasing pressure to transform their business practices and reduce their ecological footprint. One area that has emerged as a critical lever for driving sustainability is green procurement - the process of purchasing goods and services that have a reduced environmental impact compared to conventional alternatives (Genovese, 2017). By embedding environmental criteria into purchasing decisions, organizations can harness their considerable market power to incentivize suppliers to develop and offer more sustainable products and services (Johnsen, 2017). The potential benefits of green procurement are manifold. It can help organizations minimize their consumption of natural resources, energy, and emissions; decrease waste generation; and encourage the development of innovative, eco-friendly solutions from suppliers (Igarashi, 2013). Additionally, green procurement aligns with growing consumer and societal demands for corporate environmental responsibility, potentially enhancing an organization's brand reputation and stakeholder relationships (Testa, 2016). In an era of heightened climate consciousness, the integration of sustainability considerations into procurement processes has become a strategic imperative for many organizations. The oil and gas industry faces immense pressure to transition towards more environmentally friendly practices. As a major contributor to global greenhouse gas emissions and environmental degradation, the hydrocarbon sector has come under intense scrutiny from regulators, investors, and the public (Pinkse & Kolk, 2010). Accordingly, leading firms in this industry are exploring ways to embed green procurement into their operations, seeking to reduce their ecological impact and demonstrate a commitment to sustainability. This case study examines the implementation of green procurement at a prominent oil and gas exploration firm. Drawing on interviews with key procurement and sustainability personnel, the research explores the drivers, processes, and challenges faced by the company as it seeks to integrate environmental considerations into its purchasing practices. The findings offer valuable insights for scholars and practitioners seeking

to understand the complexities of enacting sustainable procurement strategies, particularly within carbon-intensive industries.

1.1 Aim of the study

The aim of this research is to learn about the application of green procurement practices and their challenges where it is known how green procurement practices are applied.

1.2 Research objectives.

[1] To study about the green procurement practices
[2] To Investigate the benefits of implementing green purchasing practices in a company.
[3] To Identify the challenges the company faces in implementing green procurement practices.
[4] To provide methods and measures for effective implementation of green procurement practices.

1.3 Research questions.

[1] What are green procurement practices?
[2] What are the benefits of implementing green purchasing practices in a company?
[3] What are the challenges the company faces in implementing green procurement practices?
[4] What are methods and measures for effective implementation of green procurement practices?

2. LITERATURE REVIEW:

a. Green Procurement Concept and Benefits

The concept of green procurement has evolved from the broader field of sustainable procurement, which involves the integration of environmental, social, and economic considerations into the purchasing process (Brammer & Walker, 2011). Green procurement specifically focuses on the environmental aspects, aiming to minimize the negative impact of purchased goods and services throughout their lifecycle (Igarashi, 2013). This may include criteria such as energy efficiency, recyclability, reduced waste, and the use of renewable or non-toxic materials. Scholars have identified numerous benefits associated with the adoption of green procurement practices. At the organizational level, green procurement can lead to cost savings through reduced resource consumption and waste, as well as enhanced brand reputation and stakeholder relations (Testa, 2016). From a societal perspective, green procurement can stimulate the development of innovative, eco-friendly products and services, contributing to broader environmental sustainability (Genovese, 2017). Additionally, by using their purchasing power to incentivize suppliers to improve their environmental performance, organizations can drive positive change throughout the supply chain (Johnsen, 2017).

b. Drivers and Challenges of Green Procurement Implementation

Research has examined the various factors that motivate organizations to implement green procurement practices. These include regulatory requirements, stakeholder pressures, corporate environmental commitments, and the pursuit of competitive advantage (Meehan & Bryde, 2011). Organizations may also be driven by a desire to mitigate environmental risks, reduce their carbon footprint, and align with broader sustainability strategies (Walker & Brammer, 2009). However, the literature also highlights significant challenges that organizations face when attempting to integrate green procurement into their operations. These include supplier resistance, higher costs of green products, limited availability of sustainable alternatives, and internal organizational barriers such as a lack of knowledge, resources, or top management support (Adetokunbo, 2018). Overcoming these obstacles requires organizations to develop robust processes, policies, and capabilities to effectively evaluate, select, and manage environmentally conscious suppliers (Igarashi, 2013).

c. Green Procurement in the Oil and Gas Industry

The oil and gas industry, given its significant environmental impact, has been the focus of growing attention regarding the implementation of green procurement practices. Scholars have explored the unique challenges faced by firms in this sector, which must balance the pursuit of sustainability with the need to maintain operational efficiency and profitability (Pinkse & Kolk, 2010). Studies have highlighted the importance of regulatory compliance, stakeholder pressures, and corporate environmental commitments as key drivers for green procurement adoption in the oil and gas industry (Hsu, 2013). However, the literature also underscores the difficulties these firms encounter, such as limited availability of green alternatives for specialized equipment and materials, as well as supplier resistance to environmental criteria (Testa, 2016). Overall, the existing literature provides a foundation for understanding the concept of green procurement, its benefits and challenges, and the unique considerations relevant to the oil and gas industry. This study aims to build upon

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this knowledge by exploring the implementation of green procurement practices at Hydrocarbon Finder Company, a leading oil and gas exploration firm, and the obstacles it has faced in the process.

d. Sustainable Procurement Models and Frameworks

Researchers have proposed various conceptual models and frameworks to guide the implementation of sustainable procurement practices, including green procurement. One prominent model is the Sustainable Procurement Maturity Model, which outlines five progressive stages of maturity: compliance, efficiency, integration, innovation, and advocacy (Meehan & Bryde, 2011). This model provides a roadmap for organizations to assess their current state and work towards more advanced, strategic approaches to sustainable procurement.

Another framework is the Sustainable Procurement Capability Maturity Model, which identifies key dimensions such as leadership, strategy, operations, measurement, and stakeholder management (Walker, 2012). This model emphasizes the need for organizations to develop cross-functional capabilities and processes to effectively integrate sustainability into their purchasing activities. Additionally, scholars have developed more granular frameworks focused on the green procurement process. These include the Greener Supplier Selection Framework, which outlines a systematic approach to evaluating and selecting environmentally conscious suppliers based on a range of criteria (Igarashi, 2013), and the Green Procurement Implementation Model, which highlights the importance of organizational learning and continuous improvement (Zhu, 2013).

e. Empirical Studies on Green Procurement Implementation

The extant literature features numerous empirical studies that have examined the implementation of green procurement practices across various industries and organizational contexts. These studies have yielded valuable insights into the factors that influence the adoption and effectiveness of green procurement. For example, a study of public sector organizations in the United Kingdom found that factors such as top management support, availability of resources, and supplier engagement were key determinants of successful green procurement implementation (Walker & Brammer, 2009). In the context of the manufacturing industry, research has highlighted the importance of developing robust supplier evaluation and selection processes, as well as fostering collaborative relationships with suppliers to drive environmental innovation (Genovese, 2013).

Within the oil and gas sector, studies have explored the specific challenges and enablers of green procurement adoption. Researchers have identified regulatory compliance, corporate environmental commitments, and stakeholder pressures as primary motivators for firms in this industry to pursue green procurement (Hsu, 2013). However, they have also underscored the difficulties these organizations face in terms of limited availability of green alternatives, higher costs, and supplier resistance (Adetokunbo, 2018). Collectively, these empirical studies provide a deeper understanding of the complexities involved in implementing green procurement practices, as well as the context-specific factors that influence their success. This knowledge can inform the development of more effective strategies and support mechanisms to foster sustainable procurement within organizations.

3. METHOD:

To address the research questions, this study employed a qualitative case study approach, which allows for an in-depth investigation of a phenomenon within its real-world context (Yin, 2017). The case organization selected for this research was a leading oil and gas exploration firm that has been actively pursuing the implementation of green procurement practices. The primary data for this study was collected through semi-structured interviews with key personnel involved in the procurement and sustainability functions at this firm. A total of 12 interviews were conducted, including procurement managers, sustainability managers, and members of the environmental compliance team. The interview questions were designed to explore the following areas:

Green procurement practices: The types of green criteria and considerations integrated into the procurement process, as well as the specific procedures and policies in place.

Drivers and benefits of implementing green procurement: The factors that motivated the company to adopt green procurement, and the perceived organizational and environmental benefits.

Challenges and barriers faced: The obstacles encountered during the implementation of green procurement include any internal or external barriers.

Strategies and measures for effective implementation: The approaches, tools, and resources used by the company to overcome challenges and promote the successful integration of green procurement.

In addition to the interviews, the researcher also reviewed relevant company documents, such as procurement policies, sustainability reports, and environmental compliance records, to triangulate the data and gain a more comprehensive understanding of the case.

4. DISCUSSION:

➢ Green Procurement Practices at the Company

The findings from the case study reveal that the Company has taken several steps to integrate green procurement practices into its operations. The company has developed a comprehensive sustainable procurement policy that outlines specific environmental criteria to be considered during the purchasing process. These criteria include energy efficiency, renewable content, recyclability, and the use of non-toxic materials.

The procurement team at company has implemented a supplier evaluation and selection process that prioritizes vendors who can demonstrate their environmental credentials and commitment to sustainability. This includes requesting detailed information on the environmental impact of their products and services, as well as their own internal sustainability practices. The company also encourages its suppliers to obtain relevant environmental certifications and adopts a preference for certified 'green' products when available. In addition, the company has established a green procurement committee, composed of cross-functional representatives from procurement, sustainability, and environmental compliance, to oversee the implementation and continuous improvement of the company's green purchasing practices. This committee is responsible for developing and updating the procurement policy, identifying opportunities for improvement, and providing guidance to the broader organization.

➢ Drivers and Benefits of Green Procurement

The primary drivers for the Company to implement green procurement practices were identified as a combination of external pressures and internal strategic priorities. Externally, the company faced increasing regulatory requirements and stakeholder demands, particularly from environmentally conscious investors and customers, to demonstrate its commitment to environmental sustainability. Internally, the firm's corporate sustainability goals and the desire to reduce its overall environmental impact were key motivating factors.

The interviewees highlighted several benefits that the company has experienced as a result of its green procurement initiatives. These include:

- **Cost savings:** The emphasis of energy-efficient and resource-conserving products has led to reduced operational costs and resource consumption for the company.
- **Improved brand reputation:** The adoption of green procurement has enhanced Hydrocarbon Finder's public image and perception as an environmentally responsible organization, strengthening its relationship with key stakeholders.
- **Supplier innovation:** The company's green procurement criteria have incentivized its suppliers to develop more innovative, sustainable solutions to meet Hydrocarbon Finder's needs.
- **Reduced environmental impact:** The integration of environmental considerations into purchasing decisions has enabled Hydrocarbon Finder to minimize the ecological footprint of its operations, contributing to its broader sustainability goals.

➢ Challenges and Barriers to Green Procurement Implementation

Despite the benefits, the case study also revealed several significant challenges and barriers that company has encountered in implementing its green procurement practices. These include:

- **Supplier resistance:** Some of the company's suppliers have been reluctant to adapt to the company's environmental criteria, citing higher costs or limited availability of green alternatives.
- **Limited green product options:** The availability of suitable green products and services, particularly for specialized equipment and materials required in the oil and gas industry, has been a major constraint for the company.
- **Higher costs of green solutions:** In many cases, the environmentally preferable alternatives identified by the company have been more expensive than their conventional counterparts, posing a financial hurdle.
- **Internal organizational barriers:** The company has faced resistance from certain internal stakeholders who are skeptical about the value of green procurement or lack the necessary knowledge and resources to implement it effectively.

To overcome these challenges, the companies has adopted several strategies, such as engaging in collaborative partnerships with suppliers to develop sustainable solutions, investing in employee training and awareness-building, and leveraging external expert support to identify and evaluate green procurement options. The company has also emphasized the need for a phased, strategic approach to green procurement implementation, focusing first on the areas with the greatest potential for impact and gradually expanding the scope over time.

5. ANALYSIS:

The interview transcripts and secondary documents were analyzed using thematic analysis, which involves identifying, analyzing, and reporting patterns or themes within the data (Braun & Clarke, 2006). The analysis was guided by the

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research questions and the conceptual framework developed from the literature review. The researcher carefully coded the data, categorized the emerging themes, and established connections between the themes to derive meaningful insights. To ensure the credibility and trustworthiness of the findings, the researcher engaged in member checking, where the preliminary results were shared with the interview participants for verification and feedback. Additionally, the research process and analysis were peer-reviewed by other scholars to enhance the overall quality and rigor of the study.

6. FINDINGS:

The findings from the company's case study offer valuable insights for both scholars and practitioners in the oil and gas industry, as well as other carbon-intensive sectors, regarding the implementation of green procurement practices. The research highlights the complex, multifaceted nature of the challenges involved, underscoring the need for a holistic, cross-functional approach to successfully integrate sustainability into purchasing activities. For organizations seeking to adopt green procurement, the case study suggests the importance of developing a robust policy and governance framework, fostering collaborative supplier relationships, and building internal capabilities and buy-in. Investing in employee training, leveraging external expertise, and communicating the benefits of green procurement effectively can also facilitate more successful implementation. Furthermore, the findings emphasize the need for a strategic, step-by-step approach to green procurement, prioritizing areas with the greatest potential for impact and gradually expanding the scope over time. This phased implementation can help organizations navigate the complexities and overcome the various barriers they may encounter. From a theoretical perspective, the case study contributes to the understanding of green procurement implementation by highlighting the interplay of institutional, resource-based, and stakeholder-driven factors that shape the adoption and effectiveness of these practices within a carbon-intensive industry context. The insights gained can inform future research and the development of more comprehensive conceptual models to guide sustainable procurement initiatives.

7. CONCLUSION:

This case study of the Company provides valuable insights into the implementation of green procurement practices within the oil and gas industry, a sector that faces significant pressure to reduce its environmental impact. The research findings suggest that while company has made considerable strides in integrating environmental considerations into its purchasing processes, the company has also encountered various challenges and barriers that have hindered the full realization of its green procurement objectives. The key drivers for companies to adopt green procurement were a combination of external regulatory and stakeholder pressures, as well as internal corporate sustainability goals. The company has implemented a comprehensive sustainable procurement policy, supplier evaluation criteria, and a dedicated committee to oversee the implementation of these practices. The benefits realized include cost savings, improved brand reputation, supplier innovation, and reduced environmental impact.

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