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GREEN SUPPLY CHAIN MANAGEMENT PRACTICES ON FIRM PERFORMANCE OF SMALL AND MEDIUM SIZED ENTERPRISES IN MOMBASA COUNTY, KENYA

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ABSTRACT

The objective of the study was to evaluate the influence of green procurement practice on the performance of small and medium-sized enterprises in Mombasa County, Kenya. The study was premised on GSCM Concept, Institutional Theory and the Theory of Planned Behaviour. A descriptive survey research design is adopted in the study. The study targets a total of 5031 proprietors of SMEs in Mombasa County of which 357 were selected using stratified sampling technique. The study used primary data accessed from the respondents using structured questionnaires designed to collect information concerning GSCM practices. Data was analyzed using descriptive and inferential analysis methods. Statistical Package for Social Science Version 26, and the results were presented in the frequency table. Correlation analysis was determined the relationship between independent and dependent variables. Regression analysis was used to determine the effect of the independent variables on the dependent variable. The study found that green procurement practices significantly enhance the performance of small and medium-sized enterprises in Mombasa County. It is recommended that SMEs institutionalize green procurement policies by strengthening supplier engagement, enhancing employee training on sustainability, and investing in eco-friendly technologies.

Key Words: *Sourcing Analysis, Environmental Performance, Intra-Organizational Capabilities*

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INTRODUCTION

The increasing global focus on sustainability has placed green supply chain management (GSCM) at the forefront of organizational strategies. Businesses are recognizing the need to integrate environmental considerations into their supply chain processes to address the dual challenges of maintaining competitiveness and minimizing environmental impact. This shift reflects the growing importance of balancing economic goals with ecological and social responsibilities, making GSCM a crucial component of modern business practices.

Green Supply Chain Management (GSCM) has emerged as a critical framework for integrating environmental considerations into supply chain activities. According to Badi and Murtagh (2019), GSCM involves embedding ecological principles across procurement, production, logistics, and warehousing processes to mitigate the negative environmental impacts of traditional supply chain practices. For instance, manufacturing firms adopting sustainable materials in procurement reduce their environmental footprint while achieving cost efficiency. Furthermore, sectors such as construction have shown significant progress in implementing GSCM principles, signaling a global movement towards more responsible and sustainable business operations.

The importance of GSCM extends beyond environmental sustainability. As noted by Koberg and Longoni (2019), GSCM incorporates social and economic dimensions, promoting practices such as fair labor policies and ethical sourcing. These holistic approaches enhance brand reputation, foster customer loyalty, and ensure long-term business viability. However, significant challenges remain. The logistics sector, for instance, has witnessed a dramatic rise in emissions. The International Energy Agency (IEA, 2009) projects that unless major changes occur, emissions will increase by 80% by 2050 compared to 2002 levels. These figures underscore the urgent need for innovative practices, including the adoption of low-carbon fuels, energy-efficient transportation technologies, and optimized logistics strategies.

Africa's logistics and transportation sector, which is pivotal for trade and development, accounts for significant carbon emissions. According to the African Development Bank (AfDB, 2022), inefficient transportation networks across the continent contribute to both economic losses and environmental degradation. For instance, road transport accounts for more than 90% of regional freight movement, yet much of it relies on outdated vehicles with high emission levels. The adoption of GSCM practices, such as energy-efficient logistics and renewable energy utilization, could dramatically reduce the environmental impact of these operations while improving cost efficiencies.

Trade blocs like the AfCFTA provide an opportunity to standardize and promote green supply chain practices across member states. By facilitating intra-African trade and fostering cross-border collaboration, these frameworks can enable businesses to adopt sustainable procurement and logistics systems, benefiting from economies of scale and shared expertise. For example, initiatives under the EAC aim to enhance regional integration by promoting eco-friendly trade corridors and incentivizing the use of low-carbon transportation technologies.

Despite these efforts, many African nations, including those within emerging trade blocs, face significant barriers to GSCM adoption. Limited access to green technologies, inadequate infrastructure, and weak regulatory enforcement hinder the progress of sustainable supply chain practices. Moreover, the reliance on informal sectors and resource-intensive industries exacerbates environmental challenges, particularly for small and medium-sized enterprises (SMEs) that dominate the African business landscape. These enterprises often lack the financial and technical capacity to implement GSCM practices effectively.

In Kenya, environmental concerns are increasingly gaining attention as businesses and policymakers align with global sustainability goals, such as the United Nations Sustainable Development Goals (SDGs). SMEs, which account for over 90% of Kenya's enterprises and contribute approximately 40% to the GDP (Kenya National Bureau of Statistics, 2021), play a pivotal role in the nation's economy. Despite their importance,

these enterprises face significant challenges in adopting GSCM practices due to limited resources, inadequate infrastructure, and a lack of technical expertise (Mutua, Odock, & Litondo, 2020).

Mombasa County, as a coastal economic hub and key gateway for trade in East Africa, presents unique opportunities and challenges for the implementation of GSCM. The region's bustling port operations, growing commercial activities, and strategic geographic location make it an ideal case for studying the impact of sustainable supply chain practices. However, Mombasa also faces ecological pressures such as marine pollution, inefficient waste management, and high transportation-related emissions. Local SMEs, which are integral to Mombasa's economy, must navigate these challenges while striving to remain competitive and sustainable.

The practices of GSCM—green procurement, green purchasing, green logistics management, and green warehousing—are integral to promoting sustainable operations. Green procurement involves sourcing environmentally friendly materials and ensuring suppliers meet sustainability criteria. For example, SMEs can reduce their environmental footprint by prioritizing suppliers that offer recycled or biodegradable materials. Green purchasing emphasizes the adoption of goods and services with minimal environmental impact, such as eco-friendly packaging or renewable energy solutions (Cousins, Lawson, Petersen, & Fugate, 2019).

Green logistics management, on the other hand, focuses on optimizing transportation, distribution, and inventory practices to minimize emissions and resource wastage. Examples include energy-efficient vehicles, route optimization technologies, and reducing empty miles in transportation networks. Green warehousing incorporates energy-efficient storage solutions, sustainable building materials, and effective waste management systems to enhance overall environmental performance.

Despite the demonstrated benefits of GSCM, its adoption among SMEs in Mombasa County remains limited. According to the World Economic Forum (2024), transportation alone accounted for 24% of global greenhouse gas emissions in 2023, highlighting the critical role of logistics in sustainability. Locally, SMEs contribute to significant waste generation and environmental degradation due to inefficient procurement and warehousing practices. For instance, improper waste disposal in Mombasa's logistics operations exacerbates marine pollution, which threatens both local biodiversity and the livelihoods of coastal communities. Research also shows that adopting GSCM practices can significantly reduce operational costs and improve firm performance. The University of Louisville (2018) reported that recycling office wastepaper saved 1,631 trees, reduced energy consumption by 44%, and cut greenhouse gas emissions by 37%. Similar benefits could be realized in Mombasa if SMEs were to adopt robust green procurement and logistics practices. However, barriers such as limited awareness, insufficient regulatory incentives, and high initial costs continue to hinder progress.

Addressing these challenges requires an in-depth understanding of the drivers and barriers to GSCM adoption among SMEs in Mombasa County. Studies by Koberg and Longoni (2019) emphasize the importance of tailoring sustainability strategies to local contexts, considering factors such as market dynamics, cultural attitudes, and regulatory environments. In Mombasa, the integration of GSCM practices could transform the competitive landscape by enabling SMEs to meet evolving consumer demands, comply with environmental regulations, and enhance their market positioning.

This study focuses on evaluating the influence of green procurement, purchasing, logistics management, and warehousing practices on SME performance in Mombasa County. By investigating these variables, the research aims to fill the existing knowledge gap and provide actionable insights for policymakers, business owners, and supply chain professionals. Ultimately, the findings will contribute to the broader goal of achieving sustainable development in Kenya and beyond.

Statement of the Problem

Small and medium-sized enterprises (SMEs) in Mombasa County, Kenya, are uniquely positioned to contribute to sustainable development by adopting green supply chain management (GSCM) practices such as green procurement, purchasing, logistics, and warehousing. These practices have the potential to enhance firm performance, mitigate environmental degradation, and promote sustainable economic growth. However, there exists a critical gap in understanding how these practices influence the operational and financial outcomes of SMEs in this region, making it a pressing issue for investigation.

Nationally, SMEs account for over 90% of all enterprises in Kenya and contribute approximately 40% to the Gross Domestic Product (Kenya National Bureau of Statistics, 2021), underscoring their central role in economic development. Globally, GSCM has been shown to improve resource efficiency, reduce operational costs, and enhance brand reputation (Badi & Murtagh, 2019). Yet, its implementation in localized contexts, especially in Mombasa County, remains under-explored. Mombasa, as a coastal commercial hub and gateway for East African trade, faces unique challenges such as elevated logistics costs, stricter environmental regulations related to port operations, and increasing consumer demand for eco-friendly products.

Despite such compelling evidence, SMEs in Mombasa face barriers to adopting GSCM practices. Challenges include limited awareness of sustainable strategies, insufficient infrastructure to support green initiatives, and an unpredictable regulatory environment (Koberg & Longoni, 2019). These issues not only hinder SMEs from leveraging the cost efficiencies and environmental benefits of GSCM but also slow Kenya's progress toward achieving its Vision 2030 sustainable development goals.

This disconnect between the global potential of GSCM practices and their localized implementation in Mombasa SMEs demands urgent attention. Without focused research, the region risks missing out on opportunities to align its economic activities with global sustainability trends, improve SME competitiveness, and safeguard environmental resources. Thus, this study seeks to explore how GSCM practices can be effectively adopted by SMEs in Mombasa County. The findings aim to bridge the gap between current practices and the desired state, providing valuable insights to inform policymaking, enhance strategic decision-making, and ultimately improve firm performance while promoting environmental integrity.

Objective of the Study

The general objective of the study is to evaluate the influence of green supply chain management practices on firm performance of small and medium sized enterprises in Mombasa County, Kenya. The specific objective of the study was to examine the influence of green procurement practice on the performance of small and medium-sized enterprises in Mombasa County, Kenya.

LITERATURE REVIEW

Theoretical Framework

Green Supply Chain Management Concept

Green procurement practice is essential for integrating environmental considerations into all stages of procuring goods and services. According to Trivellas et al. (2020), this practice is instrumental in sustainable business, particularly in the agri-food sector where it contributes to enhanced supply chain performance. For instance, the adherence to environmentally friendly sourcing of materials in the Greek agri-food sector shows a commitment to sustainability. The application of green procurement practices, therefore, may result in a positive impact on SMEs' performance.

The process of Green procurement is at the core of environmental sustainability in the supply chain. According to Trivellas et al. (2020), it encompasses a wide range of practices aimed at integrating environmental factors within the procurement process. An example can be seen in sustainable agriculture, where the procurement of organic fertilizers and pesticides significantly impacts the ecological balance. The

practice's moderation effect on the relationship between supply chain sustainability and performance could potentially explain how it influences firm performance among SMEs in Mombasa.

Institutional Theory

Businesses' responses to growing environmental management demands have been studied since 1930 using institutional theory (Hoffman &Jennings, 2015). According to institutional theory, companies can only gain legitimacy by reducing their environmental impact and behaving responsibly toward society, as environmental issues and organizational failure are becoming more generally recognized (George, et al., 2015). Institutional pressure has led businesses to embrace sustainable purchasing practices. They may be following environmental policies that meet industry standards and regulatory requirements or reducing the ecological effects of operations beyond what is mandated by law

The tendency for established organizational frameworks and processes to be regarded as routine irrespective of the consequences for efficiency is a particular focus of institutional theory (Hoffman & Marc, 2021). Through the use of green procurement, suppliers are incentivized to adopt an eco-friendly mindset. As a result, the entire economy gradually embraces green practices since this notion has an impact on the suppliers and companies at the other end of the chain.

Institutional theory is important for this study since it clarifies how institutional factors impact firms' adoption of green supply chain management practices. These pressures may come from the market, regulations, or competition. Institutional theory clarifies how outside forces, such as government restrictions, rival pressure, and customer pressure, and non-governmental institutions would compel businesses in the SME sector to engage in or stop particular practices. The SMEs are thus forced to engage in sustainable practices in order to remain in business as an institution and relate well with other institutions or sectors.

Theory of Planned Behaviour

The social psychology theory called the Theory of Planned Behavior (TPB) describes how people's ideas affect their actions. Icek Ajzen created the hypothesis in 1991. It suggests that a person's behavioral intentions, which in turn predict their conduct, are shaped by three factors: attitude, subjective norms, and perceived behavioural control.

An individual's positive or negative assessment of a conduct. Their knowledge, attitudes, and preconceptions on the behavior are the basis for this. Also important is a person’s perception of societal pressure to engage in or refrain from engaging in a conduct. This is predicated on their understanding of what significant others believe they ought to do (Archie, et al., 2022).

Even if people don't consciously take these elements into account when making judgments, the TPB assumes that they act logically based on them. The idea has been applied to numerous domains to comprehend and forecast human behaviour (Bosnjak, Ajzen, & Schmidt, 2020).

One of TPB's advantages is that it considers the impact of peers, or subjective norms, which are important for behaviour initiation and maintenance. The theory of planned behaviour makes the assumption that all actions are deliberate, rational, and planned; nonetheless, it ignores the influence of emotions like grief and annoyance, which can have a significant impact on conduct (McLeod, 2023).

To comprehend how attitudes, societal pressures, and perceived behavioural control impact intents and behaviours linked to GSCM, one might apply the TPB theory. The TPB can clarify how the SMEs’ intentions to source environmentally friendly products are influenced by their attitude toward doing so and the perceived societal pressure to do so. The theory also explains the need for SMEs to streamline their supply chain and logistics for achievement of cleaner supply chains and logistics.

Conceptual Framework

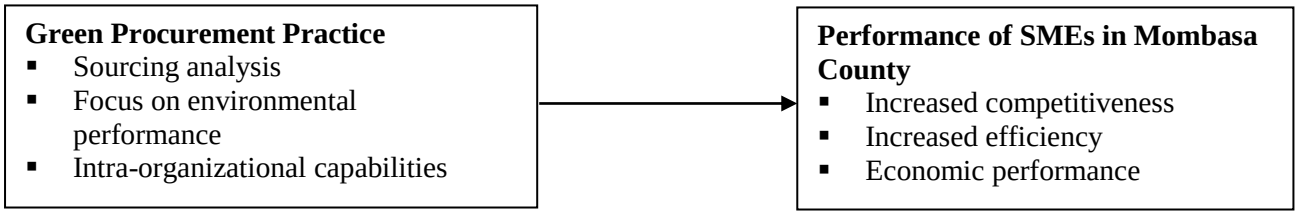

Figure 1: Conceptual framework

Review of Variables

Green procurement

Green procurement is an environmentally conscious purchasing strategy that involves reducing, reusing, and recycling materials during the purchasing process (EU Sustainable Procurement Platform, 2016). In addition, green procurement is a way for businesses that care about the environment and are frugal to acquire a range of goods and services that have the least negative effects on the environment. GSCM techniques offer a number of advantages from the supply network's purchasing standpoint, from cost savings to incorporating suppliers in a participatory decision-making process that fosters sustainability (Green Business Benchmark, 2021).

Green procurement is crucial since it may assist companies in lessening their negative effects on the environment, enhancing their brand, and boosting revenue. Advantages of green procurement include beneficial effects on the environment. For instance, by buying eco-friendly items, using less energy and resources, and producing less waste, green procurement can assist companies in lessening their influence on the environment. Businesses can enhance their standing with consumers and the general public by using green procurement practices. Green procurement helps companies increase their earnings through cutting expenses, raising income, and optimizing social and economic advantages. (Singapore Institute of Purchasing and Materials Management [SIPMM], 2024).

Performance of SMEs

The performance of small and medium-sized businesses (SMEs) is determined by their operations. There are numerous markers that can be used to measure it, such as:
Growth in sales, workers, profit, assets, and equity are all indicators of firm growth, which is a crucial performance metric for SMEs. Customer loyalty may result from their level of satisfaction. Financial success can be examined by examining market position, ROCE, revenue growth, profitability, and market share growth (Isichei, Emmanuel Agbaeze, & Odiba, 2020).

Shepherd and Wiklund (2009) and reported by Kiyabo and Isaga (2020) recognized five typical company growth measures—growth in sales, workers, profit, assets, and equity—that have been utilized in previous studies. The performance metrics for SMEs were undoubtedly created in western nations. While entrepreneurs in less developed nations are driven by necessity, those in the West are driven by the availability of chances to take advantage of. (Eijdenberg 2016)

Empirical Review

This section reviews past literature on the study objectives.

Green Procurement and Performance of SMEs

A study by Gachau and Moronge (2018) sought to determine how Kenyan humanitarian groups' supply chains performed in relation to green procurement methods. The research design used for this study was a descriptive survey. Seventy Kenya Red Cross Society personnel participated in the study. The primary tools for gathering

data were questionnaires. To calculate percentages of respondents' responses, descriptive statistics were employed with the assistance of the Statistical Package for Social Scientists (SPSS). To help examine the link between the research variables, inferential statistics such as correlation analysis and multiple regression evaluation were used. The R value (0.821) indicates that there is a substantial positive correlation between the independent and dependent variables. The four independent variables examined (green purchasing, green manufacturer/supplier collaboration, green distribution, and reverse logistics) account for 67.40% of the supply chain performance, as indicated by the coefficient of determination (R2), which also explained the percentage of variation in the dependent variable explained by changes in the independent variables. This suggested that these factors were highly important and should be taken into account in endeavours to improve supply chain performance.

Nande and Vhankate (2022) conducted a thorough analysis of research on green procurement and small and medium-sized businesses' sustainability performance both domestically and internationally. It sought to identify and comprehend the knowledge gaps in the field. It was discovered that in the Indian environment, few studies have been conducted while China, the USA, the UK, and Europe have had majority of the studies. Thus, the majority of research has been conducted in developed nations. Consequently, there is a vast array of research in underdeveloped nations such as India. Green supply chains and practices are the main topics of papers about Indian SMEs, and Das and Rangarajan (2020) point out that the studies have mostly concentrated on the financial performance of the SMEs.

Ivanova (2020) examined the management of green procurement at the small and medium-sized business level in developing nations. Small and medium-sized businesses (SMEs) are still embracing the relatively new trend of green buying. The following hypotheses were emphasized: Green buying has an impact on an organization's economic metrics, competitiveness, and social and environmental factors, the information being gathered from Kyiv and the surrounding area's SMEs. The managers of 181 businesses with a variety of ownership structures and industries filled out questionnaires, which we then examined. The study's results were assessed using factor analysis, and structural equation modelling was utilized to test the hypotheses. Research findings indicated that green procurement benefits SMEs' competitiveness, economic performance, the environment, and society. Small and medium-sized firms in developing nations should consider the developing and implementing green supplies improves performance.

Performance of SMEs

There are several ways in which GSCM can improve firm performance such as in increasing efficiency, reducing operational costs, and increasing customer satisfaction.

Green Supply Chain Management (GSCM) functions as an influential lever in enhancing firm performance, particularly in the dimension of cost reduction. According to Cousins et al. (2019), GSCM practices can be catalysts for minimizing costs through the effective and efficient use of resources, waste reduction, and energy conservation. For instance, a company implementing green procurement practices may invest in reusable packaging, thereby cutting costs related to disposable materials. The harmonization of cost reduction and environmental preservation establishes a robust and sustainable business model.

Within the green procurement practice, GSCM focuses on establishing strategic partnerships with suppliers that comply with environmental regulations and standards. According to Saeed and Kersten (2019), this alignment with green suppliers fosters a more coordinated and efficient supply chain. A real-world illustration of this is seen in SMEs in Mombasa, where partnering with eco-friendly suppliers enables quicker adherence to regulatory requirements, saving time and enhancing efficiency.

However, barriers exist in implementing green practices, which may impede efficiency. According to Tumpa et al. (2019), challenges such as lack of knowledge, technology, and financial constraints in emerging economies like Kenya may hinder the full realization of GSCM's potential in enhancing efficiency. For

instance, the lack of access to modern technology may limit an SME's ability to optimize warehousing practices, thereby constraining efficiency gains.

Customer satisfaction is integral to a firm's success and is significantly impacted by Green Supply Chain Management (GSCM). According to Tseng et al. (2019), GSCM incorporates environmentally responsible practices across procurement, purchasing, logistics, and warehousing, aligning with the growing customer preference for sustainable products. A relevant example is the consumer's inclination towards organic food products, wherein transparent and sustainable procurement practices cater to this demand.

In the realm of green procurement practice, firms strive to engage with suppliers committed to environmental sustainability. According to Badi and Murtagh (2019), this commitment not only ensures adherence to regulations but also resonates with the environmentally conscious consumer base. A real-world example is a construction company sourcing sustainably harvested wood, thereby appealing to eco-sensitive clients and enhancing customer satisfaction.

However, it is important to recognize the challenges and complexities in implementing GSCM practices. According to Saeed and Kersten (2019), understanding customer preferences and aligning them with green practices can be intricate and requires continual monitoring and adaptation. An example is the evolving customer preferences for packaging, where a balance between sustainable materials and aesthetic appeal must be meticulously maintained.

METHODOLOGY

In this study, a descriptive research design was adopted. To draw conclusions from the given data, a descriptive intent focuses on finding noteworthy events; it looks for trends and patterns in a situation (Yin, 2017). The adoption of a qualitative research design was foundational in exploring the complexity of Green Supply Chain Management practices among SMEs in Mombasa County.

The participants of this research comprised of key stakeholders involved in the Green Supply Chain Management of small and medium-sized enterprises in Mombasa County. The target populace for this exploration consists of 5,031 proprietors of SMEs that have operating licenses in Mombasa County from various sectors such as Information technology, Transport and logistics, Agriculture, Entertainment and sports, Tourism, Trade, Fishing, Market stalls, and Taxi services were involved.

The sample unit was derived from the target population of the study who are 5031 SME owners within the county. To find out the sample size, the statistical formula suggested by Kothari (2004) was used. Therefore, a sample size of 108 respondents was used. Respondents were categorized by duties and positions across the county government using stratified random sampling.

Structured questionnaires were used to get primary data from the chosen respondents for this study. The data collection in this study also consisted of interviews and observations tailored to understand how green logistics and warehousing practices influence SMEs' performance in Mombasa. Conclusively, the chosen methods offered a rich, descriptive insight into green supply chain practices.

For a pilot test, the researcher utilized a small representative sample of 36 SME proprietors in Mombasa County who were subsequently not included the main study. The researcher made sure that all of the following are used: analytical tools, time limits, significance and application, inquiry focus, and exact wording. By appropriately monitoring the participants and carrying out pilot tests to determine the instruments' efficacy, she also standardized the data gathering processes. Furthermore, providing a clear explanation of the research methods and participant selection boosted the study's transferability. Therefore, the stringent application of these principles ensured the validity and reliability of the research. Based on the results of the pilot test, the reliability was determined using the Cronbach alpha coefficient study.

The Statistical Package for Social Science (SPSS) Version 25 was used to code the data and then analyze it for both quantitative and qualitative goals. For the Likert-scale items, descriptive statistics was used to give indications regarding the pattern of data distribution, or the occurrence of values in the data collection (Guetterman, 2019). Tables were used to display the results.

RESULTS AND DISCUSSIONS

Response Rate

The study administered 108 instruments to the sampled hotels across the country. Out of these, 79 responded and returned completed questionnaires representing a response rate of 73%. The high questionnaire response rate (73%) resulted from the method of administration of the instrument, which was in this case researcher-administered. This was acceptable according to Mugenda and Mugenda (2003). This method also ensured that the respondents' queries concerning clarity were addressed at the point of data collection; however, caution was exercised so as not to introduce bias in the process. The other questionnaires were not returned by the respondents, hence, they were not included in the study.

Descriptive Results

Green Procurement Practice on Performance of SMEs in Mombasa County

The objective of the study was to examine the influence of green procurement practice on the performance of small and medium-sized enterprises in Mombasa County, Kenya. The objective was measured through the sub-constructs; sourcing analysis, focus on environmental performance, and intra-organizational capabilities. The findings are presented in Table 1.

Table 1: Green Procurement Practice on Performance of SMEs in Mombasa

Statement	SA Freq(%)	A Freq(%)	N Freq(%)	D Freq(%)	SD Freq(%)	Mean	Std. Dev
Our firm focuses on environmentally friendly sourcing of products	26(33)	40(51)	7(9)	5(6)	1(1)	4.08	0.888
Our green procurement practice increases beneficial environmental performance	22(28)	42(53)	8(10)	5(6)	2(3)	3.97	0.933
Our firm has intra-organizational capabilities to effectively handle green procurement	18(23)	45(57)	9(11)	5(6)	2(3)	3.91	0.909
Our firm targets acquisition of goods and services that have the least negative effects on the environment	21(27)	49(62)	6(8)	3(4)	0	4.11	0.698
Our firm incorporates suppliers in a participatory decision-making process that fosters sustainability during the procurement practice	25(32)	32(41)	11(14)	9(11)	2(3)	3.87	1.067
Aggregate						3.988	0.899

The findings in Table 1 reveals that green procurement practices are strongly embraced among SMEs in Mombasa County, with a consistently positive influence on firm performance. The highest-rated statement

was that *"our firm targets acquisition of goods and services that have the least negative effects on the environment"* (Mean = 4.11; S.Dev = 0.698). A large majority (89%) of respondents either strongly agreed or agreed with this statement, indicating a high level of commitment to environmentally conscious sourcing among the sampled firms.

The statement *"our firm focuses on environmentally friendly sourcing of products"* also received strong support (Mean = 4.08; S.Dev = 0.888), with 84% of respondents in agreement. This underscores a strategic orientation towards sustainability at the core of procurement decisions.

Similarly, the perception that *"our green procurement practice increases beneficial environmental performance"* was positively received (Mean = 3.97; S.Dev = 0.933), with 81% of respondents expressing agreement. This suggests that SMEs recognize the value of green procurement in enhancing both environmental outcomes and potentially competitive advantages.

The item *"our firm has intra-organizational capabilities to effectively handle green procurement"* was rated positively as well (Mean = 3.91; S.Dev = 0.909), with 80% agreement, indicating that internal skills and systems to support green procurement are fairly well established.

The lowest-rated item, though still moderately high, was *"our firm incorporates suppliers in a participatory decision-making process that fosters sustainability during the procurement practice"* (Mean = 3.87; S.Dev = 1.067). While 73% agreed, the relatively higher standard deviation points to some variability in how consistently participatory supplier engagement is practiced across firms.

On average, the aggregate score for green procurement practices was highly favorable (Mean = 3.988; S.Dev = 0.899), reflecting a strong and coherent adoption of sustainable procurement strategies among SMEs. These findings suggest that green procurement is one of the more mature areas of environmental management, but highlight the need for deeper supplier collaboration and broader knowledge diffusion to ensure uniform application of sustainable practices across the SME sector.

Performance of Small and Medium Sized Enterprises in Mombasa County

The study also sought to determine the Firm Performance of Small and Medium Sized Enterprises in Mombasa County, Kenya. The status of this variable was described in terms of; increased competitiveness, increased efficiency, and economic performance.

Table 2: Performance of Small and Medium Sized Enterprises in Mombasa County

Statement	SA Freq(%)	A Freq(%)	N Freq(%)	D Freq(%)	SD Freq(%)	Mean	Std. Dev
There is high return on investment in our firm through application of GSCM practices	18(23)	45(57)	9(11)	5(6)	2(3)	3.91	0.909
Our firm has achieved a high level of cost reduction through its GCSM practices	3(4)	28(35)	10(13)	37(45)	1(1)	2.94	1.017
There is usually high value addition following our green purchasing initiatives	25(32)	32(41)	11(14)	9(11)	2(3)	3.87	1.067
Our firm has achieved a high level of effectiveness in its products and processes	9(11)	42(53)	9(11)	19(24)	0	3.52	0.985
Our firm has achieved a high level of safety and dependability in its products and processes	6(8)	21(27)	9(11)	41(52)	2(3)	2.85	1.087
Aggregate					3.418	1.013	

The analysis of firm performance among Small and Medium-Sized Enterprises (SMEs) in Mombasa County, Kenya, resulting from the adoption of Green Supply Chain Management (GSCM) practices, reveals mixed but generally positive perceptions. The statement with the highest level of agreement among respondents was that "there is high return on investment in our firm through application of GSCM practices" (Mean = 3.91; S.Dev = 0.909). A substantial majority of respondents (80%) either strongly agreed or agreed with this statement, indicating a strong perception of financial benefit linked to GSCM implementation.

Similarly, the statement "there is usually high value addition following our green purchasing initiatives" received high ratings (Mean = 3.87; S.Dev = 1.067), with 73% of respondents expressing agreement or strong agreement. This suggests that green purchasing is widely perceived to contribute positively to value creation within these firms.

In terms of operational efficiency, the statement "our firm has achieved a high level of effectiveness in its products and processes" was moderately rated (Mean = 3.52; S.Dev = 0.985), with 64% of respondents expressing agreement. This indicates a fair level of confidence in the ability of GSCM practices to improve internal effectiveness.

Conversely, the perceived impact of GSCM on cost reduction was less favorable. The statement "our firm has achieved a high level of cost reduction through its GSCM practices" received a lower rating (Mean = 2.94; S.Dev = 1.017), with only 39% of respondents agreeing and 45% disagreeing. This reflects skepticism about the cost-efficiency outcomes of GSCM practices, suggesting that such benefits may not be immediate or clearly observable.

The lowest-rated item was "our firm has achieved a high level of safety and dependability in its products and processes" (Mean = 2.85; S.Dev = 1.087). Only 35% of respondents agreed with this statement, while a majority of 52% disagreed. This points to concerns among SMEs regarding the reliability and safety improvements associated with GSCM practices.

Overall, the aggregate mean score across all statements was moderately positive (Mean = 3.418; S.Dev = 1.013). These findings suggest that while SMEs in Mombasa County generally perceive GSCM practices as beneficial, especially in terms of return on investment and value addition, there remain concerns around cost reduction and product safety outcomes that may need to be addressed through targeted interventions or improved implementation strategies.

CONCLUSIONS AND RECOMMENDATIONS

The study concludes that green procurement practices significantly enhance the performance of small and medium-sized enterprises in Mombasa County. By prioritizing environmentally conscious sourcing, developing internal capabilities, and focusing on sustainable outcomes, SMEs not only improve their operational efficiency but also gain competitive and reputational advantages. The high level of adoption across most firms reflects a growing recognition of sustainability as a strategic imperative rather than a regulatory obligation. The positive statistical relationship between green procurement and performance underscores the role of responsible supply chain practices in driving business success. Therefore, green procurement is not merely an environmental initiative but a viable pathway to long-term enterprise sustainability and resilience.

The study found that that green procurement practices significantly enhance the performance of small and medium-sized enterprises in Mombasa County. It is recommended that SMEs institutionalize green procurement policies by strengthening supplier engagement, enhancing employee training on sustainability, and investing in eco-friendly technologies. Policymakers and industry associations should also provide targeted support, including incentives and capacity-building programs, to encourage broader and deeper integration of green procurement practices across all sectors of the SME economy.

The study Recommendations for Future Research

- Impact of Supplier Collaboration on the Effectiveness of Green Procurement in SMEs

This study can explore how active engagement and collaboration with suppliers influence the success of green procurement strategies within SMEs, particularly in enhancing environmental compliance and product sustainability.

- Barriers to Supplier Involvement in Green Procurement Among SMEs in Urban Kenya

This research could identify the specific financial, technical, or organizational challenges that prevent SMEs from fully integrating suppliers into their green procurement processes.

- Influence of Internal Green Procurement Capabilities on Decision-Making Efficiency in SMEs

This study can assess how internal capabilities, such as staff expertise, procurement systems, and environmental knowledge, affect the speed and quality of green procurement decisions.

- Effect of Green Product Sourcing on Cost Efficiency and Customer Retention in SMEs

This research could examine whether environmentally sustainable sourcing practices lead to measurable reductions in procurement costs and improvements in customer loyalty or satisfaction.

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