

# INVESTIGATING THE CHALLENGES AND OPPORTUNITIES OF ADOPTING SUSTAINABLE SUPPLY CHAIN MANAGEMENT IN KANO.

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## ABSTRACT

Sustainable Supply Chain Management (SSCM) plays a crucial role in shaping the economic, social and environmental sustainability of businesses in developing economies. This study investigates the challenges and opportunities of adopting SSCM in Kano State, Nigeria. Using mixed method approach, the study gathered quantitative data from 78 questionnaire responses alongside 16 contextual insights from interview participants. The core objectives of this research is to evaluate the existing challenges impeding the use of renewable energy in SSCM practices, while assessing the harnessed opportunities available for implementing green practices. Additionally, the findings disclose compelling factors of adopting

sustainability principles like costs constraints, technology and infrastructure limitations and policy gaps. The potential opportunities identified from sustainability-driven businesses includes operational efficiency, costs savings, competitive advantage and green funding. Moreover, the results underscore the needs to transform Kano's businesses with resilient SSCM, while offering actionable solutions for stakeholders and policy makers in unlocking the full potentials of sustainability principles in Kano State and Nigeria at large.

**Keywords:** SSCM, Sustainability Practices, Renewable Energy, Green Practice, Cost Constraints, Sustainability-driven, and Green Funding.

## **INTRODUCTION**

Nowadays, Organizations have recognized Sustainable Supply Chain Management as essential ingredient for improving business viability, timely delivery and customer satisfaction. By emphasizing operational alignment with sustainable practices, sustainable supply chain management incorporates social, economic and environmental dimensions into their operations to achieve long-term organizational goals, alongside mitigating environmental and societal impact (Dubey et al., 2020). The sustainability practices gained multifaceted concerns that are far-beyond developed economies but in emerging economies such as Kano State, Nigeria. Consequently, Supply chain management plays a crucial role in shaping business operations across various sectors in Kano, particularly manufacturing, agriculture, trade and services supplies.

The strategic location of Kano in the mid-northern part of Nigeria positioned the state as the biggest commercial center in the region. Kano serves as trade destination that connects Nigeria and other west African countries, highlighting its significant importance to international supply chain<sup>[25]</sup> (Oke et al., 2020). Additionally, study by Akintola et al. (2021) suggested socio-economic issues, insufficient infrastructure, unfavorable policy framework and limited accessibility to advanced technology as significant challenges hindering the implementation of sustainable supply chain management. These challenges are considerably led to vulnerability in supply chain, by creating inefficiency in operation, resource wastage and environmental degradation<sup>[17]</sup>.

The growing transition and adoption of sustainability practices like renewable energy and carbon free equipment in supply chain operations marked a pivotal response to the challenges posed by traditional supply chain practices. The main

objective of sustainable supply chain practices is to strike a balance between economic potentials, social responsibilities and environmental preservation<sup>[32]</sup> (Yadav et al., 2020). Therefore, emerging economies like Kano requires localized solutions in implementing transition and adoption of sustainable supply chain practices. The composition of business activities in Kano such as manufacturing, services, merchandizing, retailing and e-commerce were heavily relying on supply chain to ensure uninterrupted and smooth flow of goods and services throughout the chains. Nwokoro & Okeke (2021) characterized inefficient supply chain with significant energy costs, lack of waste management systems and dilapidated infrastructure<sup>[27]</sup>. This contributes to air pollution, deforestation and overall environmental degradation, while accumulating additional operational costs. Implementing Green supply chain and logistics practices such as renewable energy and route optimization techniques can minimizes carbon foot-print (emissions) and cost efficiency<sup>[22]</sup> (Ifeanyi et al., 2022). Subsequently, the use of closed-loop supply chain and circular economy strategies like reverse logistics, recycling, remanufacturing and asset recovery principles can be appropriate in mitigating wastes and exploring unattended business opportunities.

This research study aimed at examining the aggregate challenges and opportunities involves in adopting sustainable supply chain management in Kano, focusing on investigating economic, social and environmental dimensions, while offering valuable and in-depth insights that may encourage the implementation of sustainable practices.

In addition to the above, this research study hoped to find answer to the following questions:

1. What are the core detrimental challenges affecting the use of SSCM across various business operation in Kano?
2. How do existing business opportunities in Kano can be incorporated for sustainable supply chain practice?
3. What efforts stakeholders should promote to overcome the problems associated with adopting SSCM ?
4. How technology and innovation can facilitate the transition to SSCM in Kano
5. What contribution do SSCM should provide to ensure economic, social and environmental sustainability in Kano?

However, the significance of this research is to explore an in-depth and valuable insights for adopting SSCM in Kano State. The finding can promote the state's economic, social and environmental well-being through the following:

**Economic Sustainability:** Adopting renewable energy and optimizing supply chain and logistics operation can reduce additional costs for businesses in Kano<sup>[18]</sup> (Adebayo & Salawu, 2020). Transitions sustainable practices can improve efficiency and effectiveness in operations, lowering costs as well as building robust business opportunities.

**Social Sustainability:** This include social equity, social responsibility, ethical labor practices, diversity and inclusion etc. This social dimensions can contribute to the livelihood of workers and nearby communities in Kano.

**Environmental Sustainability:** The study underscores the need to lessen environmental concerns of supply chain operations in the state. Implementing eco-friendly practices such as resource and energy-efficiency, emissions-free practices and waste recycling can significantly increase global sustainability efforts<sup>[20]</sup> (Chukwu et al., 2022).

**Understanding Policy Gaps:** The research detects barriers and regulatory gaps and offer practical and localized solutions for authorities to create and promote a favorable and enabling ecosystem for implementing SSCM in Kano.

**Literary Contribution:** The findings of this study can contributes to the existing theories and literature through the use of localized perspectives to address and substitute the challenges of sustainable practices with potential opportunities in emerging cities like Kano State.

## **LITERATURE REVIEW**

The challenges and opportunities of adopting Sustainable supply chain in emerging economies like Kano has gained a substantial acknowledgement by organizations, businesses, individuals and government. The development highlighted the need to substitutes traditional supply chain with sustainability principles. The literature reviewed in this study will explore key issues related to economic performance, social responsibility and environmental stewardship across various dimension of business.

## Meaning and Concepts of SSCM

Seuring & Muller (2020), defined Sustainable Supply Chain Management (SSCM) “as the integration of environmental, social and economic sustainability principles to create long-term value while minimizing negative impact on the ecosystem and society<sup>[9]</sup>. Organizations that implement sustainable practices can reduce their environmental footprint, improve operational efficiency, and enhancing their reputation among consumers, investors and regulators<sup>[30]</sup> (Wang et al., 2020). However, the integral parts of SSCM comprise resource efficiency, ethical sourcing, green logistics and waste management<sup>[29]</sup> (Bai & Sarkis, 2022).

Despite stringent environmental regulations and compliance issues, SSCM has widely been implemented in developed economies, benefiting from cost efficiency and brand equity<sup>[28]</sup> (Tachizawa et al., 2019). However, there is limited transition from traditional supply chain to SSCM in emerging markets and economies as a result of initial costs of transition, infrastructure deficits, Technology required and regulatory challenges<sup>[26]</sup> (Kovacs & Spens, 2020). These distinct challenges delayed extensive implementation of sustainable supply chain practices in Kano to endure, withstand and sustain its diverse commercial activities and rapidly growing population.

## Transitioning Challenges of SSCM in Kano

The challenges of adopting sustainable practices in Kano can be categorize as follows:

**Current State of Infrastructure:** The main challenges hindering the shift from outdated practices to sustainability practices includes unstable power and energy supplies, lack of modern logistics and warehousing facilities, and poor condition of transport connectivity among others. Akintola et al. (2021) emphasized that these obstacles increased operational costs and often disrupting the smooth flow of goods and services across supply chain<sup>[17]</sup>. Moreover, businesses find these inefficiencies considerably difficult to adopt green practices while reducing environmental impact of supply chain activities<sup>[10]</sup> (Sarkis et al., 2020).

**Initial Cost of Transitioning:** In Kano, Significant portion of businesses find the costs of investing in eco-friendly supply chain and its upkeep maintenance costs as quite indispensable. Ifeanyi et al. (2022) highlighted financial constraints as the most significant barriers of transitioning from traditional to sustainable supply chain

practices like energy-efficient practices, sustainable packaging and wastes management systems<sup>[21]</sup>. Similarly, the application of SSCM is more intricate with restricted access to government incentives and financial possibilities<sup>[18]</sup> (Adebayo & Salawu, 2020).

**Technology Involved:** Lack of commitments to technical expertise in optimizing supply chain operations with technological approaches such as data analytics, software and automations GPS for real-time tracking etc, have significantly delay the shift to sustainability practices in Kano. A study by Chukwu et al. (2022), suggests high implementation cost and technical expertise as impediments that limits the application of these technologies<sup>[20]</sup>.

**Policy framework and Gaps:** The government in-action towards compliance to a sustainable business practices that can reduce climate change and enhance environmental preservations are equally uncomplimentary, particularly in Nigeria. Nwokoro & Okeke (2021), identify insufficient degree of penalties and lack of environmental laws enforced to businesses harming and compromising the environment<sup>[27]</sup>. Moreover, incentives such as tax holidays or subsidies should be offer to encourage those businesses with sustainable behavior, carbon footprint portfolio, sustainable sourcing and wastes management systems.

### **The opportunities of implementing eco-friendly supply chain**

Notwithstanding, there are profound potential opportunities for adopting green supply chain, arising from consistent demand for sustainable products by consumers to technological innovations and incentives.

**Emergence of Advanced Technologies:** The introduction of renewable energies such as compressed natural gas (CNG), solar-powered energy, data analytics tools and supply chain software have presents potential opportunities in promoting sustainable practices in emerging markets. Ogunyemi et al. (2020), argued that organizations and businesses in Kano can reduce costs and environmental impact of supply chain practices, by shifting their operations to renewable energy like solar-powered energy, alongside lowering over-reliance on unstable national energy grid<sup>[22]</sup>. Subsequently, the integration of these technologies in supply chain can often supplements businesses to profitably recycled wastes, improved inventory management and streamlined overall supply chain operations<sup>[32]</sup> (Yadav et al., 2020).

**Increasing Demand for eco-friendly product:** Growing demand for sustainable products presents potential opportunities to provide industrial and consumer goods that will suite preferences and expectations of marketplace. Hague et al. (2021), recommended that the substantial surge in global consumer demand and trends emphasizes on preferring sustainable goods and ethical sourcing of materials. Additionally, organization and businesses that applied eco-friendly supply chain can gain competitive advantage over their competitors, attracting and retaining sustainability-driven customers, while differentiating their products offerings in competitive arena and promoting the broader sustainability principles.

**Collaborative Efforts and Awareness Campaigns:** SSCM can also be implemented through collective approach among stakeholders like organizations, businesses, govern agencies and NGOs to address the implementation challenges of sustainability practices. Akintola et al. (2021), emphasized the importance of promoting widespread application of green supply chain practices, encouraging awareness campaigns, resources and best practices to deter barriers that tampered with sustainability principles. Consequently, the collaborative effort can also stimulate the development of required infrastructure used for eco-friendly supply chain, while optimizing costs and energy-efficient transportation and logistics networks<sup>[17]</sup>.

**Government Intervention:** The Federal Government of Nigeria under Nigerian Green Bond Market and National Policy on Environment has made remarkable step in promoting sustainability practices to lessen the environmental footprint<sup>[24]</sup> (Olumide et al., 2020). In Nigeria particularly Kano, Government has introduced incentivized support in form of grants, tax holidays and subsidies to those that adopt green technology in their operations. The role of policymakers towards green supply chain and promoting carbon-free ecosystem for sustainability adoption in Kano, often strengthening regulatory frameworks and enforcing sustainability principles<sup>[25]</sup> (Oke et el., 2020).

### **The economic, social and environmental dimensions of SSCM**

The economic, social and environmental impact of implementing green supply chain cannot not over-emphasized. In economic context, the adoption of sustainability practices improves costs efficiency due to optimum resource utilization, minimizing wastes and streamlining supply chain performance<sup>[18]</sup> (Adebayo & Salawu, 2020). Social perspectives on the other hand, focus on

enhancing favorable working condition, social responsibilities, social equity and ethical labor practices to ensure fairness, social inclusion and safeguarding the livelihood of employees and nearby communities (Sarkis et al., 2021). Alternatively, the environmental aspect of SSCM emphasizes the need to lessen carbon emissions, environmental degradation (Deforestation) and conserving natural resources through sustainability practices<sup>[30]</sup> (Wang et al., 2020).

This literature review underscores the present challenges and potential opportunities of implementing SSCM in Kano, while assessing their economic, social and environmental impact. The main obstacles that hinder the application of this sustainable practices includes costs, technology and regulatory frameworks. In contrast, the prospects identified among others are advanced technologies, increased demand for sustainable products and policy supports that would drive widespread transition to renewable energy.

## **METHODOLOGY**

This study combined both quantitative and qualitative aspects of data collection to investigate the challenges and opportunities available for implementing the use of green supply chain in Kano. The mixed approaches employed will be used to strike a balance between economic, social and environmental perspectives of sustainability practices. Consequently, questionnaires are designed to gather numerical data while semi structured interview were conducted for contextual insights.

### **Research Design:**

The research uses a combination of descriptive and exploratory research design. A descriptive statistical design examines the challenges and opportunities affecting the shift to renewable energy, while exploratory design focus on capturing a snap-shot of the present considerations of implementing SSCM in Kano.

### **Sampling Population**

The sampling population is randomly selected due to the fact that sustainability practices covers all strata of businesses activities, comprising 78 questionnaire respondents, ranging from shop- keepers, distributors, households and students were chosen based stratification to ensure diverse perspectives. Additionally, 16 interview participants from regulators, manufacturers, agriculture, wholesaling, retailing and services establishments were selected based on their daily

experiences and engagements in supply chain functions within the purview of their organizations.

### **Data Analysis**

**Quantitative Analysis:** The quantitative data analysis employs descriptive and inferential statistical tools. A descriptive technique is used to measure the demographic profiles of the respondents and their inputs to each question. In other hand, the inferential statistics analyzes the relationship between perceived barriers to SSCM and factors affecting the transition to renewable energy program.

**Qualitative Analysis:** Data from interview were analyzed using thematic analysis to evaluate the key challenges and potential opportunities businesses encountered while adopting sustainable practices in Kano. The thematic analysis aimed at identifying patterns, drawing contextual insights and conclusion.

### **Ethical Consideration**

The researcher maintained adherence to the stipulated research regulations, including inform consent, anonymity and confidentiality of the responses. The data collected is secured, stored and only be used for the purpose of this research, but can be withdrawn at any point in time by the participants. Subsequently, the study considered the commitments to transparency, integrity and due process as well as ethically ensures the findings depict accurate perceptions of the respondents and participants.

### **Limitations of the Study**

**Sample Size:** The sampling population may be regarded as small, though sufficient for the research purpose but cannot capture a comprehensive view of Kano, considering the business population of the state.

**Bias:** Questionnaire respondents and interview participants may often provide inaccurate and self-reported data which may leads to bias. This encourage the researcher to employ combined method of data collection and analysis.

**Resource Constraints:** Some of the interview participants refused to share some classified information, insisting that they are contain trade secrets and bears confidential credentials, while others are not authorized to be disclosed.

This research methodology aimed at providing comprehensive understanding of the challenges and prospects of adopting SSCM in Kano, through offering valuable insights for regulators and businesses.

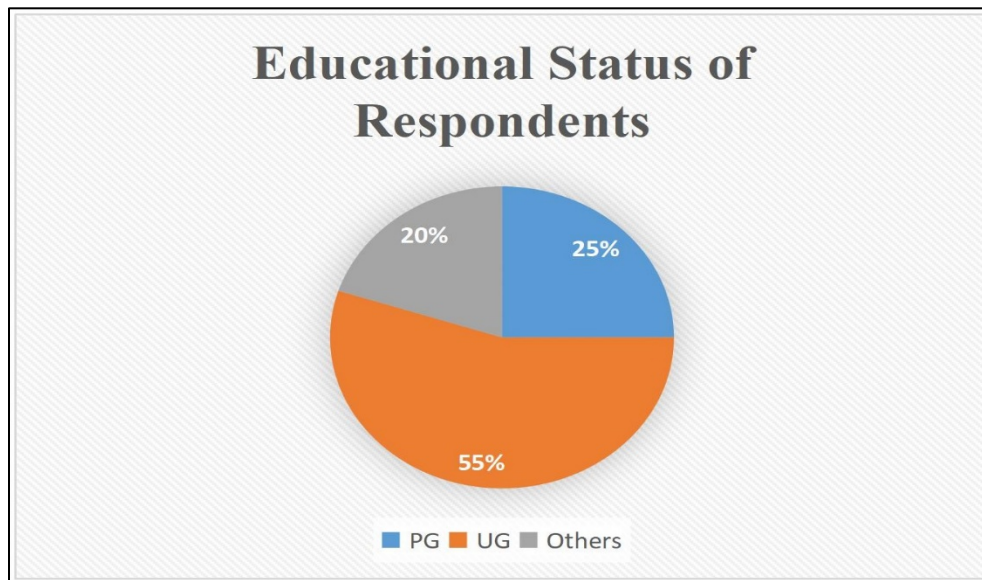
## **FINDINGS**

This chapter exhibits how data collected were analyze to provide both numerical and contextual insights into challenges and opportunities of substituting traditional practices into sustainable supply chain practices in Kano. Statistical tools such graph, charts and frequency distribution table were used to reinforce the findings, dividing demographic profiles and core questions related to SSCM.

### **Quantitative Findings**

#### ***Demographic Information of the respondents***

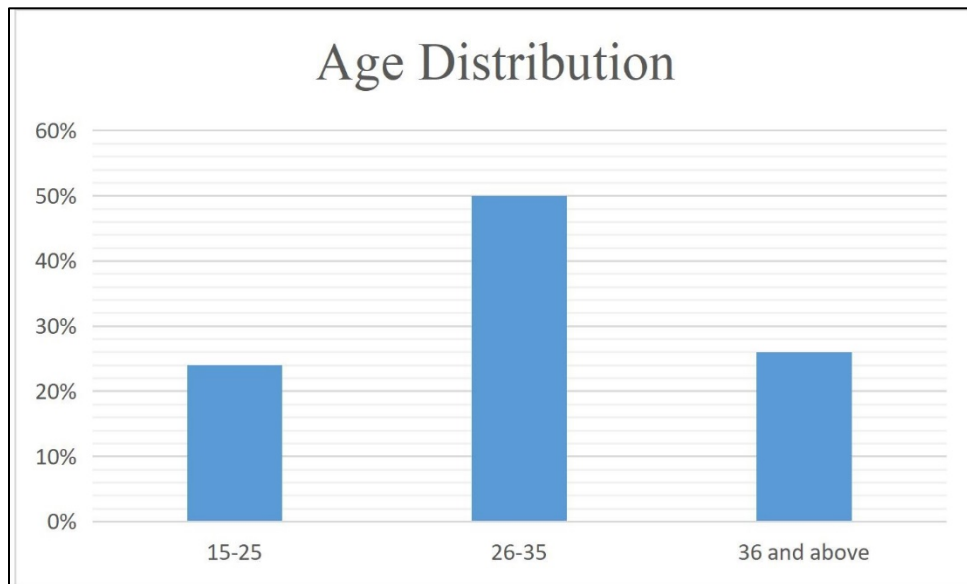
##### **Educational Qualifications**



*Graph 1 : Education of the Respondents*

**Fig. 0.1** The data in a pie-chart above present the current education qualifications of the respondents. Majority of the respondent are undergraduate with 55% responses, while the average respondents possess their postgraduate studies with a theoretical and conceptual understanding of SSCM. Those below this brackets provides 20% responses. These responses show education-driven population sample that can foster reliability of the findings.

##### **Age Group of the Respondents**



Graph 2 : Age Status of the Participants

**Fig. 0.2** The aggregate age of the modal responses were younger generations of professionals with age difference ranges from 26-35, representing 50%. The mean of this age distribution are people above 36 years of age and are often involved in a number of supply chain operations and stands at 26%.

### Analysis of SSCM Practices in Kano

#### Awareness of SSCM Practices in Kano.

<b>Responses</b>	<b>Frequency (%)</b>
Aware	88
Not aware	12
<b>Total</b>	<b>100</b>

Table 1 :Frequency of Awareness

The table 0.3 above indicated that majority of people and businesses in Kano are aware of the existing concept of sustainability practices. While on the other hand, few among the respondents that represents 12% of the responses are unaware, but emphasized the need for more awareness campaigns.

#### Challenges of Adopting SSCM in Kano

<b>Responses</b>	<b>Frequency (%)</b>
Yes	70
No	18
May be	12
<b>Total</b>	<b>100</b>

Table 2 : Challenges

The challenges of adopting sustainable supply chain practices has been proven by the significant number of the respondents. Citing costs, infrastructure deficits and technology involved among others as factors that limit the adoption. Those that denied the acknowledging the challenges constitutes 18%, alongside those that are neutral represents 12% respectively.

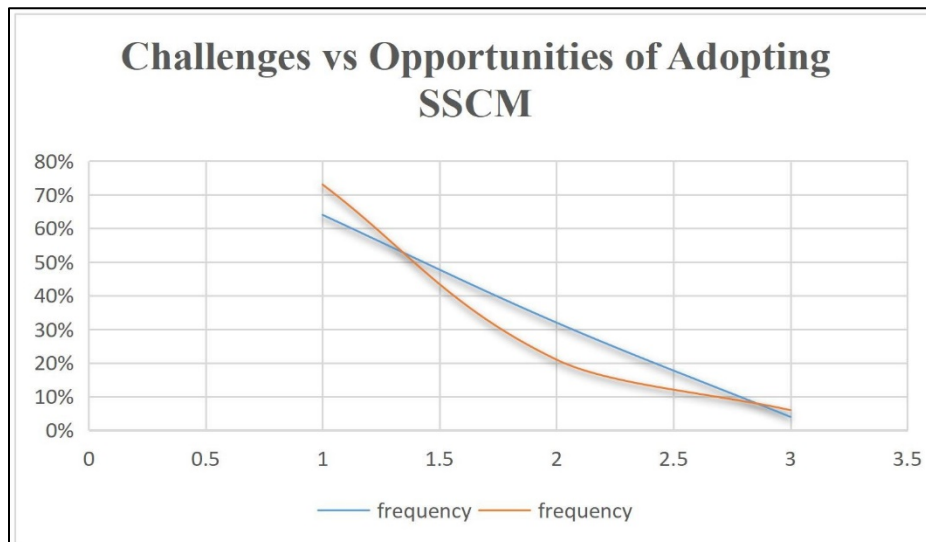
**a) Opportunities available for eco-friendly supply chain**

Responses	Frequency (%)
Agree	73
Partially agree	21
Not agree	6
Total	100

Table 3 : Prospects of SSCM in Kano

**Fig. 0.5** The perceived benefits of implementing renewable energy in supply chain practices gained a profound prospects based on the findings with 73% responses. This includes operational efficiency, infrastructure development and environmental stewardship. Additionally, 21% of the respondents are probably uncertain with the capability of businesses in Kano to adopt sustainability practices, While the rest of 6% respondents does not agree with these advantages.

**Interplay between challenges and opportunities of adopting SSCM**

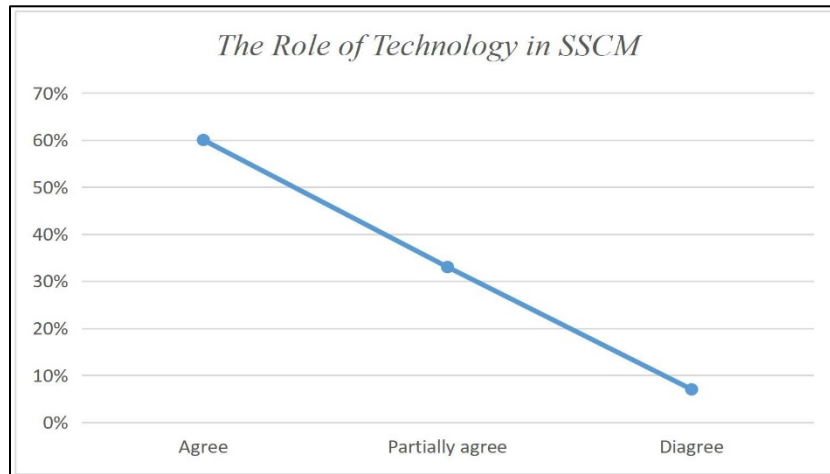


Graph 3 : Challenges coupling Opportunities of SSCM adoption

**Fig. 0.6** The findings of this study illustrates how businesses with long-term cost saving strategies understand and willing to implement SSCM despite the initial

costs of concerns. Similarly, those businesses that perceive the adoption of SSCM as impracticable will be leveraged with more awareness campaigns to lowered misconceptions and promote the transition program. Moreover, the technology involved and government support also got significant recognition in bridging the gaps between costs and infrastructure deficits.

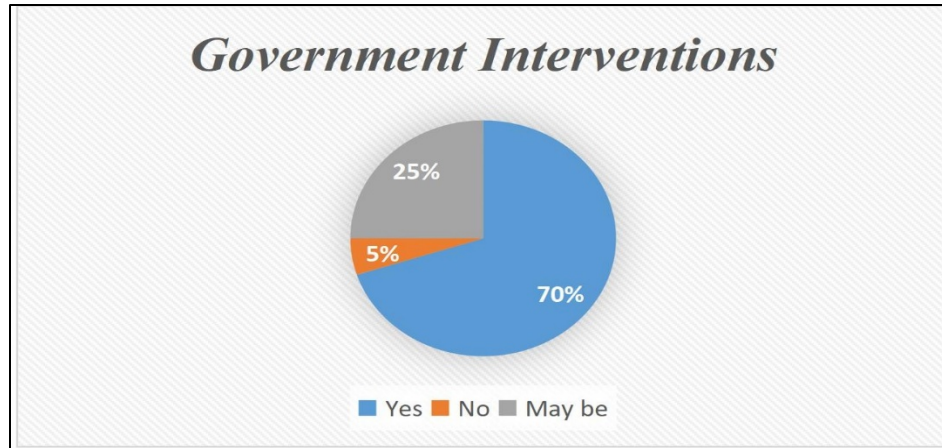
### **Technology Required for Adopting SSCM**



Graph 4 : Technology

The data above underscores how majority of the respondents (60%) agree that technology plays a crucial role in SSCM. Investing in data analytics, software and applications for real-time tracking and route optimizations, including automations and robotics applications in warehousing and distributions. Additionally, the average responses (40%) have probability of the role of these technologies, while 8% of the responses denied any aid from technological innovation in SSCM.

### **Government Policy Support**



*Graph 5 : Policy Framework required*

Graph 5 above indicates that the significant portion of the respondents (70%) disclosed the possibilities of sound policy framework could promote this transition program in Kano. Government supports such as incentives, subsidies and tax holidays were repeatedly recommended by the respondents. In contrast, the average respondents (25) were uncertain that political instability may often hinder the progress of sustainable policies, particularly in Africa where businesses are prone to these challenges.

### **Qualitative Findings**

This section deals with interviews findings based on economic, social and environmental dimensions of SSCM in Kano. The duty also identifies profits, people and the plate as triple bottom line available to address these dimensional impact of sustainability practices. Alternatively, the key findings are:

#### ***Economic Impact of SSCM***

**Cost and Energy Efficiency (CEE):** The average interview participants (7 out of 16) suggested that the use of compressed-natural-gas, solar-powered vehicles and electric vehicles (E.Vs) serves as alternative options for large scale organizations and businesses. This development has drastically reduced pollutions, preserve ecosystem and terminating the operational costs of fueling, servicing and other upkeep maintenance.

**Competitive Advantage:** Some participants revealed growing customer's demand for eco- friendly materials in emerging markets. Therefore, those organizations and businesses that seized these sustainability principles have great

competitive advantages over their competitors as consumers are appealing for environmentally friendly products.

**External Green Financing Initiatives:** Other portion of the interviews participants highlight the importance of securing and accessing external financing from NGOs such as Sustainable Development Goals (SDGs) and other Government incentives for green practices will be quite indispensable.

The above economic benefits require investment cost, technology, training and awareness campaigns to overcome the barriers that hinder the adoption of green supply chain in Kano.

### ***Social Impact of SSCM***

**Employment Opportunities:** Some organizational employees among the participants noted that the emergence of SSCM in Kano provide a lot of job opportunities in business environment. The implementation of these practices like recycling, waste management, eco-friendly logistics and renewable energy have led to the creation of newly direct employment to those communities neighboring some organizations.

**Social Responsibility:** The interviews findings also presents facts about how societal well-being and inclusion can be guaranteed due to SSCM practices. Pollution control mechanisms, resource conservation and energy-efficiency are all beneficial to society.

### ***Environmental Impact of SSCM***

**Carbon Footprint:** Some Participants highlighted the significant roles that SSCM plays in reducing carbon substances like methane, carbon-dioxide and other chemicals that are harmful to health. Practices such as waste reduction, recycling and route optimizations are considerably critical in minimizing environmental footprint.

**Resource Conservation:** Sustainability practices such closed-loop supply chain, reverse logistics and recycling have a profound impact in preserving the suitability of the ecosystem. These practices can equally avenues for using the environmental potentials without compromising future generations.

**Renewable Energy Potential:** The findings also indicated potential solutions of transitioning to renewable energy such as solar-power and CNGs to ensure energy efficiency, while supporting sustainability in the overall supply chain functions.

## **DISCUSSION**

This study tries to strike a balance between the challenges and opportunities of Adopting eco- friendly supply chain practices in Kano. Based on economic, social and environmental dimensions, the findings provide valuable insights on how collaborative efforts among various stakeholders like organizations, businesses and policymakers including non-governmental interventions (NGOs) can unlock the full potential and prospects of adopting SSCM in Kano.

### **Economic Challenges and Opportunities of SSCM**

Economically, Implementing sustainable supply chain practices in Kano presents both barriers and potential possibilities. Over 60% of the study findings revealed cost constraints as perpetual barrier hindering the use of SSCM by businesses. This aligned with some of the interviews findings which identified high investment costs required for adopting technology towards sustainability practices as repetitive challenges. These findings were corroborated by Kusi- Sarpong et al. (2019), who highlighted that lack of accessible financing options are often restraining and impeding the implementation of SSCM in emerging markets<sup>[5]</sup>.

Regardless of these trials, there are various economic opportunities identified while conducting this study. The findings suggested that those organizations and businesses that adopt eco- friendly practices enjoys a significant reduction in operational costs like energy costs, regular maintenance and services costs. This aligned with Chardine-Baumann & Botta-Genoulaz (2021), who noted that sustainability practices guaranteed profitability and operational efficiency. Consequently, the contextual data of this study underscore the role of SSCM in enhancing the competitive advantage of organizations through offering environmentally conscious consumer and industrial products, as noted Dubey et at. (2020).

### **Social Impact and Social Responsibility of SSCM**

The findings of this study illustrated that majority of the respondents are either postgraduates or undergraduates. This academic perception of SSCM presents the availability of talent resources for implementing SSCM. This aligns with Awuzie & Abuzaeinab (2019), argued that capacity building is crucial in achieving sustainability goals<sup>[1]</sup>.

However, community well-being, job creation and social responsibilities like pollution control, waste management etc were all identified as social benefits of SSCM. Subsequently, the use of green practices and renewable energy are creating new job opportunities to local communities. This reflect the findings by Bag et al. (2021), who emphasized that SSCM plays a significant role driving social development<sup>[2]</sup>. Moreover, organizations that saves costs through sustainable practices can often meet their social obligations timely, including gaining chance to engaged actively in community development.

### ***Environmental Impact and Technology in SSCM***

The Impact of environmental stewardship in SSCM focus on ethical and sustainable sourcing, resource conservation, green and reverse logistics among others. The quantitative findings of this research indicated mass recognition of environmental benefits that comprise mitigating carbon emissions, waste recycling and management as well as energy efficiency. In other hand, majority of the interview participants suggested the significant role of data analytics, automations and GPS in SSCM as driven forces behind technology adoption in supply chain practices. This study identified technological innovations, renewable energy solution and green supply chain as identical enablers of environmental stewardship. This align with Kusi-Sarpong et al. (2019), who highlighted SSCM practice significantly reduce environmental impacts<sup>[5]</sup>. Renewable energy potentially suitable in mitigating environmental challenges associated with traditional supply chain in Nigeria<sup>[22]</sup> (Olanrewaju et al., 2020).

## **CONCLUSION**

This study investigated the challenges and opportunities of adopting sustainable supply chain management (SSCM) in Kano, based on social, economic and environmental dimensions. The findings identified costs constraints, technology and infrastructure deficits, including regulatory framework as constant challenges impeding the implementation of SSCM in Kano. Despite the challenges, the study explores numerous opportunities such as capacity building, collaborative efforts and policy supports that can transform the implementation of SSCM in Kano. Additionally, the study contributes to the academic discourse and the existing literature of SSCM, alongside offering long-term actionable solutions for stakeholders and policymakers on how to actualized the full potential of SSCM in Kano and Nigeria.

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