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# Addressing Supply Chain Challenges in the Nigerian Construction Industry: The Role of Government Policies and Regulations

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**Abstract**
This study explores the challenges and strategic solutions affecting supply chains in Nigeria's construction industry, with a focus on government policy, regulatory barriers, and stakeholder coordination. Qualitative insights from industry professionals reveal that poor infrastructure, fragmented communication, and inconsistent regulations hinder supply chain efficiency. Although policy initiatives promoting local sourcing and improved procurement offer potential, persistent issues—such as customs delays and inadequate road networks—create ongoing bottlenecks. Ineffective coordination among contractors, suppliers, and agencies leads to cost overruns and project delays. The study highlights the value of digital platforms for real-time communication, collaborative planning, and transparency. It recommends regulatory reform, infrastructure upgrades, and the adoption of agile management and digital technologies. Enhancing supply chain performance will require coordinated efforts from government, industry, and regulators. The findings offer practical insights for policymakers and practitioners and suggest avenues for future research on digital integration and regional supply dynamics.

**Keywords:** Construction Supply Chain Management, Regulatory Challenges, Stakeholder, Coordination, Government Policy, Nigeria Construction Industry

## Introduction

Supply chain management (SCM) is a critical component of the construction industry, especially in developing countries like Nigeria, where infrastructural deficits and regulatory inefficiencies frequently hinder project execution. As Nigeria experiences rapid urbanisation and rising infrastructure demands, the need for efficient supply chains becomes more urgent(Falks, 2018). Delays in material delivery, escalating project costs, and compromised quality are often linked to weak supply chain systems, driven by poor infrastructure, inconsistent policies, material scarcity, and limited coordination among stakeholders (Salinas-Navarro et al., 2024).While government policies can mitigate these challenges by promoting local sourcing, investing in infrastructure, and improving procurement systems, implementation gaps often undermine their effectiveness. Similarly, poor stakeholder communication and lack of trust continue to obstruct coordinated SCM efforts. Despite these known issues, there is limited empirical evidence capturing how Nigerian construction professionals perceive these barriers and the strategies they consider effective for overcoming them (Falks, 2018). This study investigates the perspectives of key stakeholders on the role of government policies, regulatory barriers, and coordination strategies in shaping SCM performance in Nigeria's construction industry. The findings aim to inform more sustainable supply chain strategies and support evidence-based policymaking.

## Literature Review

In recent years, supply chain management has emerged as a strategic priority in construction due to its direct impact on time, cost, and quality performance (Oni-Jimoh et al., 2018). In Nigeria, SCM inefficiencies have been linked to infrastructural deficits, inadequate logistics, and fragmented communication channels. Oni-Jimoh et al. (2018) highlight the persistent challenges in material supply and contractor coordination that often delay project delivery. Government intervention through policy formulation plays a dual role—either enabling or constraining SCM effectiveness. Gaustad et al. (2018) emphasise that policies encouraging local procurement and

infrastructure investment can improve supply responsiveness. However, Omotosho et al. (2020) and Lanzano (2024)argue that regulatory barriers—such as port congestion, customs delays, and disjointed approval systems—continue to disrupt logistics and distribution chains in Nigeria.

Stakeholder coordination is another key concern in SCM literature. Modgil et al. (2022)identify digital integration and real-time communication as critical enablers for effective coordination, especially in complex project environments. Despite these insights, much of the literature remains conceptual, with limited empirical studies focused on Nigeria's construction sector. This gap underscores the need for research that captures the lived experiences and perceptions of industry stakeholders regarding practical SCM challenges and solutions.

**Methodology**

This study adopted a qualitative exploratory research design to examine and optimise supply chain management (SCM) practices within the Nigerian construction industry, particularly in Lagos. A qualitative approach was deemed appropriate due to its strength in capturing detailed, context-rich insights into complex social and operational systems (England, 2021; Lim, 2024). The research design was guided by the need to explore industry professionals' lived experiences and perceptions, aligning with interpretivist paradigms (Ranganathan & Aggarwal, 2018). Semi-structured interviews were chosen as the primary data collection method, enabling flexibility while maintaining focus on the study objectives. This approach allowed for in-depth exploration of issues such as procurement inefficiencies, logistics challenges, and technology adoption, supported by probing techniques recommended by Rosario & Wa-Mbaleka (2022).

Participants were selected using purposive sampling to ensure that only individuals with relevant expertise contributed to the study (Falks, 2018). Inclusion criteria required participants to have at least three years of SCM experience in construction and involvement in strategies to improve efficiency and cost control. A total of 20 senior-level professionals participated, with most having over 11 years of experience—reflecting deep operational and strategic knowledge within the sector (Creswell, 2013). To ensure data credibility, structured interview protocols and member checking were employed as recommended by Sailor (2020). Interviews were audio-recorded, transcribed verbatim, and analysed using NVivo 15 software, as captured in Figure 1. This qualitative approach, involving interviews with 20 supply chain professionals, aligns with best practices in construction research by providing rich, context-specific insights.

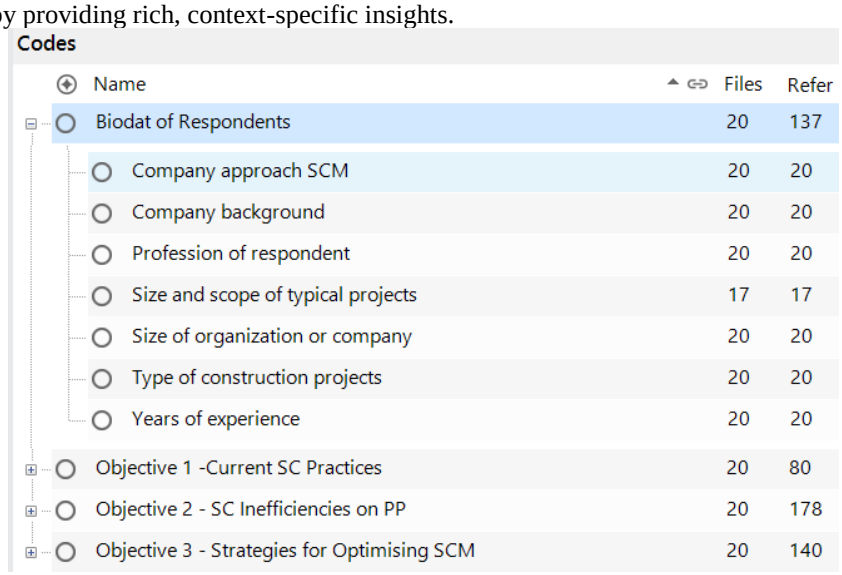


Figure 1: Thematic coding of Interview respondents and analysed using NVivo 15 software.

The analysis followed inductive and deductive content analysis techniques recommended by Lichtman (2023), Kabesa & Berkovich (2023)for qualitative explorations. Inductive coding allowed themes to emerge from the data, while deductive coding applied theoretical constructs such as experience levels and project scale. All themes were structured around three objectives: current SCM practices, inefficiencies, and optimisation strategies. Visual tools like word clouds and coding frameworks helped synthesise findings and highlight recurring patterns, ensuring analytical rigour and actionable insights.

**Results of Study**

This section on the study results captures themes such as government policies in overcoming supply chain management (SCM) challenges, specific regulatory hurdles, and improving coordination among stakeholders. It highlights how strategic policies can support local sourcing, investment, and infrastructure development to


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enhance supply chain efficiency. The study also identifies key regulatory and infrastructural barriers that hinder effective SCM, such as delays, poor roads, and inconsistent standards. Finally, it underscores the importance of fostering stakeholder collaboration through transparent communication, trust-building, and adopting digital platforms to improve coordination and decision-making across Nigeria's construction supply chain network.

**Government Policies in Overcoming SCM Challenges**

The interview responses in Table 1 highlight various ways government policies can help overcome current supply chain challenges in the Nigerian construction industry. A prominent theme is the need for government intervention through the support and encouragement of both local and international businesses. Respondents emphasised the importance of policies that promote investment in infrastructure, local sourcing of materials, and streamlining procurement processes. Policies fostering collaboration between the government, private sector, and stakeholders can create a more stable and efficient supply chain (Oni et al., 2023). Furthermore, the need for government regulation to address challenges such as material scarcity, delays, and cost fluctuations was raised, indicating a gap in the current regulatory framework that could be improved through targeted policies (Gaustad et al., 2018).

Table 1: Government Policies in Overcoming Current Supply Chain Challenges

| Word | Count | Similar Words |
|---|---|---|
| government | 15 | control, government, governments, regulation, regulations |
| encourage | 14 | boost, encourage, promote, support, supporting |
| help | 13 | availability, facilitation, help, services, support, supporting |
| investment | 10 | invest, investing, investment, place, putting |
| local | 9 | local, place |
| promoting | 8 | promoting, public |
| supply | 7 | issue, supply |
| development | 5 | arise, develop, produce, training |
| infrastructure | 5 | infrastructure |
| materials | 5 | fabrication, materials |
| public | 5 | issue, public |
| reduce | 5 | contracts, reduce, reduces |

Government incentives, such as subsidies or tax reliefs for businesses involved in local production or sourcing, are also seen to reduce the cost of materials and streamline supply chains (Cohen & Lee, 2020). Furthermore, fostering technology and digital platforms is suggested to improve supply chain management, reduce bottlenecks, and enhance stakeholder communication (Zrelli & Rejeb, 2024). Lastly, implementing policies that ensure a more transparent and predictable supply chain, particularly in logistics and transportation, is crucial for improving supply chain efficiency in the construction sector.

Overall, the insights presented in Figure 2 underline the pivotal role of government policies in shaping an environment that mitigates supply chain issues and enhances overall efficiency.


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Figure 2: Pivotal Role of Government Policies in Mitigating Supply Chain Issues

**Specific Regulatory Hurdles for SCM Improvements**

Table 2 highlights key challenges in supply chain management, focusing on regulatory and infrastructural hurdles. Prominent terms such as "government" (3.09%), "regulation" (1.85%), and "infrastructural" (3.09%) emphasise the persistent barriers posed by governmental policies, regulatory bottlenecks, and underdeveloped infrastructure. These factors exacerbate inefficiencies, causing delays in material delivery and increased project costs. For instance, "customs" and "port" (both 1.23%) point to procedural delays in clearance processes, which align with existing literature that identifies bureaucratic red tape and inconsistent enforcement of policies as impediments to supply chain fluidity (Lanzano, 2024). Additionally, "road" (2.47%) and "transportation" (1.85%) highlight poor infrastructure as a critical bottleneck, consistent with findings that inadequate transportation networks hinder timely material procurement (Omotosho et al., 2020).

Table 2: Responses on Specific Regulations for Supply Chain Management

| Word | Count | Similar Words |
|---|---|---|
| bad | 7 | bad, poor |
| government | 7 | government, regulation, regulations |
| delay | 6 | delay, delays |
| infrastructural | 5 | infrastructural, infrastructure |
| materials | 5 | materials |
| regulation | 5 | regulation, regulations, regulatory |
| state | 5 | nations, state |
| time | 5 | time |
| communication | 4 | communication, nations |
| cost | 4 | cost, price |
| impact | 4 | impact |
| poor | 4 | inadequate, poor |
| road | 4 | road |
| standards | 4 | exchange, standards |


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To counter these challenges, improved stakeholder coordination is crucial. The table references "communication" (1.85%) and "protocols" (1.23%), indicating that clear communication channels and standardised protocols are essential. Proactive strategies such as digital platforms for real-time tracking and collaborative planning among suppliers, contractors, and clients can mitigate logistical issues (Modgil et al., 2022). Practices like joint risk assessment and streamlined approval processes also enhance efficiency and reduce project delays.


Figure 3: Regulatory and Infrastructural Hurdles in Supply Chain Management

The cascading effect of these hurdles, as depicted in Figure 3, is evident in the terms "delay" (3.70%) and "cost" (2.47%), showing how inefficiencies inflate budgets and prolong timelines. Addressing these challenges demands policy reforms, infrastructural investments, and stakeholder collaboration. Such initiatives align with contemporary frameworks advocating for integrated supply chain systems (Odimarha et al., 2024).

**Improving Coordination among SCM Stakeholders**

Improving coordination among stakeholders in the Nigerian construction industry is a critical strategy highlighted in Table 3. Communication is the most referenced term and is pivotal in fostering effective collaboration among suppliers, contractors, and clients. Regular meetings and establishing clear communication channels are standard practices, ensuring all parties are informed and aligned. Studies have shown that structured communication minimises misunderstandings and enhances decision-making (Abubakar & Dano, 2020).

Table 3: Responses on Strategies for Improving Coordination among Stakeholders

| Word | Count | Similar Words |
|---|---|---|
| communication | 10 | communication |
| build | 7 | build, building, establish, establishing |
| meetings | 7 | meeting, meetings |
| effective | 6 | effective, establish, establishing |
| project | 6 | plan, planning, project |
| stakeholders | 6 | stakeholders |
| regular | 5 | regular |
| necessary | 4 | necessary, requirements |
| relationships | 4 | relationship, relationships |


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Building and maintaining relationships among stakeholders is another recurring theme. Trust-building measures such as transparency and fostering solid partnerships are crucial in creating a collaborative environment. Prior research underscores the role of trust in mitigating conflicts and ensuring smoother project execution (Mahzan et al., 2009). Additionally, integrating frequent evaluations and feedback mechanisms ensures continuous improvement and adaptability in stakeholder coordination, aligning with Lean Construction principles (Mellado & Lou, 2020).

Procurement management strategies are also emphasised, reflecting the importance of transparent processes for sourcing materials and services. Effective procurement reduces delays and cost overruns while promoting accountability among stakeholders. Developing agile project management frameworks that include stakeholder coordination has enhanced project outcomes (Irfeey et al., 2023).

Lastly, leveraging digital tools and platforms for information sharing and collaboration among stakeholders is mentioned in Figure 4. Digital technologies like cloud-based systems and project management software improve data accessibility, reduce redundancies, and streamline operations, aligning with global trends in construction project management (Ashraf et al., 2022).


Figure 4: Communication Has a Pivotal Role in Fostering Effective Collaboration

**Discussion: Optimising SCM in Nigeria's Construction Industry**

The study's findings provide critical insights into the challenges and opportunities for improving supply chain management (SCM) in Nigeria's construction sector. Central to the discussion is the role of government policy reforms. Interview participants emphasised the transformative potential of policy interventions—ranging from infrastructure development and local sourcing mandates to streamlined import procedures and fiscal incentives like subsidies and tax breaks. These align with the work of Oni-Jimoh et al. (2018)and Cohen & Lee (2020), who highlight the importance of enabling regulatory environments in enhancing supply stability, cost control, and logistical efficiency.

Despite these opportunities, persistent regulatory and infrastructural barriers—such as bureaucratic delays at ports, deteriorated road networks, and inconsistent policy enforcement—continue to hinder SCM performance. These findings resonate with Lanzano (2024) and Omotosho et al. (2020), who establish a clear link between red tape, logistics constraints, and SCM inefficiencies. In this context, government efforts must go beyond policy formulation to focus on implementation and monitoring, particularly in streamlining customs operations and upgrading core transport infrastructure to reduce time and cost overruns.

Coordination among stakeholders was another dominant theme. Respondents pointed to the importance of structured communication, trust-building, and the adoption of digital collaboration tools to ensure seamless material flow and information sharing. These observations are consistent with Ige et al. (2021), who argue that clear communication protocols and stakeholder engagement mechanisms reduce conflict, improve transparency, and contribute to more predictable project outcomes. Similarly, Modgil et al. (2022)stress the value of digital supply chain integration, noting that technologies such as BIM and cloud-based platforms foster inter-organisational trust and agility—attributes that are especially critical in volatile construction environments like Nigeria's.

However, this study also reveals several limitations that should inform the interpretation of results. First, the qualitative data was drawn from a relatively small, geographically concentrated sample of industry professionals,


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primarily located in urban centres such as Lagos and Abuja. As a result, the findings may not fully capture regional disparities in SCM practices across Nigeria's diverse geopolitical zones, particularly in rural or less industrialised states. Second, the study focused primarily on the perceptions of contractors and consultants, with limited input from suppliers, regulatory agencies, or clients, which may constrain the breadth of stakeholder representation.
Furthermore, while the research identifies digital tools as potential enablers of SCM optimisation, it does not quantify their specific cost-benefit outcomes nor assess the readiness of small and medium-sized enterprises (SMEs) to adopt such technologies. Modgil et al. (2022) caution that digital integration is not a one-size-fits-all solution, as it requires significant upfront investment, user training, and a supportive institutional culture—factors that can pose barriers in resource-constrained settings.

## Conclusion

This study examined the key challenges undermining supply chain management (SCM) in Nigeria's construction industry, particularly those related to government policy, regulatory inefficiencies, and stakeholder coordination. Findings reveal that infrastructural deficits, policy inconsistencies, bureaucratic delays, and poor stakeholder communication contribute significantly to cost overruns, extended project timelines, and material delivery failures. While strategic government policies—such as incentives for local sourcing and infrastructure investment—can improve SCM performance, their impact is limited by persistent port congestion, customs inefficiencies, and inadequate transportation networks.
To address these challenges, a multi-pronged strategy is essential:

1. Policy Reforms: Simplifying procurement procedures, harmonising regulatory standards, and offering fiscal incentives (e.g., tax waivers for local suppliers) could reduce procurement cycle times by up to 25%, leading to significant project cost savings.
2. Infrastructure Investment: Targeted upgrades in road networks and logistics hubs can lower transportation-related delays by approximately 30–40%, based on regional logistics performance indicators.
3. Stakeholder Coordination: Regular joint planning meetings, shared risk management frameworks, and structured communication protocols are vital to mitigating fragmentation in SCM processes.
4. Digital Technology Adoption: Tools such as Building Information Modeling (BIM), cloud-based project management software, and IoT-enabled tracking systems have the potential to reduce project costs by 10–15% and cut lead times by 20% through improved visibility and data-driven decision-making.

However, the scalability of digital tools remains a challenge, especially for small- and medium-sized firms facing limited access to infrastructure, training, and funding. Addressing this will require public-private partnerships focused on digital literacy, cost-sharing models, and localised software development tailored to Nigeria's construction environment.

## Recommendations

- Evaluating the real-time effectiveness of specific digital SCM platforms (e.g., BIM, ERP, and blockchain tools) across various project scales;
- Assessing the economic and logistical variations of SCM performance across Nigeria's six geopolitical zones;
- Investigating long-term return-on-investment (ROI) of digital integration for both small and large construction firms.

By implementing these recommendations, Nigeria's construction sector can enhance supply chain resilience, reduce systemic inefficiencies, and foster sustainable infrastructure development aligned with national growth objectives.

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