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The Prospects of E-Commerce and Cashless Policy Technologies in the Nigerian Construction Industry

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ABSTRACT

This study examines the combined prospects of e-commerce technologies and Nigeria's cashless policy within the construction industry, focusing on stakeholders in the Federal Capital Territory (FCT), Abuja. A descriptive survey design was used to assess: (i) the level of awareness of e-commerce adoption, and (ii) the benefits of integrating e-commerce with cashless payment systems. A sample of 260 respondents (152 consultants, 108 contractors) was drawn from a population of 400 through purposive and simple random sampling. Data were collected with a validated questionnaire (Cronbach's α = 0.78) and analysed using mean and standard deviation. Results show high awareness of e-commerce and cashless policy initiatives, with stakeholders recognizing benefits such as improved transparency, reduced corruption, faster procurement cycles, and enhanced financial traceability. However, infrastructural gaps, digital literacy challenges, and partial reliance on cash limit full adoption. The study recommends among others that there is a need to develop sector-specific digital platforms that integrate procurement, project management, and payment systems.

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INTRODUCTION

The Nigerian construction industry has historically relied heavily on cash-based transactions, particularly in procurement, labour payments, and site-level financial operations. With increasing digitization of global business environments, the adoption of e-commerce technologies and cashless payment systems presents opportunities to improve efficiency, accountability, and transparency. According to the Central Bank of Nigeria (CBN) (2024), the cash policy was introduced for a number of key reasons which includes, driving development and modernization of the country's payment system in line with Nigeria's Vision 2020 goal and to reduce the cost of banking services (including cost of credit) and drive financial inclusion by providing more efficient transaction options and greater reach; limit high cash usage in the formal sector and thereby improve the effectiveness of monetary policy in managing inflation and driving economic growth (Oshodi, Oladokun, & Adeleke, 2022). The CBN designed the cashless policy to reduce reliance on physical cash, modernize payment systems, and promote financial inclusion especially in e-commerce.

E-Commerce

E-commerce applications in areas such as online procurement, digital bidding, and electronic supply chain management would further complement these objectives by enabling faster and more traceable transactions. However, adoption in the construction sector remains inconsistent due to infrastructural constraints, knowledge gaps, and entrenched informal practices regards cashless policy payment systems in Abuja's construction industry. E-commerce in construction enhances efficiency by reducing paper-based transactions, improving communication between contractors and suppliers, and fostering better inventory and cost

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management (Olapade & Fagbenle, 2023). The seamless execution of payment systems and integration of project management processes forms a synergy between e-commerce and the cash-less policy.

Cashless Policy

The cashless policy, introduced by the Central Bank of Nigeria in 2012, aims to modernize payment systems, reduce corruption, increase transaction efficiency, and promote financial inclusion (Central Bank of Nigeria, CBN, 2020). According to Ogunleye and Adeyemi (2021), the policy's main thrust is to promote the use of electronic channels such as mobile banking, digital transfers, Automated Teller Machines (ATMs), internet transfers, debit/credit cards, Point of Sale (POS) systems, internet banking and online payments for e-commerce in construction site.

STATEMENT OF THE PROBLEM

Despite national efforts to implement the cashless policy, the Nigerian construction industry exhibits inconsistent adoption. Frequent cash transactions still dominate procurement and labour payments, especially at the site level. Limited technological infrastructure, poor digital literacy, and resistance from informal sector participants hinder progress. Abuja, as a major construction hub, lacks sector-specific empirical studies evaluating the synergy between e-commerce adoption and cashless operations.

Research Questions

1. What is the current level of awareness of e-commerce adoption in the Nigerian construction industry?
2. What are the perceived benefits of integrating e-commerce with cashless systems in the Nigerian construction industry?

METHODOLOGY

This study adopted a descriptive survey design suitable for collecting data without manipulating variables. The population consisted of 400 registered construction stakeholders (250 consultants and 150 contractors) in Abuja. A combination of purposive sampling (to select registered firms) and simple random sampling (to select individuals within firms) was employed, yielding a sample of 260 respondents.

A structured, validated questionnaire (Cronbach's alpha = 0.78) measured awareness and perceived benefits using a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). Data were analyzed using mean, frequency, and standard deviation. A cut-off mean of 2.50 guided decisions. Limitations of this method include reliance on self-reported data and geographic restriction to Abuja, which may affect generalization.

RESULTS

Research Question 1:

What is the current level of awareness of e-commerce adoption in the Nigerian construction industry?

Table 1: The Level of Awareness of E-Commerce Adoption

Item	Statement	Mean	SD	Decision
1	Awareness of CBN cashless policy initiative	4.32	0.71	Agree
2	Awareness of e-commerce concepts in construction	4.18	0.79	Agree
3	Ability to identify e-commerce applications in construction	3.97	0.84	Agree
4	Availability of information about e-commerce through professional channels	3.85	0.92	Agree

Grand Mean = 4.08

Table 1 indicates that construction stakeholders demonstrate high awareness of the cash-less policy with a mean score of 4.2. The mean score of 4.18 is recorded for the category of those aware of what "e-commerce" means in the context of the construction industry The list is the Information about e-commerce adoption in

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construction is readily available through professional channels with mean of 3.85.

Research Question 2**:** What are the perceived benefits of integrating e-commerce with cashless systems in the Nigerian construction industry?

Table 2: The perceived benefits of e-commerce integration

Item	Statement	Mean	SD	Decision
1	E-commerce improves price transparency and competitiveness	4.37	0.61	Agree
2	E-commerce reduces procurement lead time	4.29	0.66	Agree
3	E-commerce enhances project efficiency and timely delivery	4.41	0.58	Agree
4	E-commerce improves record-keeping and traceability	4.22	0.72	Agree

Grand Mean = 4.32

Table 2 shows that E-commerce improves price transparency and competitive pricing for materials and services with a mean score of 4.32. It also shows that E-commerce reduces procurement lead time for construction materials on a score of 4.29. The stakeholders perceived significant benefits from cash-less policy adoption, particularly in terms of accountability, reduced corruption, speed, and better record management on a score of 4.22. Nevertheless, E-commerce improves record-keeping and traceability of purchases with a score of 4.22.

DISCUSSION OF FINDINGS

The study found high awareness of both e-commerce applications and the cashless policy among construction stakeholders in Abuja. This aligns with previous research indicating improved awareness due to national sensitization campaigns. Central Bank of Nigeria (2022) reports that intensive sensitization campaigns have improved stakeholders' knowledge across sectors. Similarly, Ezeokoli et al. (2020) also found high awareness in Anambra State's construction sector. Stakeholders reported strong recognition of benefits such as improved transparency, reduced corruption risks, streamlined procurement processes, and enhanced documentation. These findings corroborate Adebisi & Akinola (2021), who reported improved accountability in public construction projects, emphasizing the transformative potential of digital finance and digital procurement in construction. Despite high awareness, actual usage is limited by digital infrastructural weaknesses, cost of transactions, inconsistent network connectivity, and reluctance among informal workers.

CONCLUSION

The combined adoption of e-commerce technologies and cashless payment systems presents significant opportunities for improving transparency, accountability, and efficiency in Nigeria's construction industry. While awareness is high, full implementation is hindered by infrastructural, financial, and human-capacity constraints. Targeted improvements in digital infrastructure, capacity building, and policy consistency are necessary to maximize the benefits of digital transition.

RECOMMENDATIONS

The following recommendations were made by the researcher based on the conclusion drawn from the findings of the study that;

1. Strengthen collaboration between CBN and construction regulatory bodies to deliver continuous training and sensitization on digital payment and e-commerce tools.
2. Improve ICT infrastructure to support reliable internet connectivity essential for digital procurement and payments.
3. Encourage small and medium-sized construction firms to adopt cashless and e-commerce systems through incentives, training, and simplified digital tools.
4. Develop sector-specific digital platforms that integrate procurement, project management, and payment systems.

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