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GREEN FINANCE AND SUSTAINABILITY AS MEDIATED BY THE INNOVATION CAPABILITY OF FINANCIAL INSTITUTIONS

Agbayekhai, Michael Oshioke

Department of Business Administration, Veritas University, Abuja

ORCID ID: 0009-0008-9733-0570

mikeagbas123@gmail.com

Abstract

This research investigates the influence of green finance on sustainability and examines the mediating role of innovation capability among financial institutions in Nigeria. Grounded in the dynamic capabilities theory, the study adopts a quantitative cross-sectional design. Data were obtained from 70 senior management personnel across 14 commercial banks in Nigeria, selected through purposive sampling. Data were analysed using descriptive statistics and multiple regression analysis, and the hypotheses were tested with Hayes' PROCESS (Macro 3.5) to examine both direct and indirect effects. The findings reveal that green finance has a significant positive impact on sustainability and promotes innovation capability. Furthermore, the findings indicate that innovation capability positively influences sustainability and partially mediates the relationship between green finance and sustainability. The study concludes that green finance contributes to sustainability, especially when supported by strong innovation capabilities. Consistent with the dynamic capabilities theory, the findings underscore the need for supportive innovative capabilities in banks and for adopting flexible strategies and implementing supportive policies to maximize the benefits of green finance. These insights are valuable for policymakers, bank executives, and environmental experts, emphasizing the role of green finance and innovation in promoting sustainable development in developing economies.

Keywords: Green Finance, Innovation Capability, Sustainability, Financial Institutions.

Introduction

Financial institutions are essential to economic growth and development. They facilitate financial intermediation, extend credit to the productive sectors, and support the government in implementing its fiscal policies, and contribute to currency and financial stability. Through these functions, they are a catalyst for advancing sustainability and facilitating the transition to a greener economy. However, financial institutions in developing countries such as Nigeria face significant operational

and regulatory challenges, including weak technological adoption, inadequate infrastructure, limited institutional capacity, and regulatory inefficiencies, which may limit their participation in green financing (Rupsha, 2022). These barriers can also threaten the adoption of eco-friendly strategies and investments, initiatives and financial practices necessary for transitioning to a climate-resilient and low-carbon economy.

Green finance is a new monetary term that explains a form of financing that integrates economic benefits with ecological conservation (Zhou et al., 2020). Green finance is a major issue, especially in developing economies (UNEP Finance Initiative, 2021). Green financing attracts several benefits, including supporting environmentally friendly projects, enhancing the reputation and brand values of firms, and assisting firms in mitigating financial risks (Li et al., 2017). Despite the rising global attention, the adoption of green finance practices among Nigerian financial institutions remains uneven and relatively underdeveloped, constrained by regulatory, institutional and technical capacity, as well as low levels of green investment (Ngwenya & Simatele, 2020). Similar challenges have been reported across Sub-Saharan Africa, where financial, regulatory and institutional barriers continue to impede the expansion of green finance adoption and realisation of sustainability outcomes (Manasseh et al., 2026).

Although prior research has explored green finance with other organizational outcomes such as performance (Ngwenya & Simatele, 2020), sustainable financing (Raihan & Khan, 2018), and environmental performance (Tan et al., 2025; Hoque et al., 2019). There have been limited studies that have accounted for the direct contribution of green finance to sustainability outcomes. Inconsistencies also exist amongst previous studies that have also examined the effect of green finance on organizational outcomes (Lei & Yu, 2023).

Innovation capability represents an essential resource at the organization's disposal, which enables it to develop new processes and technologies, improve market positioning, and enhance sustainability performance (Babarinde, 2021). In developing economies, it may also help firms overcome operational, infrastructural and resource constraints that limit the effective adoption of green finance (Khan et al., 2022; Rosenbusch et al., 2011). Although previous studies have linked innovation capability to sustainability and organisational performance (Hanaysha et al., 2022; Ibrahim & Isichei, 2023), evidence within financial institutions, particularly banks, remains limited. While innovation capability fosters organizational sustainability (e.g., Ibrahim & Isichei, 2023), limited knowledge exists regarding how green finance and innovation capability jointly stimulate organizational sustainability in banks. Ibrahim and Isichei (2023) investigated the mediating effect of innovation capability in the relationship between entrepreneurial finance and sustainability among nascent firms. This suggests that the potential mediation role of innovation capability in the relationship between green finance and the sustainability of banks is underexplored. The current study addresses this gap by examining the direct effect of green finance on sustainability and how innovation capability mediates this relationship in Nigerian commercial banks. Grounded in Dynamic Capabilities Theory, the study contributes to the literature and how financial resources and organisational capabilities jointly drive sustainability outcomes in emerging economy contexts.

Theoretical Foundation and Hypotheses Development

Theoretical Framework: Dynamic Capabilities Theory

The current study explored green financing of banks and its far-reaching impact on sustainability through the Dynamic Capabilities Theory (DCT). The DCT emphasizes an organization's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece, 2007). The theory suggests that firms that fail to continuously develop new capabilities and proactively adapt to changes in the dynamic environment may struggle to sustain their operations and remain competitive.

From this standpoint, the adoption of green finance can assist banks in enhancing both sustainability and organizational performance. However, reliance on traditional banking practices alone may limit their ability to fully realize the benefits of green finance. Instead, banks require rare and dynamic capabilities that enable them to effectively leverage emerging opportunities and respond to challenges associated with sustainability and green financing (Zhang et al., 2022; Boffo & Patalano, 2020).

Consistent with the tenets of the DCT, we argue that banks, particularly those operating in developing economies, face constraints such as limited technological capacity, manpower shortages, and inadequate infrastructure, which hinder the effective implementation of green finance initiatives. Therefore, relying on their traditional banking approaches might not foster sustainability; thus, they need to adopt innovative approaches, new competencies, technologies, and organizational capabilities and processes that could drive their innovation capability in exploring green finance efforts towards sustainability. Consequently, drawing from DCT, this study posits that banks require dynamic and innovative capabilities to effectively implement green finance strategies and achieve sustainability. Although DCT was initially developed for smaller firms operating in rapidly changing environments, it has also been widely applied to larger organizations (Teece, 2014), including financial institutions. Therefore, innovation capability is conceptualized in this study as a key dynamic capability through which banks can transform green finance initiatives into improved sustainability performance.

Hypothesis Development

Green Finance and Bank Sustainability

With the ever-changing nature of the global market space orchestrated by issues bordering on the sustainability of the environment, financial institutions are redesigning their operational and financial intermediation strategies and policies to align with sustainability objectives. According to Zhou et al. (2020), green finance includes various financial mechanisms, such as green bonds and green loans, that support environmental protection through the allocation of financial resources towards environmentally friendly projects and investments.

Empirical evidence suggests that green finance contributes significantly to decarbonization and carbon-emission reduction through green technological innovation, increased social investment, and renewable energy development (Ma & Fei, 2024; Mamun et al., 2022). Similarly, other studies indicate that green finance facilitates the transition to a low-carbon economy and enhances environmental sustainability (Xiong et al., 2025; Huang et al., 2024).

Although much of the extant literature has focused on environmental sustainability, scholars increasingly argue that the benefits of green finance may also extend to organizational sustainability, particularly within financial institutions (Kumar et al., 2024; Gidage & Bhide, 2025). For example, banks that adopt green finance mechanisms may experience lower operational risks, improved resource efficiency, enhanced corporate reputation, and reduced compliance costs, all of which contribute to their long-term sustainability (Chen et al., 2022).

Despite these insights, empirical evidence on the direct effect of green finance on banks' sustainability, especially in developing economies, remains limited and fragmented. Studies by Akomea-Frimpong et al. (2021) found that most banking-sector studies have focused on green financial products, regulatory issues, and drivers of green finance adoption, with relatively limited attention given to sustainability outcomes. Mir and Bhat (2022) also noted the lack of a comprehensive framework linking green finance to organizational sustainability.

Drawing on Dynamic Capabilities Theory, green finance can be viewed as a strategic resource that enables banks to adapt to evolving environmental and regulatory market conditions. By integrating sustainability considerations into their financial operations, banks can develop capabilities that enhance competitiveness and long-term viability. Therefore, it is expected that the adoption of green finance will contribute positively to sustainable organizational outcomes. Thus, this study proposes that:

H1: Green finance has a significant positive effect on bank sustainability.

Evidence from previous studies has shown that green finance fosters positive organizational outcomes (Gianfrate & Peri, 2019), partly because it encourages organizations to adopt entrepreneurial and strategic oriented policies and strategics. Green finance provides resources for environmentally-friendly projects, support the development of low carbon technologies, mobilisation of capital for low-carbon projects, and promote sustainable innovation. As organisation respond to sustainability-related constraints, they may be obligated to develop innovative products, services, policies and processes that enhance long-term sustainability. Consequently, challenges associated may with the adoption of green finance, may incline them to develop and adopt innovative methods to achieve sustainability objectives.

Empirical evidence supports this assertion. For example, Chang et al. (2024) reported that green finance policies significantly improve firms' green innovation performance, especially among firms that rely heavily on external financing, likewise, Wang et al. (2023) found that green finance promotes sustainable innovation through increased research and development investments. Similarly, Ma and Fei (2024) showed that green finance stimulates green technological innovation, thereby enhancing firms' capacity to develop innovative solutions to environmental challenges.

Innovation capability can contribute to explaining a variety of organizational behaviours, strategic actions and entrepreneurial orientation (Teece, 2014). For instance, business firms with strong innovation capabilities can be more competitive and better positioned to achieve superior organizational performance, whereas those that do not possess such capabilities may experience poor performance. Helfat and Peteraf (2003) explained that most failures in businesses and many stagnation and poor business performance are linked to a lack of innovation capability. As Vladić et al. (2021) noted, innovation capability may have a direct and positive influence on firms' engagement, commitment, and motivation, which may lead to their sustainability. Consistent with this view, Sarfraz et al. (2022) reported that innovation capability improves sustainable performance through green process innovation, while Somwethee et al. (2023) found that innovation capability positively influences sustainable organizational performance. Similarly, Al-Kalouti et al. (2020) found that innovation capability significantly enhances both financial and non-financial performance in banks and serves as a source of sustainable competitive advantage.

Despite this growing body of evidence, research evidence on the relationship between green finance and innovation capability, as well as the effect of innovation capability on bank sustainability, remains underexplored, particularly in developing economies such as Nigeria. Consequently, this study investigates these relationships within the banking sector

Hypothesis 2. Green finance is directly and positively associated with innovation capability

Hypothesis 3. Innovation capability will have a direct and significant effect on sustainability.

The relationship between green finance and sustainability via innovation capability

Innovation capability refers to those essential resources within the ambit of the organization that provide them a competitive edge in their industry (Ibrahim & Isichei, 2023; Babarinde, 2021).

Innovation capability also involves the organization's ability to adopt entrepreneurial activities to achieve its set goals (Nambisan, 2017). Organizations adopting green finance can positively increase their chances of sustainability when they can adopt and utilize innovation capability. For example, Ibrahim and Isichei (2023) found that nascent entrepreneurs who have innovation capability have higher tendencies of sustainability than those who do not. There is also evidence showing that innovation capability positively impacts organizational sustainability (e.g. Hanaysha et al., 2022; Lai et al., 2015).

Similarly, Yan et al. (2022) found that green finance and green innovation jointly enhance sustainability performance in banks, suggesting that innovation-related capabilities play an important role in translating green finance initiatives into sustainability outcomes. Likewise, Sarfraz et al. (2022) reported that innovation capability improves sustainable performance through green product and process innovation, providing empirical support for the mechanism linking financial resources to sustainability outcomes.

Notwithstanding, none of these studies have investigated the mediating role of innovation capability on the nexus between green finance and sustainability. Although Ibrahim and Isichei (2023) examined the mediating role of innovation capability on entrepreneurial finance on sustainability, the study was on nascent ventures and not on financial institutions like banks. Thus, our knowledge about the mediating role of innovation capability on the relationship between green finance and the sustainability of banks remains limited. However, since innovation capability improves organizational sustainability, we argue that innovation capability might improve the effect of green finance on the sustainability of organizations. We, therefore, hypothesize that:

Hypothesis 4. Innovation capability mediates the relationship between green finance and a bank's sustainability.

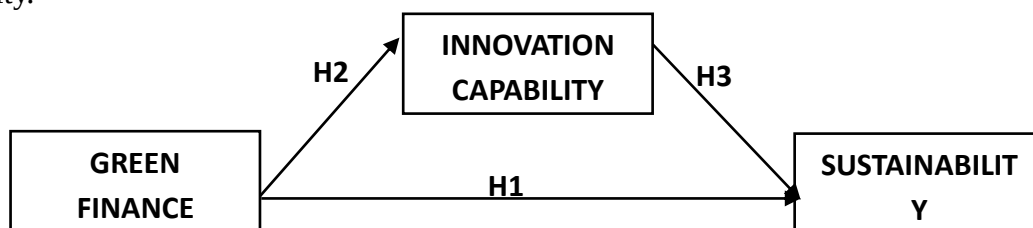


Figure 1: Conceptual Model
Source: Authors' design (2026)

Methodology

All the bankers involved in the current study were senior management staff of banks that were within the ranks of assistant general managers (AGM), general Managers (GM), and executive directors (ED). The choice of the top-level employees was due to their strategic decision-making roles within the banks and their knowledge of green finance, sustainability, and innovation capability. As of 31st March 2024, there were twenty (20) licensed commercial Banks operating in Nigeria, out of which 14 banks reported sustainability initiatives in their annual reports. The study population comprises 757 senior management staff across these fourteen (14) banks.

Sample and procedure

The current research adopted a purposive sampling technique because not all commercial banks in Nigeria had adopted the Environmental, Social and Governance (ESG) sustainability practices. Consequently, the samples were drawn from the fourteen (14) commercial banks that reported ESG sustainability in their operations. A total of 70 senior management staff were drawn from the total population.

Although the sample size is relatively modest, it is considered adequate for bootstrap-based mediation analysis. Hayes (2018) noted that bootstrapping procedures for mediation testing do not rely on large-sample normality assumptions and are capable of providing robust estimates of indirect effects. Notwithstanding, the small sample size may reduce statistical power and limit the generalizability of the findings. Therefore, the results should be interpreted cautiously and validated in future studies using larger samples.

We assured the respondents' anonymity, privacy, and voluntary participation. We also informed them that no personally identifiable information was collected, and that data would be used solely for academic purposes and reported only in aggregate form. Copies of the questionnaire for the study were distributed online through Google Forms. We decided on the online approach because of the difficulty in accessing these senior staff.

Measurements of Scales

Green finance practices:

This study adopted a unidimensional approach in measuring green finance. Key indicators such as knowledge and awareness of green finance and its products, the volume of green loans, issuance of green bonds, adoption of environmental risk management systems, and investments in sustainable projects such as renewable energy were considered. The items were adapted from established scales, literature and contextualized to reflect the operational realities (Khan & Shahid, 2026; Ahmad & Rahman, 2024). The instrument was further reviewed by experts in sustainability, banking, and management research and pretested to ensure content validity, clarity, and contextual relevance. In all, a total of four (4) items made up the Green Finance scale, and the responses were measured on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The Cronbach's alpha was 0.840

Sustainability outcomes:

This study utilized a unidimensional construct in assessing sustainability as well. This was measured using indicator items such as environmental performance (e.g., carbon footprint, GHG, online banking, energy efficiency, use of papers), social impact (e.g., diversity, adoption of remote work methods for meetings, community development initiatives, financial inclusion), financial resilience (e.g., profitability, asset quality), and corporate social responsibility (CSR). The items were adapted from the scale developed by Baxter and Chipulu (2023) and contextualised to the banking sector in developing economies. In all, a total of three (3) items made up the sustainability scale, and the responses were also measured on a five-point Likert. The Cronbach's alpha was 0.925, demonstrating excellent internal consistency. The use of three indicators is consistent with SEM recommendations that permit latent constructs to be represented by a minimum of three reliable and valid indicators.

Innovation Capability:

We used the 5-item innovation capability scale, adopted and adapted from Ibrahim and Isichei (2023), originally developed based on YuSheng and Ibrahim (2020). An example of the items is, "Opportunities that are useful to the growth of my business have been taken to transform the way my business is carried out. "I have been able to identify new ideas that will help the growth of my business". The scale was adopted because it has been previously validated and has strong psychometric properties in measuring innovation capability

Their analysis produced a high internal reliability α of 0.895. However, ours was 0.892.

Table 1: The Measurement scale

Confirmatory Factor Analysis			Convergent and Discriminant Validity Check				Reliability Test	
Variables	(Items)	Loadings	AVE	DV	MSV	MaxR(H)	CR	Cronbach's Alpha
Green Finance	GNF1	0.80						
	GNF2	0.83						
	GNF3	0.89						
	GNF4	0.84	0.705	0.839	0.013	0.910	0.905	0.840
Innovation Capability	INC1	0.95						
	INC2	0.89						
	INC3	0.90						
	INC4	0.96	0.856	0.925	0.510	0.966	0.960	0.925
Sustainability	SUS1	0.88						
	SUS2	0.89						
	SUS3	0.91	0.795	0.892	0.510	0.922	0.921	0.892

Note(s): AVE = Average variance extracted, DV = Discriminant Validity, CR = Composite Reliability, MSV = Maximum Shared Variance

Overall measurement model fit

The general model adaptability testing was carried out using AMOS 24.0, and the Confirmatory Factor Analysis (CFA) was conducted. The overall measurement model consists of three hidden variables representing green finance, innovation capacity and sustainability. The results indicate strong incremental fit, with $\chi^2 = 74.5$; $df = 41$; $\chi^2/df = 1.82$; GFI=0.855; CFI=0.95; AGFI=0.77; TLI=0.94, all of which exceed recommended thresholds and suggest satisfactory comparative model fit.

However, absolute fit indices present a weaker pattern of fit, with GFI = 0.855, AGFI = 0.77, RMSEA = 0.11, and RMR = 0.06, indicating that the model does not meet all conventional cut-off criteria for RMSEA and AGFI. Therefore, following Hair et al. (2010), the model exhibits a mixed pattern of fit, indicating strong incremental fit but weaker absolute fit, and is therefore acceptable with caution.

Convergent validity and discriminant validity

To ensure that the current study factor loads are adequate, the researcher ranked the coefficient at 0.50. However, all indicators with an acceptable value of 0.6 exceed their respective constructs, indicating that the load of indicator factors is significant. The average variance extracted (AVE) is 0.50, so we also established convergence validity (CV). In addition, discriminant validity (DV) was established, since the AVE square root is greater than the correlation of the CFA latent variable (Fornell & Larcker, 1981) see Table 1.

Composite reliability and Cronbach's alpha reliability

Hair et al. (2010) state that the scale is reliable if the alpha and composite reliability of Cronbach ≥ 0.70 and ≥ 0.60 , and the factor load should be 0.50. Based on the results of the CFA analysis as a whole, these criteria have been met (Table 1).

Results

Descriptive

Table 2 shows the mean, SD, and bivariate correlations among the variables. The results show that green finance is positively and significantly associated with sustainability ($r = 0.403$, $p < 0.01$). Green finance also exhibits a positive relationship with innovation capability ($r = 0.127$); however, this relationship is not statistically significant at the 0.01 level. Innovation capability is positively and significantly associated with sustainability ($r = 0.505$, $p < 0.01$). The non-significant correlation may differ from the structural model result, which reflects the unique effect of green finance after accounting for shared variance among the variables

Table 2: Mean, standard deviation and bivariate correlations among variables

Variables	Mean	SD	1	2	3	4	5
Position	1.56	.500	1				
Gender	1.56	.500	.421**	1			
Green Finance	17.17	2.787	-.069	.026	1		
Innovation Capability	13.60	5.913	.674**	.223**	.127	1	
Sustainability	10.89	3.744	.437**	.537**	.403**	.505**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Hypotheses testing

The hypotheses of this study were tested using the Hayes PROCESS Macro 3.5 (Model 4 – Hayes, 2018) by applying bias-corrected 5,000 resample bootstraps to determine the direct and indirect effects (Hayes, 2018). Thus, Figure 2 shows the results of the analysis of direct and total effects, and Table 3 shows the analysis of the indirect effect.

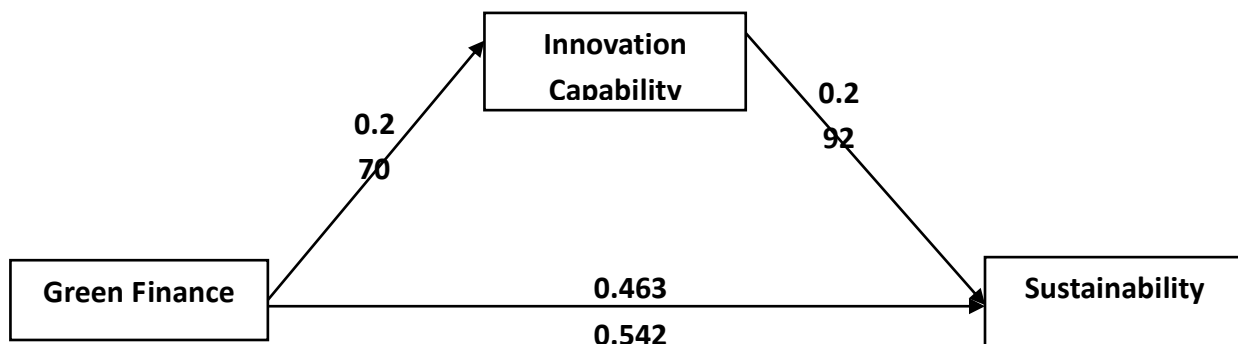


Figure 2. Results of the structural model

Source: Authors' design (2026)

Influence of Green Finance on Sustainability

Influence of Green Finance on Sustainability

The regression model (Figure 2) provided evidence to support hypothesis 1. Green Finance has a statistically significant direct relationship with sustainability ($\beta = 0.463$, $p < 0.001$). This coefficient reflects the direct effect (c') of green finance on sustainability within the path model. Also, the total effect (path c) of green finance on sustainability shows a significant positive relationship ($\beta = 0.542$, $p < 0.001$). therefore Hypothesis 1 was supported.

Impact of Green Finance on Innovation Capability

Concerning hypothesis 2, the results indicate that green finance is a significant positive predictor of innovation capability ($\beta = 0.270$, $p < 0.001$). This indicates that hypothesis 2 was supported. Although the bivariate correlation was positive but not statistically significant ($r = 0.127$), the path coefficient reflects the unique effect of green finance after accounting for shared variance among the study constructs.

Table 3: Mediation analysis

Path			Indirect effect	Bias-corrected 95% CI	
				Upper	Lower
Green Finance	→ Innovation Capability	→ Sustainability	0.0789	0.0610	0.2373

Source: PROCESS output

Innovation capability also positively and significantly influenced sustainability ($\beta = 0.292$, $p < 0.001$), providing support for Hypothesis 3

The influence of green finance on sustainability via the innovation capability (indirect effect)

For Hypothesis 4, we tested the influence of green finance on sustainability through innovation capability using bootstrapping. As shown in Table 3, the results indicate a positive and significant indirect effect ($\beta = 0.0789$), with a 95% confidence interval excluding zero (LL = 0.0610, UL = 0.2373), in line with Hayes (2018). Accordingly, innovation capability mediates the relationship between green finance and sustainability, supporting Hypothesis 4. Given that both the direct effect ($\beta = 0.463$, $p < 0.001$) and the indirect effect are significant, the findings indicate partial mediation.

Discussion

The research examined the direct effect of green finance on sustainability and the mediation effect of innovation capability in Nigerian commercial banks. It posits that green finance enhances sustainability objectives, with innovation capability amplifying this positive impact.

Despite limited empirical integration of these constructs in Nigeria, the findings provide relevant evidence within an emerging economy context. We found that green finance has a significant (positive) effect on sustainability, consistent with Ma et al. (2023) and Ibrahim and Isichei (2023). This suggests that banks adopting green finance are more likely to achieve sustainability, although outcomes may depend on institutional readiness, the maturity of ESG practices, and regulatory support. While green finance can improve competitiveness and performance, it may also expose banks to regulatory and reputational and risks (Delmas & Burbano, 2011; Boffo & Patalano, 2020). Furthermore, the results indicate that innovation capability positively influences sustainability in financial institutions. This corroborates the findings of Ibrahim and Isichei (2023), Hanaysha et al. (2022), and Babarinde (2021), who emphasised the role of innovation capability in improving firm performance and sustainability. Nevertheless, this effect is not uniform across firms, as differences in absorptive capacity and innovation infrastructure may shape outcomes.

Finally, innovation capability partially mediates the relationship between green finance and sustainability, demonstrating both direct and indirect effects. This is consistent with Kim and Mauborgne (2005), who posit that innovation-driven capabilities enhance organisational success and persistence. The result also reiterates the importance of innovation capability in terms of fostering sustainability. Since innovation capability strengthens banks' appreciation of green finance, such financing encourages banks to pursue their sustainability objectives. However, given the small sample size and cross-sectional design, the mediation results should be interpreted as

indicative rather than definitive evidence. Although statistically significant, the indirect effect may be sensitive to sample variation, and future studies with larger samples are recommended to validate the robustness of this relationship.

Drawing on DCT, the findings suggest that organizations can enhance sustainability by adopting green finance to develop innovative capabilities. However, in emerging economies such as Nigeria, institutional and regulatory constraints may moderate the transformation of financial resources into dynamic capabilities and sustainability outcomes.

Conclusion and implications for theory and practice

Conclusions.

Drawing on Dynamic Capabilities Theory, this study examined the relationships among green finance, innovation capability, and sustainability within Nigerian commercial banks. The results demonstrate the significance of green finance as a resource that fosters sustainability, particularly for commercial banks. The results of the study have implications for top and senior managers in the financial sectors, environmental experts, policymakers, employees in Nigeria and other stakeholders. The study also presents significant theoretical and practical insights. This contributes to how green finance can improve sustainability and extend the theory. The study offers empirical evidence that green finance influences sustainability (both directly and indirectly through innovation capability). The findings show that top and senior bank managers can utilize green finance to explore various growth and expansion opportunities. Also, bank executives can boost the sustainability of their institutions by adopting financial sources that encourage less carbon emission.

Recommendations

Some key recommendations emerged from this study. First, banks and stakeholders should expand the adoption of green financial instruments, including loans and bonds tailored for renewable energy, sustainable agriculture, and waste management projects. Also, banks need to initiate products to further expand access to green financial services through mobile and online banking and digital platforms, ensuring wider participation from businesses and individuals. Strengthening partnerships with international organizations can provide greater access to expertise, funding, and best practices in green finance in emerging economies. Furthermore, integrating Environmental, Social, and Governance (ESG) criteria into financial strategies, setting clear sustainability targets, and monitoring and reporting will reinforce banks' commitment to sustainability. Educational campaigns on the benefits of green finance, collaboration with policymakers for incentives and regulations, and developing metrics to assess green finance effectiveness will further support sustainability efforts.

Limitations and Future Directions

While this study provides valuable insights, certain limitations should be acknowledged. The sample consists exclusively of senior executives from Nigerian commercial banks; in addition, the sample size of 70 respondents may limit statistical power and generalisability of the findings. Furthermore, the geographical focus on Nigeria presents constraints in terms of applying these results to other contexts with different regulatory environments. Also, there is the limitation of self-reporting bias on the part of respondents, which may affect the reliability of responses received.

Notwithstanding, this research recommends that future studies should use larger and more diverse samples across different financial institutions and employ longitudinal designs to better establish causal relationships among the variables. Studies should be carried out within Africa and other climes, where issues concerning green or environmental finance have not been fully adopted. Finally, future studies could explore other mediating and moderating variables that could influence the relationship between green finance and sustainability, such as government policies, consumer

behaviour, and technological advancements, to further enhance the understanding of green finance and sustainability.

Declarations

Ethical Approval and Consent to Participate

Ethics approval not required

Consent of Publication

Not Applicable

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