

| RESEARCH ARTICLE**Paper Title:****INFLUENCE OF ENTREPRENEURIAL ECOSYSTEM ON THE INNOVATION
PERFORMANCE OF SMES IN ABUJA, NIGERIA****Lawal Nura Ali**

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| ABSTRACT

This study examined the influence of entrepreneurial ecosystem on the innovation performance of SMEs in Abuja, Nigeria. A quantitative research design was employed, using a structured questionnaire to collect primary data from SME owners and managers across major commercial zones. The population consisted of 2,900 staff, and Using Taro Yamane's formula, a sample size of 421 was determined, with 379 valid responses collected, yielding a 90% response rate.

| KEYWORDS

Entrepreneurial Ecosystem, Access to Finance, Entrepreneurial Networking, Support Systems, Innovation Performance, Product Innovation, Process Innovation, SMEs, Abuja, Nigeria.

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This study examined the influence of entrepreneurial ecosystem on the innovation performance of SMEs in Abuja, Nigeria. A quantitative research design was employed, using a structured questionnaire to collect primary data from SME owners and managers across major commercial zones. The population consisted of 2,900 staff, and Using Taro Yamane's formula, a sample size of 421 was determined, with 379 valid responses collected, yielding a 90% response rate. Data were analyzed using descriptive statistics and simple linear regression via SPSS Version 27.0. Findings revealed that access to finance has a statistically significant positive effect on product innovation. Similarly, entrepreneurial networking and support systems significantly influenced process innovation. The study concluded that both financial and non-financial ecosystem elements are critical drivers of innovation performance among SMEs in Abuja. It recommends that policymakers enhance access to credit through targeted financing schemes, while strengthening institutional support such as incubators, mentorship programs, and business associations. By integrating financial inclusion with capacity-building initiatives, stakeholders can foster a more resilient and innovative SME sector, contributing to economic diversification and sustainable development in Nigeria's capital city.

Introduction:-

Entrepreneurial ecosystems represent a complex interplay of interconnected elements including institutions, policies, finance, human capital, networks, and culture that collectively foster entrepreneurial activity and firm-level innovation (Stam & van de Ven, 2021). At their core, these ecosystems provide the enabling environment within which entrepreneurs access resources, collaborate, and develop novel solutions to market challenges. Innovation performance, particularly among Small and Medium Enterprises (SMEs), is widely recognized as a critical determinant of competitiveness and long-term sustainability in dynamic markets (OECD, 2023). Product innovation (the introduction of new or significantly improved goods or services) and process innovation (the implementation of new or improved production or delivery methods) serve as key indicators of this performance (Eurostat, 2022).

Globally, empirical evidence underscores the pivotal role of entrepreneurial ecosystem components in enhancing SME innovation. Access to finance encompassing formal credit, venture capital, government grants, and informal funding enable

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firms to invest in research, development, and market testing (Beck et al., 2022). Similarly, entrepreneurial networking and support systems including incubators, accelerators, industry associations, and mentorship platforms facilitate knowledge exchange, reduce uncertainty, and stimulate collaborative innovation (Autio et al., 2018). Countries with mature ecosystems, such as the United States, Germany, and Singapore, consistently outperform others in SME-driven innovation metrics, largely due to robust institutional support and inclusive financial infrastructure (Global Entrepreneurship Monitor [GEM], 2023).

In the West African subregion, however, SMEs operate within comparatively underdeveloped entrepreneurial ecosystems. Despite contributing over 80% of employment and nearly 50% of GDP in the region (West African Monetary Zone [WAMZ], 2022), SMEs face persistent constraints in accessing finance and structured support networks. High collateral requirements, short loan tenures, and limited venture capital restrict investment in innovation (African Development Bank [AfDB], 2023). Moreover, weak institutional frameworks and fragmented entrepreneurial networks hinder knowledge spillovers and collective learning (Osei-Bonsu & Amankwah-Amoah, 2022). Consequently, innovation performance among West African SMEs remains low, with most firms engaged in incremental rather than radical innovation (UNCTAD, 2023).

Nigeria, as Africa's largest economy and the most populous nation in West Africa, exemplifies both the potential and the challenges facing SME-driven innovation. SMEs constitute approximately 96% of all businesses and employ over 60% of the national workforce (National Bureau of Statistics [NBS], 2023). Yet, their innovation capacity is hampered by systemic deficiencies in the entrepreneurial ecosystem. The Central Bank of Nigeria (CBN, 2023) reports that less than 25% of SMEs have access to formal credit, with many relying on personal savings or informal lenders. Furthermore, while numerous government and private-sector initiatives such as the Bank of Industry (BOI) interventions and the YouWIN! Program aim to bolster entrepreneurial support, their reach and impact remain uneven due to bureaucratic bottlenecks and poor coordination (Oladipo & Akinlabi, 2024).

Within this national context, Abuja the Federal Capital Territory (FCT) emerges as a strategic focal point for examining the nexus between ecosystem components and SME innovation. As a planned city and administrative hub, Abuja hosts a concentration of policy institutions, international organizations, and educational establishments that could theoretically foster a conducive entrepreneurial environment. Recent studies indicate a growing presence of tech hubs, innovation labs, and business development service providers in the city (Abuja Innovation Hub, 2024; FCT-MSME Development Agency, 2023). Nevertheless, evidence suggests that many SMEs in Abuja still struggle to translate these ecosystem advantages into tangible innovation outcomes. A 2024 survey by the Abuja Chamber of Commerce and Industry revealed that only 32% of surveyed SMEs had introduced a new product or process in the past two years, citing inadequate financing and weak networking opportunities as primary barriers.

Given this backdrop, understanding how specific components of the entrepreneurial ecosystem namely access to finance and entrepreneurial networking and support systems influence product and process innovation among SMEs in Abuja is both timely and policy-relevant. This study seeks to fill a critical gap in the literature by providing empirical, location-specific insights that can inform targeted interventions to strengthen Nigeria's innovation ecosystem at the subnational level.

Statement of the Problem:

Despite global consensus that robust entrepreneurial ecosystem particularly access to finance and entrepreneurial networking and support systems significantly enhance the innovation performance of SMEs, this linkage remains underexploited in many developing economies. In ideal ecosystems, such as those in Singapore or Estonia, SMEs benefit from seamless access to credit, venture capital, mentorship, incubators, and collaborative networks that directly catalyze product and process innovation (Autio et al., 2018; OECD, 2023). These components reduce uncertainty, lower transaction costs, and enable knowledge spillovers, thereby enhancing firms' capacity to develop new products or improve operational efficiency (Stam & van de Ven, 2021). When effectively aligned, ecosystem enablers create a virtuous cycle wherein innovation drives competitiveness, job creation, and economic resilience.

In stark contrast, SMEs in Abuja, Nigeria, operate within a fragmented and underperforming entrepreneurial ecosystem that severely constrains their innovation capabilities. Although SMEs constitute 96% of businesses in Nigeria and contribute over 60% of employment (NBS, 2022), fewer than 25% of them have access to formal financing, with collateral requirements and high interest rates cited as major barriers (EFInA, 2023). Moreover, while Abuja hosts institutions like the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), the Abuja Enterprise Agency (AEA), and several tech hubs, their reach and coordination remain limited. A 2022 World Bank diagnostic noted that only 28% of Nigerian SMEs introduced any form of innovation (product or process) in the preceding three years far below the Sub-Saharan African average of 42% (World Bank, 2022). In Abuja specifically, anecdotal and survey evidence from the Abuja Chamber of Commerce (2021) indicates that weak networking opportunities and inconsistent policy implementation hinder knowledge exchange and market-responsive innovation among local SMEs.

This disconnect between ecosystem potential and innovation outcomes reflects a critical gap in both theory and practice. While existing models (e.g., Isenberg's ecosystem framework and the systems of innovation theory) posit strong linkages between ecosystem enablers and firm-level innovation, empirical validation in Nigeria's unique institutional context—particularly in its capital city—is scarce (Ogundana et al., 2023). Without evidence-based understanding of how access to finance and support networks specifically influence product and process innovation among Abuja's SMEs, policymakers risk designing generic interventions that fail to address root constraints. If unaddressed, this problem perpetuates low productivity, stifles inclusive economic growth, and undermines Nigeria's broader goals under the National Policy on Micro, Small and Medium Enterprises (2021) and the African Continental Free Trade Area (AfCFTA) competitiveness agenda.

Research Questions:

- i. To what extent does access to finance influence product innovation among SMEs in Abuja?
- ii. How does entrepreneurial networking and support systems affect process innovation among SMEs in Abuja?

Research Objectives:

- i. To examine the influence of access to finance on product innovation of SMEs in Abuja.
- ii. To assess the effect of entrepreneurial networking and support systems on process innovation of SMEs in Abuja.

Statement of Hypotheses:

- i. H₀₁: Access to finance has no significant influence on product innovation among SMEs in Abuja.
- ii. H₀₂: Entrepreneurial networking and support systems have no significant effect on process innovation among SMEs in Abuja.

Literature Review:-

Introduction

Conceptual Framework

Concepts of Entrepreneurial Ecosystem

Entrepreneurial ecosystem components refer to the interconnected institutional, financial, human, and social structures that collectively shape the environment in which entrepreneurs operate and innovate (Stam & van de Ven, 2021). Among these, access to finance and entrepreneurial networking and support systems are two of the most critical enablers for small and medium enterprises (SMEs).

Access to finance

Access to finance encompasses the availability, affordability, and adequacy of financial resources such as bank loans, venture capital, angel investment, government grants, and informal credit that allow SMEs to fund research, prototype development, market testing, and scaling (Beck et al., 2022). In well-functioning ecosystems like those in Germany or Singapore, diversified financing mechanisms significantly reduce the risk of capital constraints, enabling firms to pursue long-term innovation strategies (OECD, 2023). Conversely, in environments where credit markets are underdeveloped or biased against small firms—as is common in many developing economies—SMEs struggle to transform ideas into marketable innovations, thereby stifling productivity and growth (Ayyagari et al., 2021).

Entrepreneurial networking and support systems

Equally vital are entrepreneurial networking and support systems, which include formal and informal structures such as business incubators, accelerators, industry associations, mentorship programs, innovation hubs, and peer-to-peer learning platforms. These systems facilitate knowledge transfer, resource pooling, and collaborative problem-solving, thereby reducing information asymmetries and transaction costs (Autio et al., 2018). Through networking, entrepreneurs gain exposure to new technologies, market trends, and best practices, which directly influence their capacity to innovate. For instance, tech hubs in Lagos and Nairobi have demonstrated how co-location and structured mentorship can accelerate digital innovation among startups (Motoch & Mwangi, 2022). Moreover, support systems often act as intermediaries between policymakers and entrepreneurs, ensuring that regulatory frameworks and public interventions are responsive to ground-level needs (Isenberg, 2011). The strength of these networks is not merely in their existence but in their inclusivity, coordination, and relevance to local economic contexts.

The interplay between finance and networking within the entrepreneurial ecosystem creates synergistic effects that amplify innovation outcomes. Access to capital may be insufficient without the strategic guidance and market intelligence provided by robust support networks, while strong networks may fail to yield results if firms lack the financial means to act on

opportunities (Motoch& Mwangi, 2022). This integrated perspective aligns with the systemic view of entrepreneurial ecosystems, where no single component operates in isolation; rather, their collective functionality determines entrepreneurial success (Stam & van de Ven, 2021). Empirical studies confirm that ecosystems characterized by both deep financial markets and dense collaborative networks such as those in Estonia or Rwanda consistently outperform others in SME-driven innovation metrics (World Bank, 2022). Therefore, for SMEs in emerging economies like Nigeria, strengthening both dimensions simultaneously is essential to overcoming structural barriers to innovation.

Innovation Performance of SMEs

Innovation performance refers to the measurable outcomes of a firm's efforts to introduce new or significantly improved products, processes, marketing methods, or organizational practices (OECD & Eurostat, 2022).

product innovation

For SMEs, product innovation defined as the development and market introduction of new or enhanced goods and services is a primary driver of competitive differentiation and market expansion. Successful product innovation enables SMEs to meet evolving customer demands, enter new markets, and command premium pricing (Damanpour& Aravind, 2023). In dynamic sectors such as agro-processing, fintech, and renewable energy, product innovation is often the key to survival and scalability. For example, Nigerian fintech SMEs like Flutterwave and Opay have leveraged digital product innovation to disrupt traditional financial services, demonstrating how such innovation can yield both commercial success and societal impact (Adeola & Evans, 2022).

process innovation

Closely related is process innovation, which involves the implementation of new or improved methods in production, logistics, delivery, or administrative systems to enhance efficiency, reduce costs, or improve quality (OECD & Eurostat, 2022). Unlike product innovation, which is often customer-facing, process innovation operates internally but is equally critical for SME sustainability. Efficient production processes allow SMEs to compete on cost, respond flexibly to supply chain disruptions, and allocate resources toward further innovation. In manufacturing SMEs in Nigeria, for instance, adopting automated inventory systems or lean production techniques has been shown to increase output by up to 30% while reducing waste (Ogundana et al., 2023). However, such improvements require upfront investment and technical know-how resources that are often scarce without supportive ecosystem components.

Together, product and process innovation constitute the core dimensions of innovation performance that determine an SME's adaptability, resilience, and growth trajectory. Empirical evidence consistently links high innovation performance to improved firm-level outcomes, including revenue growth, employment generation, and export propensity (Gunday et al., 2021). At the macro level, SME-driven innovation contributes to national productivity, industrial diversification, and technological catch-up particularly critical for developing economies seeking to move beyond resource dependence (World Bank, 2022). Yet in Nigeria, innovation performance among SMEs remains markedly low: only 28% reported introducing any form of innovation between 2019 and 2022, with even fewer engaging in radical or technologically intensive innovations (World Bank Enterprise Surveys, 2022). This underperformance underscores the urgency of understanding how ecosystem enablers particularly access to finance and support networks can be leveraged to unlock the latent innovative potential of SMEs in urban centers like Abuja.

Theoretical framework

This study underpinned two theories that collectively explain the relationship between entrepreneurial ecosystem and the innovation performance of SMEs: the Entrepreneurial Ecosystem Theory and the Resource-Based View (RBV) of the firm. Together, these theories provide a robust lens for understanding how external ecosystem enablers (such as access to finance and networking) interact with internal firm capabilities to drive product and process innovation among SMEs in emerging economies like Nigeria.

Entrepreneurial Ecosystem Theory

The Entrepreneurial Ecosystem Theory, primarily advanced by Isenberg (2011) and later refined by Stam and van de Ven (2021), posits that entrepreneurship does not occur in a vacuum but is deeply embedded in a context-specific system of interdependent actors, institutions, policies, and resources. This theory emphasizes that the performance of individual firms especially SMEs is significantly shaped by the quality and configuration of their surrounding ecosystem. Key components such as finance, human capital, culture, support services, and markets function synergistically to either facilitate or constrain entrepreneurial activity and innovation. In the Nigerian context, where institutional voids and market inefficiencies are prevalent, the ecosystem perspective helps explain why many SMEs in Abuja, despite possessing entrepreneurial intent,

struggle to innovate without adequate external support structures. The theory further suggests that ecosystems are not static; rather, they evolve through feedback loops between entrepreneurs and their environment. Thus, improving access to finance and strengthening networking platforms can catalyze a virtuous cycle of innovation, learning, and growth (Autio et al., 2018; Motoch& Mwangi, 2022).

Resource-Based View (RBV)

Complementing this external perspective, the Resource-Based View (RBV), originally articulated by Barney (1991), focuses on the internal resources and capabilities that firms leverage to achieve sustainable competitive advantage. While RBV traditionally emphasizes internal assets (e.g., skilled labor, proprietary technology), scholars have extended it to include externally acquired resources particularly in resource-constrained settings (Sirmon et al., 2011). For SMEs in Abuja, access to finance represents a critical financial resource, while entrepreneurial networks provide social and knowledge-based resources that can be bundled, leveraged, and transformed into innovative outputs. According to RBV, innovation performance (both product and process) emerges when firms effectively mobilize and reconfigure these resources in ways that are valuable, rare, inimitable, and non-substitutable (VRIN criteria). In this light, the entrepreneurial ecosystem does not directly produce innovation but enables SMEs to acquire and deploy the resources necessary to do so. The integration of RBV with ecosystem theory thus offers a dual-layered explanation: the ecosystem supplies the inputs, while the firm's internal capacity determines how effectively those inputs are converted into innovation outcomes (Adeola & Evans, 2022; Ogundana et al., 2023).

Together, these theories justify the hypothesized relationship between the independent and dependent variables in this study. The Entrepreneurial Ecosystem Theory explains why access to finance and support networks matter at the systemic level, while RBV clarifies how SMEs internalize these ecosystem components to generate innovation. This theoretical synergy is particularly relevant in Abuja city with nascent but growing ecosystem infrastructure where the gap between resource availability and innovation output may stem not only from ecosystem deficiencies but also from firms' limited capacity to exploit available resources. By grounding the study in these frameworks, the research moves beyond descriptive analysis to offer a mechanism-based understanding of SME innovation dynamics in Nigeria's capital territory.

Empirical Review

Dare and Ezeamuzie (2024) examined the effect of entrepreneurship education on SME performance in Abuja, Nigeria, with a focus on job creation and business growth; using a survey research design, they collected primary data from 232 SME managers selected via the Taro Yamane formula and analyzed it using Ordinary Least Squares (OLS) regression. They found that practical entrepreneurship education significantly improved SME performance and recommended government-funded training, provision of instructional materials, and institutional strengthening. However, the study did not consider broader entrepreneurial ecosystem components particularly access to finance or networking systems and thus overlooked their potential influence on innovation performance. (Dare & Ezeamuzie, 2024)

Agbaeze, and et al (2020) investigated how entrepreneurial innovation affected solid waste recycling capacity in Abuja; employing a questionnaire-based survey and regression analysis, they reported a statistically significant positive relationship ($p < 0.01$) between innovation and recycling efficiency and urged the government to institutionalize support for eco-entrepreneurship. Despite its contribution, the study was narrowly focused on the waste management sector and did not assess general SME innovation outcomes such as product or process innovation across industries, nor did it examine ecosystem enablers like finance or support networks. (Agbaeze, Ofobruku, & Chukwu, 2020)

Gumel and Bardai (2021) identified barriers preventing Nigerian SMEs from accessing financial institution funding; using a mixed-methods approach involving 296 survey respondents and 15 semi-structured interviews, they uncovered four key constraints: inadequate access to financial institutions, low owner education, exorbitant interest rates, and gender bias, and proposed policy and regulatory reforms to ease financing. Although the study thoroughly diagnosed financing barriers, it did not empirically test how improved access to finance translates into measurable innovation outcomes such as new products or improved processes among SMEs. (Gumel & Bardai, 2021)

Abdullahi, and et al (2025) assessed how economic, political, and technological aspects of the business environment influenced SME performance in Abuja; using a descriptive survey of 200 firms and regression analysis, they found that financial constraints, policy instability, and poor digital infrastructure negatively affected growth and recommended economic stabilization and enhanced digital literacy. Nevertheless, while "access to finance" was mentioned as a challenge, the study treated it as a generic input without linking it to specific dimensions of innovation performance, and it omitted any analysis of entrepreneurial networking or support systems. (Abdullahi, Odeh, & Alaga, 2025)

Aliyu, and et al (2019) explored the mediating role of innovation between access to finance and business performance among women entrepreneurs in Northwestern Nigeria; using PLS-SEM on survey data from 576 respondents, they confirmed that innovation partially mediated the finance–performance relationship and advocated for integrated financial and innovation support. However, the study was limited to women-owned MSMEs in one geopolitical zone, excluded male entrepreneurs, and did not focus on Abuja or examine the role of entrepreneurial networking and support systems in enabling innovation. (Aliyu, Ahmad, & Nordin, 2019)

Adegboye and Iweriebor (2018) analyzed whether access to finance enhanced SME innovation and productivity in Nigeria using the World Bank Enterprise Survey and logit regression; they found that bank credit significantly boosted product, process, and organizational innovation though surprisingly associated with lower productivity and recommended targeted external financing mechanisms. Despite its national relevance, the study relied on aggregate secondary data that masked subnational variations and offered no granular insights into Abuja’s unique ecosystem or the role of non-financial support structures like mentorship and networking in driving innovation. (Adegboye & Iweriebor, 2018)

Job Adah and et al (2025) studied the impact of fintech specifically mobile banking on SME financial inclusion in Abuja; using a descriptive survey of 385 firms and linear regression, they concluded that mobile banking significantly improved account access and usage and recommended user-friendly digital platforms and digital literacy programs. However, the study stopped at financial inclusion as an outcome and did not investigate whether such inclusion led to actual innovation performance, such as the development of new products or the adoption of improved processes among SMEs. (Job Adah, Dare, & Ndaman, 2025)

Study Gap:

Despite growing empirical interest in SME performance in Abuja, a critical research gap persists in understanding how specific components of the entrepreneurial ecosystem particularly access to finance and entrepreneurial networking and support systems jointly influence the two core dimensions of innovation performance: product and process innovation. Existing studies have examined related but fragmented aspects: Dare and Ezeamuzie (2024) focused on entrepreneurship education, Agbaeze, Ofobruku, and Chukwu (2020) restricted innovation to waste recycling, Gumel and Bardai (2021) identified financing barriers without linking them to innovation outcomes, and Abdullahi, Odeh, and Alaga (2025) treated finance as a generic environmental constraint. While Adegboye and Iweriebor (2018) established a national-level link between finance and innovation, they used aggregated secondary data that obscured Abuja-specific dynamics and omitted networking. Similarly, Aliyu, Ahmad, and Nordin (2019) limited their sample to women entrepreneurs in Northwestern Nigeria, and Job Adah, Dare, and Ndaman (2025) equated fintech adoption with financial inclusion without measuring actual innovation performance. Consequently, no study has simultaneously and empirically tested the combined effect of access to finance and entrepreneurial networking on both product and process innovation among SMEs in Abuja, creating a clear theoretical and contextual gap that this study seeks to fill.

Methodology:-

This study employed a descriptive survey research design to examine the influence of entrepreneurial ecosystem access to finance and entrepreneurial networking and support systems on the innovation performance of SMEs in Abuja, Nigeria. The target population consisted of 2,900 SME managers and employees across ten major commercial clusters including Garki, Wuse, Maitama, Gwarinpa, Jabi, Nyanya, Kubwa, CBD, Lugbe, and Karu. A sample size of 421 was determined using Yamane’s formula ($n = 351$) with an additional 20% buffer for non-response, and participants were selected through simple random sampling to ensure representativeness. Primary data were collected via a structured five-point Likert scale questionnaire administered to SME owners and managers, supplemented by key informant interviews with business support officers from institutions like the Abuja Enterprise Agency (AEA). The questionnaire captured biodata and responses on variables such as product innovation, process innovation, access to finance, and networking systems. Data analysis was conducted using descriptive statistics and inferential techniques, specifically regression analysis, with SPSS Version 27.0. The study model was specified as $PI = \alpha + \beta_1 AF + \beta_2 ENS + \varepsilon$ and $POI = \alpha + \beta_1 AF + \beta_2 ENS + \varepsilon$, where PI and POI represent product and process innovation, respectively. Content validity and reliability were confirmed with Cronbach’s Alpha values ranging from 0.78 to 0.88, all above the recommended threshold of 0.70, indicating high internal consistency of the measurement instruments.

Data Presentation And Analysis:

Introduction

This chapter discussed the opinions of the study participants as obtained by distributing copies of the questionnaire. Frequency statistics was used for the analysis, and Statistical Package for Social Science (SPSS) 27 of linear Regression was used to evaluate the proposed hypotheses.

Administration of Questionnaire

A well-structure questionnaire was administered to some selected SMEs and staff for this study. However, not all the copies distributed were returned as envisaged. rate.

Table4.1 Response Rate

Questionnaire	Frequency	Percentage (%)
Response	379	90%
Non-response	42	10%
Total	421	100%

Source: field survey, 2025

The table presents the response rate for the administered questionnaire, showing that out of a total of 421 distributed instruments, 379 respondents completed and returned the questionnaire, representing 90% of the total, while 42 (10%) did not respond. This high response rate of 90% indicates a strong level of engagement from the target participants and enhances the reliability and representativeness of the data collected. Such a robust response minimizes non-response bias and increases confidence in the generalizability of the findings, particularly in the context of studying SMEs in Abuja, where access and willingness to participate can sometimes be challenging. The low non-response rate further supports the validity of subsequent statistical analyses and conclusions drawn from the dataset.

Tests of Hypotheses

Test of Hypothesis One

H₀₁: Access to finance has no significant influence on product innovation among SMEs in Abuja.

Table 1 Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.535 ^a	.286	.285	.48831
a. Predictors: (Constant), AF				

Source: SPSS Output Version 27.0

Table 1 presents the model summary for the regression analysis examining the influence of Access to Finance (AF) on innovation performance among SMEs in Abuja. The model yields an R value of 0.535, indicating a moderate positive linear relationship between AF and the dependent variable (innovation performance). The R Square value of 0.286 suggests that approximately 28.6% of the variation in innovation performance is explained by access to finance, while the Adjusted R Square of 0.285 confirms that this explanatory power remains stable after adjusting for the number of predictors in the model. The standard error of the estimate (0.48831) reflects the average distance that observed values fall from the regression line, suggesting a reasonably acceptable level of prediction accuracy. Overall, the model demonstrates that access to finance is a statistically relevant, though partial, predictor of innovation performance consistent with prior findings such as Adegboye and Iweriebor (2018), who reported that external finance significantly drives product and process innovation among Nigerian SMEs.

Table 2 ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35.996	1	35.996	150.959	.000 ^b
	Residual	89.657	376	.238		
	Total	125.654	377			
a. Dependent Variable: PI						
b. Predictors: (Constant), AF						

Source: SPSS Output Version 27.0

Table 2 presents the ANOVA results for the regression model examining the effect of Access to Finance (AF) on Product Innovation (PI) among SMEs in Abuja. The regression model is statistically significant, as indicated by the F-value of 150.959 with 1 and 376 degrees of freedom and a p-value (Sig.) of .000, which is well below the conventional alpha level of 0.05. This confirms that the model reliably explains a significant portion of the variance in product innovation. The sum of squares for regression (35.996) reflects the explained variation, while the residual sum of squares (89.657) represents unexplained variation. Given the highly significant F-statistic, the null hypothesis—that access to finance has no effect on product innovation—is rejected. This result aligns with findings from Adegboye and Iweriebor (2018), who similarly reported that access to finance significantly drives innovation among Nigerian SMEs, reinforcing the conclusion that financial access is a critical enabler of product innovation in the Abuja context.

Table 3 Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.835	.179		10.246	.000
	AF	.557	.045	.535	12.287	.000

a. Dependent Variable: PI

Source: SPSS Output Version 27.0

Table 3 presents the regression coefficients for the relationship between Access to Finance (AF) and Product Innovation (PI) among SMEs in Abuja. The unstandardized coefficient (B) for AF is 0.557, with a standard error of 0.045, indicating that a one-unit increase in access to finance is associated with a 0.557-unit increase in product innovation, holding other factors constant. The standardized coefficient (Beta) of 0.535 confirms a moderate-to-strong positive effect, aligning with the R value in Table 1. This relationship is highly statistically significant ($t = 12.287$, $p = .000$), leading to the rejection of the null hypothesis that access to finance has no effect on product innovation. The constant (intercept) of 1.835 is also significant ($p = .000$), suggesting a baseline level of product innovation even when access to finance is zero. These findings empirically support the conclusion that access to finance is a key driver of product innovation among SMEs in Abuja, consistent with Adegboye and Iweriebor (2018), who similarly found that external financing significantly enhances SME innovation in Nigeria.

Test of Hypothesis two

H₀₂: Entrepreneurial networking and support systems have no significant effect on process innovation among SMEs in Abuja.

Table 4 Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.723 ^a	.523	.522	.34980

a. Predictors: (Constant), ENS

Source: SPSS Output Version 27.0

Table 4 presents the model summary for the regression analysis examining the influence of Entrepreneurial Networking and Support Systems (ENS) on process innovation among SMEs in Abuja. The model yields an R value of 0.723, indicating a strong positive linear relationship between ENS and the dependent variable. The R Square value of 0.523 reveals that approximately 52.3% of the variation in process innovation is explained by entrepreneurial networking and support systems, while the Adjusted R Square of 0.522 confirms the model's stability after accounting for predictor variables. The standard error of the estimate (0.34980) is relatively low, suggesting a high level of precision in the model's predictions. This indicates that ENS such as participation in business associations, access to mentorship, and engagement with support programs plays a substantial role in enhancing operational efficiency and process improvements within SMEs in Abuja. These findings align with Aliyu et al. (2019), who emphasized the mediating role of innovation in entrepreneurial success, and underscore the importance of non-financial ecosystem components in driving firm-level innovation outcomes.

Table 5 ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	50.504	1	50.504	412.759	.000 ^b
	Residual	46.007	376	.122		
	Total	96.511	377			
a. Dependent Variable: POI						
b. Predictors: (Constant), ENS						

Source: SPSS Output Version 27.0

Table 5 presents the ANOVA results for the regression model examining the influence of Entrepreneurial Networking and Support Systems (ENS) on Process Innovation (POI) among SMEs in Abuja. The model is statistically significant, as indicated by an F-value of 412.759 with 1 and 376 degrees of freedom and a p-value (Sig.) of .000, which is far below the 0.05 threshold, confirming that ENS is a highly significant predictor of process innovation. The sum of squares for regression (50.504) represents the variation in process innovation explained by ENS, while the residual sum of squares (46.007) indicates unexplained variation. Given the large F-statistic and high significance level, the null hypothesis that entrepreneurial networking and support systems have no effect on process innovation is decisively rejected. This finding aligns with Aliyu et al. (2019), who emphasized the role of support systems in enhancing SME performance through innovation, and underscores the critical importance of non-financial ecosystem components such as mentorship, training, and business networks in driving operational improvements within SMEs in Abuja.

Table 6 Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.482	.126		11.763	.000
	ENS	.632	.031	.723	20.316	.000

a. Dependent Variable: POI

Source: SPSS Output Version 27.0

Table 6 presents the regression coefficients for the relationship between Entrepreneurial Networking and Support Systems (ENS) and Process Innovation (POI) among SMEs in Abuja. The unstandardized coefficient (B) for ENS is 0.632, with a standard error of 0.031, indicating that a one-unit increase in ENS is associated with a 0.632-unit increase in process innovation, holding other factors constant. The standardized coefficient (Beta) of 0.723 suggests a strong positive effect, aligning with the R value in Table 4. This relationship is highly statistically significant, as evidenced by a t-value of 20.316 and a p-value (Sig.) of .000, leading to the rejection of the null hypothesis that ENS has no effect on process innovation. The constant (intercept) of 1.482 is also significant (p = .000), indicating a baseline level of process innovation even when ENS is zero. These findings underscore that entrepreneurial networkingsuch as participation in business associations, mentorship programs, and access to institutional supportplays a critical role in enhancing operational efficiency and process improvements within SMEs in Abuja, reinforcing conclusions from Aliyu et al. (2019) and Job Adah et al. (2025) on the importance of ecosystem support structures in driving innovation.

Summary of Findings:

The findings of this study reveal a strong and significant relationship between entrepreneurial ecosystem and the innovation performance of SMEs in Abuja, Nigeria. Firstly, the study established that access to finance has a statistically significant positive effect on product innovation. The findings indicates that SMEs with greater access to credit, grants, and external funding are more likely to develop and launch new or improved products.

Secondly, the results demonstrate that entrepreneurial networking and support systems have a highly significant positive impact on process innovation. The findings showing that participation in business associations, mentorship programs, and institutional support initiatives enables SMEs to adopt more efficient production methods, improve service delivery, and streamline internal operations.

Together, these findings affirm that both financial and non-financial dimensions of the entrepreneurial ecosystem access to finance and networking/support systems are critical drivers of innovation among SMEs in Abuja. While access to finance primarily fuels product innovation, entrepreneurial networks and support structures are pivotal for advancing process innovation. These insights underscore the need for a holistic policy approach that strengthens not only financial inclusion but also institutional frameworks that foster collaboration, knowledge sharing, and technical assistance for SMEs in Nigeria's capital city.

Discussion of the Findings:-

The findings of this study provide compelling empirical evidence that entrepreneurial ecosystem specifically access to finance (AF) and entrepreneurial networking and support systems (ENS) play a pivotal role in shaping the innovation performance of SMEs in Abuja, Nigeria. The results confirm that both financial and non-financial dimensions of the ecosystem significantly influence product and process innovation, respectively, reinforcing the strategic importance of a holistic and supportive environment for SME growth and competitiveness.

First, the study establishes that access to finance has a statistically significant positive effect on product innovation ($\beta = 0.535$, $p = .000$), accounting for approximately 28.6% of its variance. This finding aligns with Adegboye and Iweriebor (2018), who found that external financing is the strongest driver of all forms of innovation among Nigerian SMEs, particularly in enabling investment in new product development and adoption of foreign technologies. The availability of credit, grants, or equity funding allows SMEs to bear the risks associated with research, prototyping, and market testing activities essential for launching novel goods and services. In the context of Abuja, where many SMEs rely on personal savings or informal loans, limited access to formal finance remains a major constraint to scaling innovative ideas into market-ready products. This underscores the need for targeted financial inclusion policies, such as government-backed loan schemes and venture capital funds tailored to early-stage innovators, as recommended by Gumel and Bardai (2021).

Second, the study reveals that entrepreneurial networking and support systems exert a strong and highly significant influence on process innovation ($\beta = 0.723$, $p = .000$), explaining over half (52.3%) of its variation. This suggests that interactions with business associations, participation in incubation programs, mentorship, and training workshops are critical enablers of operational efficiency improvements such as streamlined workflows, better inventory management, and enhanced service delivery. These findings resonate with Aliyu et al. (2019), who emphasized the mediating role of innovation in translating institutional support into improved business performance among women entrepreneurs in Northern Nigeria. Furthermore, Abdullahi, Odeh, and Alaga (2025) highlighted that technological constraints and weak institutional linkages hinder SME performance in Abuja, reinforcing the value of structured networks that facilitate knowledge transfer and digital capability building. For instance, ENS platforms can expose SME owners to best practices in lean production, digital tools, and quality control, thereby catalyzing internal process upgrades even in resource-constrained settings.

Collectively, these findings affirm the complementary roles of financial and relational resources within the entrepreneurial ecosystem. While access to finance primarily fuels outward-facing product innovation, entrepreneurial networks and support systems drive inward-facing process innovation through learning, collaboration, and capacity development. This duality supports the integration of the Resource-Based View (RBV) and Entrepreneurial Ecosystem Theory: AF provides the critical financial resources necessary for innovation (RBV), while ENS fosters social capital and knowledge spillovers that enhance absorptive capacity and organizational learning (Stam & van de Ven, 2021). By demonstrating how each component uniquely contributes to different dimensions of innovation, this study fills a contextual gap identified in prior literature where national-level analyses (e.g., Adegboye & Iweriebor, 2018) lack urban specificity, and sector-specific studies (e.g., Agbaeze et al., 2020) overlook cross-sectoral innovation dynamics. The results offer actionable insights for policymakers, financial institutions, and SME support agencies in Abuja to design integrated interventions that simultaneously strengthen financing mechanisms and build robust, inclusive entrepreneurial networks to foster a more innovative and resilient SME sector.

Summary, Conclusion and Recommendations:-

Summary

This study examined the influence of entrepreneurial ecosystem on the innovation performance of Small and Medium Enterprises (SMEs) in Abuja, Nigeria. Innovation performance was measured through two key dimensions: product innovation (PI) and process innovation (POI). The research aimed to provide empirical insights into how external ecosystem enablers shape innovation outcomes in a rapidly urbanizing African capital city with a growing but fragmented entrepreneurial environment.

The study was structured into five chapters. Chapter One established the background by highlighting the critical role of SMEs in economic development and job creation, while identifying persistent gaps in innovation due to systemic constraints within

Nigeria's entrepreneurial ecosystem. The problem statement underscored the disconnect between the availability of ecosystem resources and actual innovation outputs among SMEs in Abuja. Clear objectives, research questions, and hypotheses were formulated to investigate the relationships between AF and PI, as well as ENS and POI.

Chapter Two presented a comprehensive literature review grounded in theoretical frameworks such as the Entrepreneurial Ecosystem Theory and the Resource-Based View (RBV), which explain how external support structures and internal resource utilization jointly drive innovation. The chapter also synthesized empirical findings from seven recent studies conducted in Abuja and across Nigeria including Dare & Ezeamuzie (2024), Adegboye & Iweriebor (2018), and Aliyu et al. (2019) to contextualize the research and identify a significant gap: the lack of integrated analysis linking both financial and non-financial ecosystem components directly to specific types of innovation at the subnational level.

Chapter Three detailed the research methodology, which adopted a quantitative survey design. Primary data were collected using a structured five-point Likert scale questionnaire administered to SME owners and managers across major commercial zones in Abuja, including Wuse, Garki, CBD, Gwarinpa, and Maitama. A total of 421 questionnaires were distributed, with 379 returned and used for analysis, yielding a robust response rate of 90%. Data were analyzed using descriptive statistics, correlation, and multiple regression techniques via SPSS, with all hypotheses tested at the 0.05 significance level.

Chapter Four presented the findings, which revealed that access to finance has a statistically significant positive effect on product innovation, indicating that SMEs with better financial access are more likely to develop new or improved products. Similarly, entrepreneurial networking and support systems were found to have a strong and highly significant positive impact on process innovation, demonstrating that engagement with business networks, mentorship programs, and institutional support enhances operational efficiency and internal process improvements. These results affirm that both dimensions of the entrepreneurial ecosystem play distinct yet complementary roles in fostering innovation.

Conclusion

This study concludes that entrepreneurial ecosystem components—specifically access to finance and entrepreneurial networking and support systems—have a significant and distinct influence on the innovation performance of SMEs in Abuja, Nigeria. Access to finance was found to exert a statistically significant positive effect on product innovation, confirming that SMEs with greater access to credit, grants, and external funding are more likely to develop and launch new or improved products. The findings indicate that financial constraints remain a major barrier to product development, underscoring the need for targeted financial inclusion policies and tailored lending mechanisms for SMEs.

Furthermore, the study concludes that entrepreneurial networking and support systems significantly enhance process innovation among SMEs. Engagement with business associations, mentorship programs, training workshops, and institutional support agencies facilitates knowledge transfer, operational learning, and the adoption of efficient production and service delivery methods. In the context of Abuja's evolving entrepreneurial landscape, where many SMEs operate with limited technical expertise, such networks serve as vital platforms for capacity building and process optimization.

Together, these conclusions affirm that both financial and relational resources within the entrepreneurial ecosystem are essential for fostering innovation. While access to finance primarily enables outward-facing product development, networking and support systems drive inward-facing operational improvements. For policymakers, financial institutions, and SME development agencies in Abuja, this underscores the importance of adopting an integrated approach—one that expands credit access while simultaneously strengthening institutional frameworks that promote collaboration, mentorship, and continuous learning. By addressing both dimensions, stakeholders can create a more enabling environment for sustainable SME innovation, ultimately contributing to economic diversification and competitiveness in Nigeria's capital region.

Recommendations:-

i. Policymakers and financial regulatory bodies in Nigeria should implement targeted interventions to improve SMEs' access to finance, thereby enhancing product innovation in Abuja. This can be achieved by expanding credit guarantee schemes, establishing innovation-focused loan facilities with favorable terms (e.g., low-interest rates, longer tenures), and encouraging commercial banks and microfinance institutions to develop tailored financial products for SMEs engaged in research, development, and market testing. Additionally, government agencies such as the Central Bank of Nigeria (CBN) and SMEDAN should strengthen existing intervention funds to ensure timely disbursement and broader reach, particularly to startups and technology-driven enterprises. By reducing financial barriers, SMEs will be better positioned to invest in new product design, prototyping, and commercialization.

ii. Stakeholders should prioritize the development and institutionalization of entrepreneurial networking and support systems to drive process innovation among SMEs in Abuja. This includes strengthening the capacity of business incubators, innovation hubs, and SME associations to deliver regular training workshops, mentorship programs, and peer-learning forums focused on operational efficiency, digital tools adoption, and lean management practices. The Abuja Enterprise Agency (AEA) and other support institutions should also foster public-private partnerships to create collaborative platforms where entrepreneurs can share best practices, access technical advisory services, and co-develop solutions to common operational challenges. By enhancing knowledge spillovers and building social capital, these networks will empower SMEs to streamline workflows, reduce waste, and improve service delivery leading to sustained process innovation and competitiveness.

Contribution to Knowledge:

This study makes a significant contribution to knowledge by providing empirical evidence on the distinct roles of entrepreneurial ecosystem components in driving innovation performance among SMEs in Abuja, Nigeria. It fills a critical research gap by simultaneously examining access to finance and entrepreneurial networking and support systems, demonstrating that while access to finance significantly enhances product innovation (accounting for 28.6% of its variance), networking and support systems have an even stronger influence on process innovation (explaining 52.3% of its variance) a differentiation not previously established in the Nigerian context. Drawing on primary data from multiple commercial zones and employing rigorous regression analysis, the study advances theoretical understanding by applying the Entrepreneurial Ecosystem Theory and Resource-Based View to a real-world urban African setting, validating their relevance in explaining how external resources and relational capital translate into tangible innovation outcomes. The findings offer practical insights for policymakers, financial institutions, and agencies like SMEDAN and the Abuja Enterprise Agency, emphasizing the need for integrated strategies that combine financial inclusion with capacity-building and institutional support to foster sustainable SME innovation and economic growth.

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