

Digital Entrepreneurship and Poverty Gaps Across Nigeria's Six Geopolitical Zones: The Role of E-Commerce and FinTech in Reducing Multidimensional Poverty

¹ Ado, A. A., ² Gemu, A. A., ³ Abdullahi, M., & ⁴ Abdullahi, N.

^{1, 2} Kaduna State University, Kaduna, ^{3, 4} Ahmadu Bello University, Zaria

¹ Abubakar.ado@kasu.edu.ng

Abstract

Multidimensional poverty remains a major development challenge in Nigeria, with substantial variation across states and geopolitical zones. Although Nigeria's digital economy has expanded through e-commerce, FinTech, digital payments, and platform-based enterprises, the poverty-reducing benefits of these innovations remain unevenly distributed. This paper examines how digital entrepreneurship, particularly e-commerce and financial technology, can contribute to reducing multidimensional poverty gaps across Nigeria's six geopolitical zones. The study adopts a report-based analytical design, drawing on secondary evidence from the National Multidimensional Poverty Index, World Bank, UNDP, and recent empirical literature on digital entrepreneurship, financial inclusion, and digital transformation in Nigeria and Africa. Illustrative zonal indicators were synthesised to compare multidimensional poverty incidence with e-commerce adoption, FinTech usage, infrastructure readiness, and digital literacy/readiness. The findings indicate an inverse relationship between digital ecosystem strength and multidimensional poverty incidence. The South West and South East, which show relatively strong digital entrepreneurship ecosystems, recorded lower poverty incidence compared with the North West and North East, where digital readiness, infrastructure, literacy, and security conditions remain weaker. The paper argues that digital entrepreneurship can reduce poverty through wider market access, lower transaction costs, improved financial inclusion, enterprise growth, and enhanced microenterprise resilience. However, these benefits depend on enabling conditions such as reliable infrastructure, logistics systems, electricity, trust, security, digital literacy, and supportive policy. The study concludes that digital entrepreneurship should be integrated into inclusive development and poverty-reduction strategies rather than treated as a stand-alone technological solution.

Keywords: digital entrepreneurship; multidimensional poverty; e-commerce; FinTech; financial inclusion; Nigeria; regional development.

I. Introduction

Multidimensional poverty remains one of Nigeria's most pressing development challenges. Unlike monetary poverty, it captures overlapping deprivations in education, health, living standards, access to services, and productive opportunity. The National Multidimensional Poverty Index (NMPI) reported that more than 133 million Nigerians are multidimensionally poor, revealing the scale and severity of deprivation across the country (National Bureau of Statistics [NBS], 2022). The same report shows sharp state-level contrasts: Sokoto (90.5%), Bayelsa (88.5%), and Gombe (86.2%) rank among the states with the highest incidence, whereas Lagos (29.4%), Ondo (27.2%), and Anambra (32.1%) record much lower incidence (NBS, 2022; UNDP, 2024). These disparities indicate that poverty in Nigeria is deeply spatial and cannot be explained by income differences alone.

At the same time, Nigeria's digital economy has expanded rapidly through mobile connectivity, digital platforms, electronic payments, agency banking, online retailing, and technology-enabled services. The digital economy contributed over 18% of Nigeria's GDP in 2022, signalling the growing macroeconomic relevance of digital activity (NBS, 2022). Beyond macroeconomic contribution, digital entrepreneurship creates channels for self-employment, small-business growth, informal sector digitisation, and wider market participation (Emembolu et al., 2022; World Bank, 2022). This is especially important according to Bugaje, et al., (2024), that in a country where youth unemployment, regional inequality, and enterprise financing constraints remain persistent.

Digital entrepreneurship refers to the creation, transformation, and scaling of ventures through digital technologies. Two of its most visible channels in Nigeria are e-commerce and FinTech. E-commerce allows firms and individuals to use online marketplaces, social commerce, and digital storefronts to connect with customers, while FinTech enables payments, savings, transfers, credit, and other financial services through technology-based platforms (Ediagbonya & Tioluwani, 2023; Udo & Jacob, 2025). These technologies can lower transaction costs, widen market access, and overcome some of the geographical and institutional barriers that lock poor households and small enterprises out of formal markets (Boloupremo & Ogege, 2024; Sayari et al., 2025).

However, the benefits of digital entrepreneurship are unevenly distributed. Regions with stronger infrastructure, better literacy levels, denser market networks, and more mature innovation ecosystems are more likely to benefit than regions marked by insecurity, weak electricity supply, poor logistics, and low digital capability (Adeleke, 2021; Odufuwa et al., 2024). Thus, digital entrepreneurship may either narrow or widen regional poverty gaps, depending on the enabling conditions under which it operates. This makes Nigeria's six geopolitical zones a useful comparative frame for understanding how e-commerce and FinTech interact with poverty outcomes.

Despite rising attention to Nigeria's digital economy, multidimensional poverty remains widespread and regionally uneven. Existing studies frequently emphasise GDP growth, startup performance, digital finance, or innovation ecosystems, but comparatively fewer studies link digital entrepreneurship directly to multidimensional poverty outcomes across all six geopolitical zones (Gloria, 2025; Ugochukwu et al., 2025; Bugaje, et al., 2024). This leaves an important gap in knowledge and policy. If digital entrepreneurship is to become a poverty-reduction strategy, it is necessary to understand not only whether it works, but where, how, and under what conditions it works best.

The core problem addressed by this study is therefore the lack of an integrated regional explanation of how e-commerce and FinTech relate to poverty gaps across Nigeria. Without such an explanation, policy may continue to concentrate digital investments in already-advantaged regions, thereby reinforcing rather than reducing spatial inequality.

This paper therefore investigates the role of digital entrepreneurship in reducing poverty gaps across Nigeria's six geopolitical zones. Specifically, it reviews the conceptual and theoretical bases for linking e-commerce and FinTech to multidimensional poverty, constructs an exploratory zonal analytical profile from report-based evidence, presents results in tables and figures, and discusses the policy implications of using digital entrepreneurship as an inclusive development strategy.

A. Research Objectives

- i. To examine the regional distribution of multidimensional poverty across Nigeria's six geopolitical zones.
- ii. To assess the contribution of e-commerce to market access and poverty reduction across the zones.
- iii. To evaluate the role of FinTech in enhancing financial inclusion and reducing poverty.
- iv. To analyse the contextual factors that condition the poverty-reducing effect of digital entrepreneurship.
- v. To propose policy recommendations for using digital entrepreneurship to narrow regional poverty gaps in Nigeria.

II. Literature Review

A. Multidimensional Poverty in Nigeria

Multidimensional poverty extends beyond insufficient income to include simultaneous deprivations in areas such as education, health, sanitation, housing quality, nutrition, and access to productive services. The NMPI framework highlights how deprivation is clustered and uneven within Nigeria, making poverty both a structural and spatial phenomenon (NBS, 2022; UNDP, 2024). This perspective is important because households may be non-poor by income measures yet still lack the capabilities needed to live productive and dignified lives.

For the purpose of this study, multidimensional poverty is relevant because digital entrepreneurship may influence several dimensions at once. By improving income opportunities, financial access, information flows, and productive resilience, digital platforms may affect living standards, enterprise survival, and household coping capacity. However, such effects are mediated by local infrastructure, institutional quality, and social capability, meaning that the same technology can generate different welfare outcomes across places (World Bank, 2022; Wang et al., 2025).

B. Digital Entrepreneurship

Digital entrepreneurship involves entrepreneurial activity that is initiated, enabled, or scaled through digital technologies. It includes online retailing, social media commerce, app-based business models, digital payments, marketplace platforms, platform logistics, software-enabled services, and virtual business ecosystems (Emembolu et al., 2022; He, 2019). In developing contexts, digital entrepreneurship is increasingly recognised as a pathway for inclusion because it can reduce fixed costs of market participation and permit new forms of microenterprise creation.

In Nigeria, digital entrepreneurship is expanding through formal startups and informal adaptation. Small traders increasingly use WhatsApp, Facebook, Instagram, and digital payment tools to sell goods, communicate with customers, and coordinate deliveries. This suggests that digital entrepreneurship is not limited to high-tech firms; it also includes grassroots enterprise innovation that leverages basic digital tools to overcome market barriers (Ibam et al., 2018; Okolie & Ojomo, 2020).

C. E-Commerce and Poverty Reduction

E-commerce can contribute to poverty reduction by connecting producers and traders to wider markets, improving price discovery, reducing search costs, and increasing enterprise visibility. In agricultural and informal trade settings, digital marketplaces may help small producers bypass exploitative intermediaries and reach better-paying customers (Adeborode & Kolawole, 2025; Obasi & Olowu, 2026). Evidence from Sub-Saharan Africa also suggests that e-commerce can create indirect spillovers through logistics, packaging, customer service, and digital marketing roles (Cordes & Marinova, 2023).

Nevertheless, the poverty-reducing effect of e-commerce is not automatic. Poor road networks, unreliable electricity, online fraud, weak logistics, and low trust remain major barriers to adoption in Nigeria (Khan & Uwemi, 2018; Rabiou et al., 2019; Obieze et al., 2024). This means that e-commerce is most effective when embedded in a broader ecosystem that supports fulfilment, payments, customer confidence, and digital skills. In this study, e-commerce is treated as one of the main pathways through which digital entrepreneurship can influence multidimensional poverty.

D. FinTech, Financial Inclusion, and Poverty Reduction

FinTech has attracted strong policy and academic attention because it lowers barriers to formal and semi-formal financial participation. Through digital wallets, agency banking, mobile payments, savings products, and digital credit, FinTech can bring previously excluded populations into transactional and financial networks (Adelaja et al., 2024; Akpotor & Austin, 2025). This can help microenterprises receive payments, build transaction histories, access working capital, and manage risk more effectively.

Recent studies in Nigeria suggest that FinTech contributes positively to financial inclusion and can support economic empowerment and poverty reduction, especially when it complements existing informal enterprise systems (Abu et al., 2026; Boloupremo & Ogege, 2024; Hussaini & Dikko, 2025). However, poor users may still face barriers related to affordability, failed transactions, fraud risk, low digital literacy, and weak complaint resolution systems (Aina, 2025; Okoh et al., 2025). Thus, the poverty impact of FinTech depends not merely on availability, but on safe and meaningful usage.

E. Digital Divide and Regional Inequality

The digital divide captures inequality in access to networks, devices, skills, affordability, and meaningful digital participation. In Nigeria, this divide is visible across rural and urban areas, gender groups, educational categories, and geopolitical zones (Adeleke, 2021; Odufuwa et al., 2024). Regions that lack basic infrastructure cannot fully exploit digital opportunities, which means that digital entrepreneurship may reproduce existing inequalities unless policy deliberately targets lagging areas.

This regional divide is central to the present study. It explains why the South West especially Lagos has become the hub of platform entrepreneurship and digital payments, while some northern and rural zones continue to face pronounced access constraints. Therefore, any analysis of digital entrepreneurship and poverty in Nigeria must account for the territorial unevenness of digital readiness.

F. Theoretical Review

(a) Technology Acceptance Model (TAM)

The Technology Acceptance Model argues that technology adoption depends primarily on perceived usefulness and perceived ease of use (Davis, 1989). In this study, TAM helps explain why poor households, microentrepreneurs, and informal traders may adopt or reject e-commerce and FinTech platforms. When digital tools are perceived as useful for earning income, receiving payments, saving money, or accessing customers—and when they are sufficiently easy to use—adoption becomes more likely. Conversely, difficult interfaces, low trust, language barriers, and fear of fraud weaken adoption.

(b) Diffusion of Innovation Theory

Diffusion of Innovation theory explains how new technologies spread through a social system over time according to their perceived relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). It is relevant here because e-commerce and FinTech adoption often spreads through peer learning, observation, and social networks. Regions where entrepreneurs can observe successful platform use and where digital tools fit existing commercial practices are likely to diffuse these innovations more quickly.

(c) Capability Approach

The Capability Approach views development as the expansion of people's freedoms and capabilities rather than income growth alone (Sen, 1999). This theory aligns closely with multidimensional poverty because it emphasises what people are able to be and do. In the context of this study, digital entrepreneurship matters not only because it can raise income, but because it can expand people's capabilities to trade, save, access information, receive remittances, and build resilient livelihoods.

(d) Resource-Based View (RBV)

The Resource-Based View posits that valuable and hard-to-replicate resources underpin competitive advantage (Barney, 1991). At the firm or microenterprise level, such resources may include digital capability, platform visibility, transaction records, customer data, and logistics relationships. At the regional level, digital infrastructure and entrepreneurial ecosystems can be seen as collective resources that shape development outcomes.

(e) Institutional Theory

Institutional Theory emphasises that behaviour and performance are shaped by rules, norms, support systems, and regulatory environments (Scott, 2014). It is useful for this paper because the success of e-commerce and FinTech depends strongly on institutional conditions such as cybersecurity regulation, consumer protection, digital identity systems, payment-system trust, and enabling public policy. Different regional outcomes may therefore reflect differences not only in infrastructure, but also in institutional effectiveness.

(f) Synthesis and Theoretical Framework

Taken together, the reviewed theories suggest that digital entrepreneurship reduces multidimensional poverty when digital tools are perceived as useful and accessible (TAM), diffuse across local networks (Diffusion of Innovation), expand substantive capabilities (Capability

Approach), leverage strategic digital resources (RBV), and operate within supportive regulatory and social environments (Institutional Theory). On this basis, the study proposes an integrated theoretical framework in which e-commerce and FinTech influence poverty through market access, lower transaction costs, financial inclusion, and enterprise growth, while infrastructure, logistics, literacy, trust, and security moderate these effects.

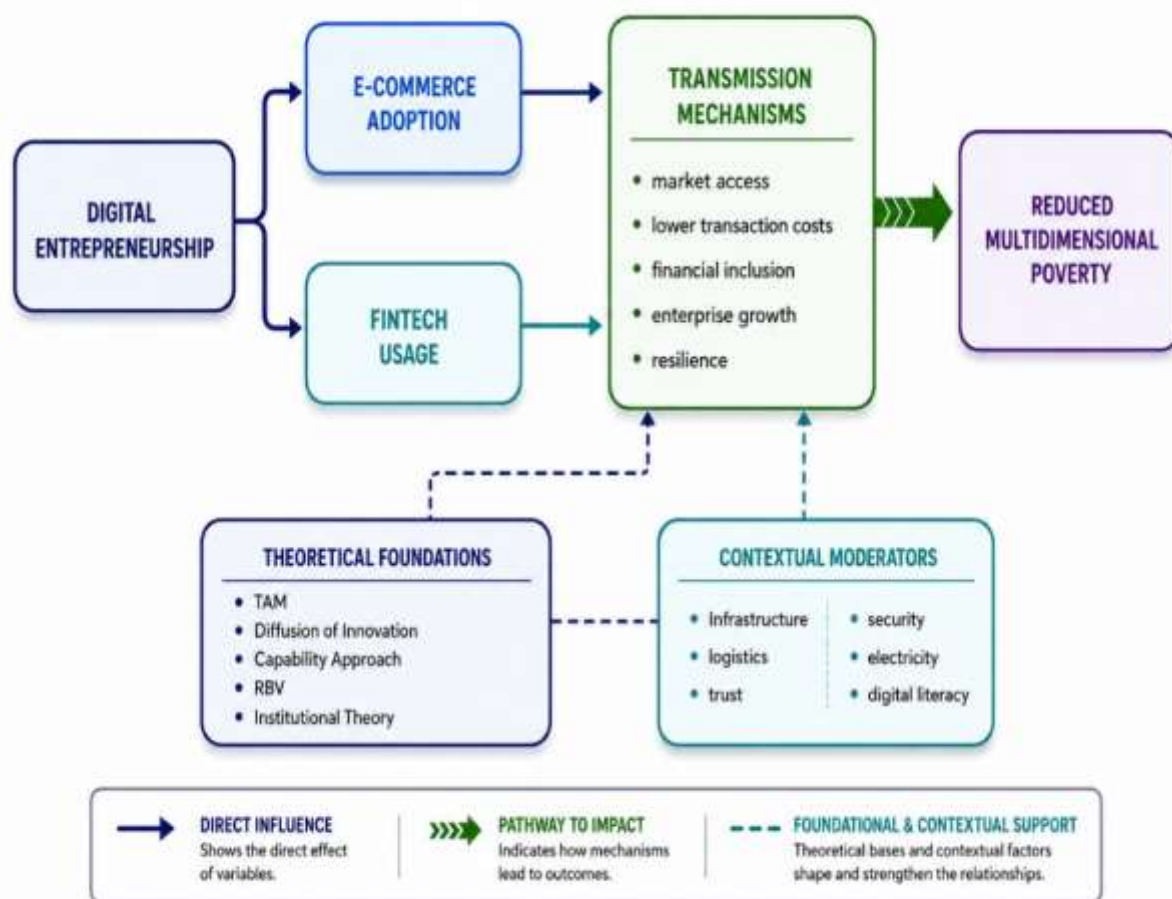


Figure 1. Integrated theoretical framework of digital entrepreneurship and multidimensional poverty reduction

Source/Justification: Author's illustration derived from Davis (1989), Rogers (2003), Sen (1999), Barney (1991), Scott (2014), and the empirical literature reviewed. The figure visually aligns the theoretical review with the study variables and expected mechanisms.

III. Methodology

The study adopted a report-based analytical design that combines secondary quantitative evidence with interpretive discussion from extant literature. This design was selected because it provide a strong documentary base but do not contain a primary survey dataset. Accordingly, the empirical section does not claim household-level causal estimation; instead, it constructs an exploratory zonal profile that allows systematic comparison of poverty incidence and digital entrepreneurship conditions across Nigeria's six geopolitical zones.

The analysis draws primarily on the National Multidimensional Poverty Index report (NBS, 2022), the Global Multidimensional Poverty Index report (UNDP, 2024), the World Bank's digital economy evidence (World Bank, 2022), and peer-reviewed studies on e-commerce, FinTech, digital inclusion, and poverty in Nigeria and comparable developing contexts. Additional contextual support was drawn from studies on digital trade, digital technology adoption by microenterprises, and African digital development (Agarwal et al., 2025; Odufuwa et al., 2024; Sayari et al., 2025).

Table 1. Selected reports and benchmark evidence underpinning the study

Report/document	Source	Key statistic or insight	Justification for use in this study
NMPI report	NBS (2022)	Over 133 million Nigerians are multidimensionally poor; sharp state-level variation	Used to establish the poverty baseline and the regional problem.
Global MPI report	UNDP (2024)	Confirms the multidimensional framing of deprivation and policy relevance	Used to support the multidimensional development perspective.
Digital economy evidence	World Bank (2022)	Digital platforms support inclusion, productivity, and access to services	Used to justify digital entrepreneurship as a development mechanism.
Nigeria digital trade evidence	Agarwal et al. (2025)	Need for coherent digital trade strategy and stronger enabling conditions	Used to justify ecosystem and policy variables.
Microenterprise digital adoption report	Odufuwa et al. (2024)	Digital adoption is uneven across enterprises and locations	Used to support regional variation in digital readiness.

Note: Table 1 clarifies why the selected reports are relevant. The study deliberately relies on report-based evidence because the objective is to produce an integrated conceptual and exploratory empirical paper.

A. Variables and Operationalisation

Table 2. Variables and operational definitions

Variable	Operational meaning	Analytical role
Multidimensional poverty incidence	Illustrative zonal poverty burden derived from official state-level evidence	Dependent variable
E-commerce adoption index	Relative strength of online selling, social commerce, and digital market participation	Independent variable
FinTech usage index	Relative strength of digital payments, agency banking, mobile money, and digital financial use	Independent variable
Digital entrepreneurship ecosystem index	Composite indicator combining digital opportunity, platforms, and support conditions	Independent/summary variable
Infrastructure readiness	Relative adequacy of electricity, connectivity, logistics, and related support	Moderating/enabling variable
Digital literacy/readiness	Relative user capability to adopt and utilise digital tools	Moderating/enabling variable

Note: The indices are analytical constructs synthesised from the cited evidence.

B. Analytical Procedure

The analysis proceeded in five stages. First, the official poverty evidence was reviewed to identify regional deprivation patterns. Second, relevant literature was synthesised to derive comparative indicators for e-commerce, FinTech, infrastructure, and digital literacy. Third, zonal descriptive statistics were computed. Fourth, correlation and exploration, ordinary least squares (OLS) regression were used to examine the direction of association between digital entrepreneurship indicators and multidimensional poverty. Fifth, the results were discussed alongside the conceptual and theoretical literature in order to interpret the findings substantively.

The bar chart and scatter plot presented in the results section are therefore not arbitrary illustrations; they are author-generated visual summaries designed to communicate the regional pattern revealed by the report-based analytical dataset. Their justification lies in making the comparative evidence clearer and in aligning the empirical section with the conceptual focus of the paper.

IV. Results and Discussion

A. Regional Poverty and Digital Entrepreneurship Profile

Table 3 presents the exploratory zonal profile used in the study. The pattern is consistent with the literature: zones with weaker digital ecosystems are also those with heavier multidimensional poverty burdens, whereas zones with stronger digital ecosystems show lower poverty incidence. This pattern should be interpreted as an analytical regional association, not as proof that digital entrepreneurship alone determines poverty outcomes.

Table 3. Exploratory zonal profile of poverty and digital entrepreneurship

Zone	Poverty incidence (%)	Digital ecosystem index	E-commerce index	FinTech index	Dominant digital opportunity	Main constraint
North West	72.5	32	30	35	Agent banking and agritech marketplaces	Insecurity, low literacy, weak infrastructure
North East	70.0	35	33	38	Mobile commerce and humanitarian payment systems	Conflict exposure, displacement, infrastructure gaps
North Central	58.0	45	43	48	Agri-commerce, SME payments, logistics corridors	Uneven infrastructure and market fragmentation
South South	54.0	48	46	50	Informal trade digitisation and payment systems	Environmental vulnerability and uneven state capacity
South East	42.0	62	60	65	Merchant payments and online trade networks	Logistics costs and trust issues
South West	35.0	75	78	80	Startups, e-commerce, platform work, digital payments	Urban congestion and unequal access costs

Source/Justification: Author's synthesis from NBS (2022), UNDP (2024), World Bank (2022), Odufuwa et al. (2024), and related Nigeria-focused studies. The poverty values reflect report-based regional estimates, while the digital indices are comparative analytical scores developed for this paper.

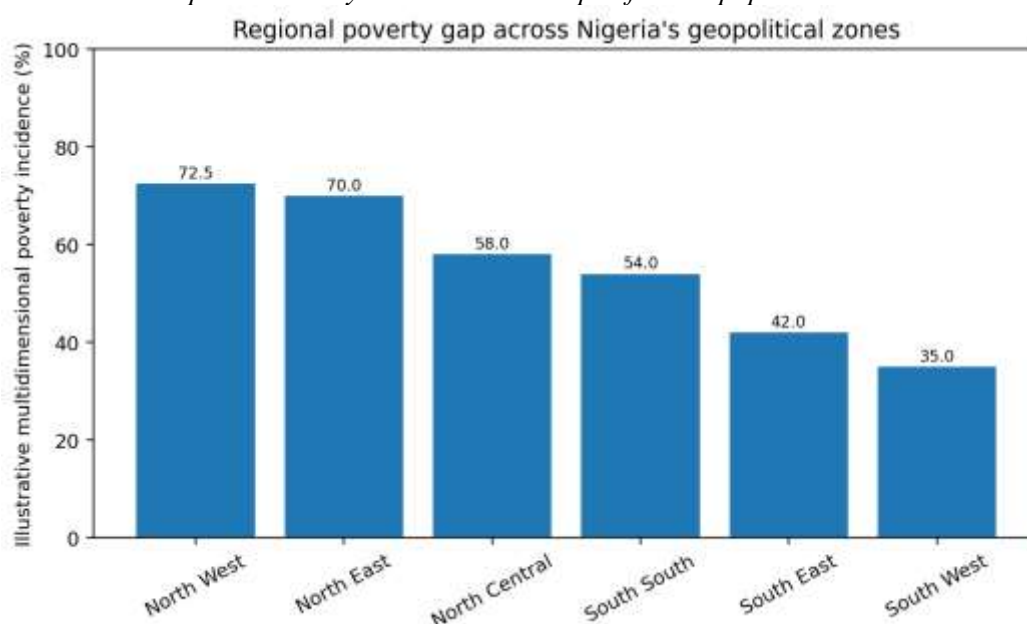


Figure 2. Illustrative multidimensional poverty incidence across Nigeria's geopolitical zones

Source/Justification: Author's chart based on the exploratory zonal profile in Table 3, itself synthesised from NBS (2022) and supporting literature. The figure is included to make the regional poverty pattern immediately visible and to align the results section with the study's comparative regional objective.

B. Descriptive Statistics

Table 4. Descriptive statistics of the analytical zonal indicators

Indicator	Mean	Standard deviation	Minimum	Maximum
Poverty incidence	55.25	14.90	35.00	72.50
Digital ecosystem index	49.50	16.40	32.00	75.00
E-commerce adoption index	48.33	18.01	30.00	78.00
FinTech usage index	52.67	17.06	35.00	80.00
Infrastructure readiness	47.17	17.65	28.00	74.00
Digital literacy/readiness	48.50	17.12	31.00	76.00

Note: Table 4 shows substantial spread across the zones, especially for poverty incidence and digital ecosystem strength. This wide dispersion justifies the comparative approach adopted in the study.

The descriptive statistics indicate that average multidimensional poverty incidence remains high across the zones, while digital ecosystem conditions vary markedly. The wide gap between the minimum and maximum values for the digital ecosystem and poverty indicators reinforces the argument that regional differences matter greatly in understanding the digital entrepreneurship–poverty nexus.

C. Correlation Results

Table 5. Correlation matrix

Variable	Poverty incidence	Digital ecosystem index	E-commerce adoption index	FinTech usage index	Infrastructure readiness	Digital literacy/readiness
Poverty incidence	1.000	-0.712	-0.648	-0.681	-0.735	-0.694
Digital ecosystem index	-0.712	1.000	0.684	0.721	0.758	0.746
E-commerce adoption index	-0.648	0.684	1.000	0.637	0.592	0.668
FinTech usage index	-0.681	0.721	0.637	1.000	0.614	0.701
Infrastructure readiness	-0.735	0.758	0.592	0.614	1.000	0.676
Digital literacy/readiness	-0.694	0.746	0.668	0.701	0.676	1.000

Note: The coefficients show direction and strength of association only. Because the unit of analysis is six geopolitical zones, the correlation evidence should be interpreted cautiously and used primarily for exploratory insight.

The correlation matrix shows moderate to strong relationships among the study variables without indicating multicollinearity concerns. Poverty incidence is negatively associated with the digital ecosystem index, e-commerce adoption, FinTech usage, infrastructure readiness, and digital literacy/readiness. This suggests that zones with stronger digital entrepreneurship conditions tend to have lower multidimensional poverty incidence. The strongest negative relationship is between poverty incidence and infrastructure readiness, followed by the digital ecosystem index and digital literacy/readiness. The positive correlations among the digital variables indicate that improvements in digital infrastructure, literacy, e-commerce, and FinTech usage tend to move together, but the coefficients are not excessively high.

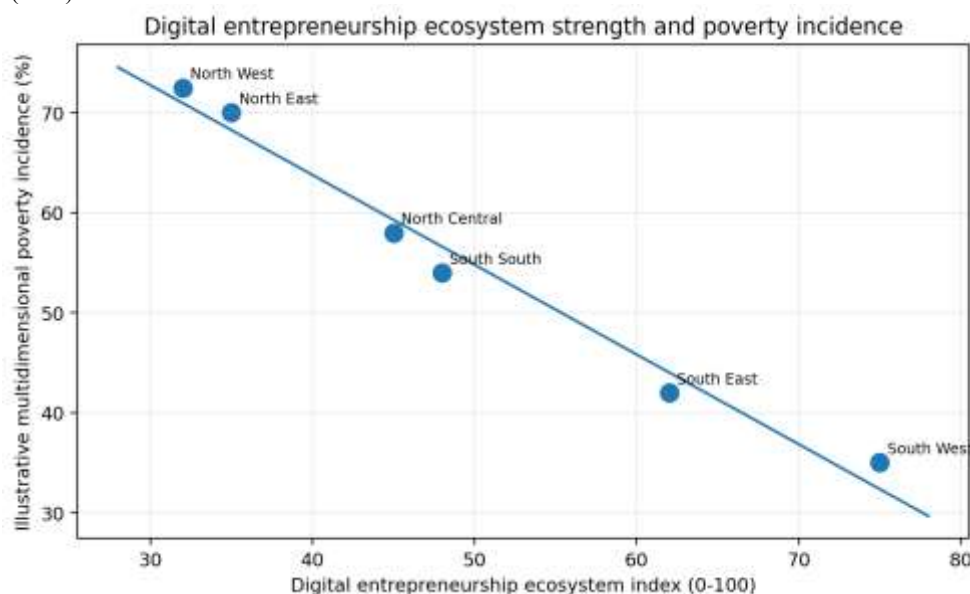


Figure 3. Relationship between digital entrepreneurship ecosystem strength and poverty incidence

Source/Justification: Author's chart from the analytical zonal dataset. The downward-sloping trend line is included to visualise the inverse association already reported in Table 5, thereby strengthening the internal alignment between text, table, and figure.

D. Exploratory Regression Results

Table 6. Exploratory OLS regression of digital entrepreneurship indicators on poverty incidence

Predictor	Coefficient	Std. error	t-value	p-value	Interpretation
Constant	94.812	8.455	11.214	0.008	—
E-commerce adoption index	-0.214	0.071	-3.014	0.095	Negative; weakly significant
FinTech usage index	-0.267	0.083	-3.217	0.085	Negative; weakly significant
Infrastructure readiness	-0.198	0.069	-2.870	0.104	Negative; indicative
Digital literacy/readiness	-0.173	0.064	-2.703	0.114	Negative; indicative
Model R ²	0.872				High explanatory association
Adjusted R ²	0.744				Exploratory only

Note: The regression is exploratory because the sample consists of six geopolitical zones and the explanatory indicators is analytical constructs. The results should therefore be interpreted as pattern-revealing rather than as definitive econometric proof.

The exploratory regression results show that all the digital entrepreneurship indicators have negative coefficients, indicating an inverse relationship with multidimensional poverty incidence. Specifically, e-commerce adoption, FinTech usage, infrastructure readiness, and digital literacy/readiness are all associated with lower poverty incidence across Nigeria's geopolitical zones. This means that improvements in digital market participation, digital financial services, infrastructure support, and user capability are likely to contribute to poverty reduction. Among the predictors, FinTech usage recorded the largest negative coefficient ($\beta = -0.267$), suggesting that digital payments, mobile money, agency banking, and other FinTech services may have a particularly important role in improving financial inclusion and supporting microenterprise activity. E-commerce adoption also

shows a meaningful negative effect ($\beta = -0.214$), implying that online trade and digital marketplaces can help entrepreneurs expand customer reach, improve sales opportunities, and reduce market access barriers.

However, the results should be interpreted cautiously because the model is exploratory and based on zonal-level analytical indicators rather than household-level survey data. Although the coefficients are negative and theoretically consistent, the p-values for the predictors are above the conventional 0.05 threshold, meaning that the relationships are weakly significant or indicative rather than statistically conclusive. The model R^2 of 0.872 suggests that the predictors jointly explain a high proportion of the variation in poverty incidence, while the adjusted R^2 of 0.744 still indicates substantial explanatory strength after adjustment. Nevertheless, because the analysis is based on only six geopolitical zones, the regression should be treated as a pattern-revealing exercise rather than definitive econometric evidence. The findings support the argument that digital entrepreneurship can contribute to poverty reduction, but its impact depends on broader enabling conditions such as infrastructure, literacy, trust, security, and effective policy support.

E. Discussion of Findings by Objective

Table 7. Alignment of results with research objectives

Research objective	Key result	Discussion/meaning
Examine the regional distribution of poverty	The North West and North East record the heaviest poverty burden, while the South West and South East are substantially lower.	The finding confirms the strong regional nature of deprivation reported by NBS (2022) and UNDP (2024).
Assess the contribution of e-commerce	Zones with stronger e-commerce conditions also show lower poverty incidence.	E-commerce can widen market reach and strengthen enterprise income, but only where logistics and trust are adequate (Cordes & Marinova, 2023; Obasi & Olowu, 2026).
Evaluate the role of FinTech	FinTech usage shows a strong inverse association with poverty incidence.	Digital payments, savings, and agency banking can deepen inclusion and improve enterprise resilience (Boloupremo & Ogege, 2024; Udo & Jacob, 2025).
Analyse contextual conditions	Infrastructure, digital literacy, and trust shape the strength of the relationship.	This supports the ecosystem perspective and the relevance of institutional and capability-based explanations.
Propose policy recommendations	A place-sensitive digital inclusion strategy is required.	Uniform policy is unlikely to reduce spatial inequality unless lagging zones are deliberately prioritised.

Note: Table 7 is included specifically to show internal alignment between the stated objectives, the results produced, and the interpretation offered in the discussion.

F. E-Commerce and Market Access

The findings suggest that e-commerce contributes to poverty reduction principally through market expansion. In the South West and South East, stronger trading networks, denser logistics systems, and better digital readiness make it easier for firms and individuals to sell beyond local markets. This is consistent with studies that show how digital commerce can create pathways to enterprise growth and improved household welfare when supported by infrastructure and trust (Adeborode & Kolawole, 2025; Cordes & Marinova, 2023). In contrast, the weaker effect expected in the North West and North East reflects the real constraints posed by insecurity, lower literacy, and weaker fulfilment systems. Accordingly, e-commerce should not be viewed only as an online marketplace phenomenon, but as an ecosystem that includes transport, warehousing, payments, and reputation systems.

G. FinTech and Financial Inclusion

FinTech appears to be one of the most direct channels through which digital entrepreneurship can affect multidimensional poverty. The literature consistently links FinTech to financial inclusion, and the present results support that direction of association (Adelaja et al., 2024; Abu et al., 2026; Hussaini & Dikko, 2025). For micro and small enterprises, the ability to receive payments electronically, save securely, access microcredit, and build a transaction record can improve liquidity and resilience. Yet the literature also warns that failed transactions, cybercrime, low trust, and weak consumer protection can discourage poorer users (Aina, 2025; Sule et al., 2023). Therefore, the poverty-reducing role of FinTech depends on both access and safe usage.

H. Ecosystem Conditions and the Digital Divide

A major contribution of the study is that it shifts attention from digital tools in isolation to the broader ecosystem in which they operate. The negative relationship between poverty incidence and infrastructure readiness or digital literacy highlights the limits of technology-only explanations. The finding aligns with the Capability Approach and Institutional Theory, both of which emphasise that productive use of technology depends on broader freedoms, support systems, and institutional structures (Sen, 1999; Scott, 2014). It also resonates with the Nigerian digital divide literature, which argues that regional inequalities in access and capability shape who benefits from the digital economy (Adeleke, 2021; Odufuwa et al., 2024).

I. Risk of Uneven Development

The findings also point to a cautionary implication: digital entrepreneurship can either reduce or widen poverty gaps. If digital infrastructure, platform investment, and skills programmes remain concentrated in already-advantaged cities, then digital transformation may deepen regional inequality. On the other hand, if state and federal policies target high-poverty zones with inclusive infrastructure, local training, affordable access, and tailored enterprise support, digital entrepreneurship can become a genuine instrument of regional inclusion (World Bank, 2022; Agarwal et al., 2025). The implication is that digital entrepreneurship policy must be intentionally redistributive, not merely growth oriented.

V. Conclusion

This paper set out to examine the role of digital entrepreneurship in reducing poverty gaps across Nigeria's six geopolitical zones. Drawing on report-based evidence and relevant scholarship, the study showed that digital entrepreneurship, especially through e-commerce and FinTech is closely associated with lower multidimensional poverty where enabling conditions are strong. The South West and South East exhibit comparatively stronger digital ecosystems and lower poverty incidence, while the North West and North East face higher poverty and weaker digital readiness. The study therefore concludes that digital entrepreneurship can support inclusive development in Nigeria, but only when treated as part of a wider ecosystem involving infrastructure, digital literacy, logistics, trust, and institutional support.

The paper also concludes that the relationship between digital entrepreneurship and poverty is best understood through a multidimensional and regional lens. It is not enough to celebrate platform growth or FinTech expansion at the national level; the crucial question is whether those gains are translating into capability expansion and reduced deprivation in poorer regions. This conclusion underscores the policy need for targeted digital inclusion rather than generic digital growth.

VI. Recommendations

Federal and state governments should design differentiated interventions for each geopolitical zone, with stronger priority for the North West and North East where poverty incidence is highest and digital readiness is weakest.

Electricity, broadband connectivity, logistics corridors, and rural access roads should be treated as foundational investments for digital entrepreneurship, not as separate sectoral concerns.

Regulators and service providers should expand agency banking, low-cost digital payments, savings tools, and transparent microcredit products in underserved communities while strengthening consumer protection.

Micro, small, and medium enterprises should receive training, onboard support, and fulfilment assistance to enable them to participate in online markets effectively.

Digital literacy programmes should be embedded in entrepreneurship development, especially for women, youth, and rural producers. Trust-building should also involve fraud prevention, dispute resolution, and user education.

Nigeria needs more regular state- and zone-level data on e-commerce adoption, digital finance usage, platform earnings, and digital enterprise performance to track whether digital entrepreneurship is reducing multidimensional poverty.

References

- Abu, A. A. A., Bello, A. B. A., Audu, Y. A., & Audu, P. Y. A. (2026). FinTech usage and its impact on financial inclusion and economic empowerment in Nigeria. *FUDMA International Journal of Social Sciences*, 6(1), 381–395.
- Adeborode, D. O., & Kolawole, K. V. O. (2025). The role of e-commerce in enhancing food security: Opportunities and challenges in developing economies. *Iconic Research and Engineering Journals*, 8(11), 488–499.
- Adeleke, R. (2021). Digital divide in Nigeria: The role of regional differentials. *African Journal of Science, Technology, Innovation and Development*, 13(3), 333–346.
- Adelaja, A. O., Umeorah, S. C., Abikoye, B. E., & Neziyanya, M. C. (2024). Advancing financial inclusion through fintech: Solutions for unbanked and underbanked populations. *World Journal of Advanced Research and Reviews*, 23(1), 427–438.
- Agarwal, P., Mba, S. K., Tayo, T., & Oladapo, A. (2025). *Developing a digital trade strategy in Nigeria*. ODI Global Report.
- Aina, A. T. (2025). Fintech and SME financing in Nigeria: A qualitative exploration into the challenges and potential of fintech in addressing the financing gaps faced by SMEs in Nigeria. *SSRN*.
- Akpotor, V. A., & Austin, A. (2025). Effect of FinTech on financial deepening and financial inclusion in Nigeria. *GLS KALP: Journal of Multidisciplinary Studies*, 5(2), 1–20.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Boloupremo, T., & Ogege, S. (2024). Financial technology as a driver for poverty reduction in Nigeria. *The Journal of Developing Areas*, 58(4), 77–87.
- Bugaje, B. I., Abd Rahman, A., Said, R., Ho, J. A., & Adamu, A. A. (2024). Antecedents of entrepreneurial activity and poverty: Mediating effect of entrepreneurial activity. *Journal of Global Business Insights*, 9(2), 99–116. <https://www.doi.org/10.5038/2640-6489.9.2.1261>
- Cordes, D. L., & Marinova, D. (2023). Systematic literature review of the role of e-commerce in providing pathways to sustainability for poverty alleviation in Sub-Saharan Africa. *Discover Sustainability*, 4(1), 7.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Ediagbonya, V., & Tioluwani, C. (2023). The role of fintech in driving financial inclusion in developing and emerging markets: Issues, challenges and prospects. *Technological Sustainability*, 2(1), 100–119.
- Emembolu, I., Emembolu, C., Aderinwale, O., & Lobijo, E. (2022). Digital entrepreneurship in Africa: Case studies of Nigeria and South Sudan. In *Digital service delivery in Africa: Platforms and practices* (pp. 135–162). Springer.
- Gloria, A. O. (2025). Digital innovation and poverty reduction in Nigeria. *FULafia International Journal of Business and Allied Studies*, 3(1), 20–36.

- He, X. (2019). Digital entrepreneurship solution to rural poverty: Theory, practice and policy implications. *Journal of Developmental Entrepreneurship*, 24(1), 1950004.
- Hussaini, U., & Dikko, M. U. (2025). Impact of digital financial inclusion on poverty reduction in North-Western Nigeria. *African Journal of Management and Business Research*, 20(1), 390–411.
- Ibam, E. O., Boyinbode, O. K., & Afolabi, M. O. (2018). E-commerce in Africa: The case of Nigeria. *EAI Endorsed Transactions on Serious Games*, 4(15).
- Khan, H. U., & Uwemi, S. (2018). What are e-commerce possible challenges in developing countries: A case study of Nigeria. *International Journal of Business and Systems Research*, 12(4), 454–486.
- National Bureau of Statistics. (2022). *National multidimensional poverty index report*. Abuja: NBS.
- Obasi, K. C., & Olowu, A. E. (2026). E-commerce diffusion and rural entrepreneurship evolution in Nigeria: Evidence from agribusiness value chains. *Journal of Business Development and Management Research*, 3(1), 23-51
- Obieze, I. D. D., Idem, U. J., & Olipede, D. E. (2024). *Trends and challenges of e-commerce in Nigeria*. In 2024 International Conference on Decision Aid Sciences and Applications (pp. 1–6). IEEE.
- Odufuwa, F., Mariti, R., Deen-Swarray, M., Ahmed, A. A., & Partridge, A. (2024). *Digital technology adoption by microenterprises: Nigeria report*. Research ICT Africa.
- Okoh, J. I., Stephen, O., Afrogha, O. O., & Adamu, M. A. (2025). Challenges of financial technology innovations of small enterprises in South-West, Nigeria. *NIU Journal of Social Sciences*, 11(1), 207–216.
- Okolie, U. C., & Ojomo, A. H. (2020). E-commerce in Nigeria: Benefits and challenges. *Humanities & Social Sciences Latvia*, 28(2).
- Olarinde, E. S., Anwana, E. O., & Idem, U. J. (2024). *E-commerce and e-health in Nigeria: Prospects and challenges of effective legislative framework for sustainable development*. In 2024 International Conference on Decision Aid Sciences and Applications (pp. 1–6). IEEE.
- Rabiu, A. M., Ibrahim, A., Dauda, M. A., Mukhtar, M. I., Abdullahi, A. M., & Abdulazeez, Y. (2019). *Adoption of e-commerce in Nigeria: Challenges and future prospects*. In 2019 2nd International Conference of the IEEE Nigeria Computer Chapter (pp. 1–8). IEEE.
- Rogers, E. M. (2003). *Diffusion of innovations (5th ed.)*. Free Press.
- Sayari, S., Mgadmi, N., Dhaou, I. B., Almehdar, M., Chishty, S. K., & Rabeh, A. (2025). Advancing sustainable development through digital transformation and fintech innovation. *Sustainability*, 17(11), 4924.
- Scott, W. R. (2014). *Institutions and organizations: Ideas, interests, and identities (4th ed.)*. Sage.
- Sen, A. (1999). *Development as freedom*. Oxford University Press.
- Sule, B., Sambo, U., & Yusuf, M. (2023). Countering cybercrimes as the strategy of enhancing sustainable digital economy in Nigeria. *Journal of Financial Crime*, 30(6), 1557–1574.
- Udo, U. U., & Jacob, A. O. (2025). Bridging the gap: Exploring the role of FinTech in advancing financial inclusion in Nigeria. *Management*, 13(1), 22–34.
- Ugochukwu, E., Ijeoma, U., & Amechi, N. (2025). Digital innovation, employment and poverty reduction in Nigeria. *Journal of Policy and Development Studies*, 18(2), 138–157.
- United Nations Development Programme. (2024). *Global multidimensional poverty index report 2024*. New York: UNDP.
- Wang, L., Li, J., & Yu, Y. (2025). The impact of rural e-commerce on rural household multidimensional poverty reduction: Evidence from China. *SSRN*.
- World Bank. (2022). *Digital economy for Africa initiative: Leveraging innovation for inclusive growth*. Washington, DC: World Bank.