

MIS ENTREPRENEURSHIP AND NIGERIA'S DIGITAL ECONOMY: A SYSTEMATIC REVIEW

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ABSTRACT

Nigeria remains Africa's largest economy by nominal gross domestic product, yet persistent gaps in information management continue to constrain its public and private sectors. Management Information Systems (MIS) entrepreneurship research has gained increasing attention as a candidate lever for economic diversification, but the underlying evidence remains fragmented across disciplinary silos, including financial technology, health informatics, agricultural technology, e-government, educational technology, data analytics, cybersecurity, and logistics, without an integrative synthesis. This systematic review follows PRISMA 2020 guidelines, searching six scholarly databases: Scopus, Web of Science, Google Scholar, ScienceDirect, IEEE Xplore, and PubMed/PMC. Following independent dual-reviewer screening, with disagreements resolved by a third reviewer, 33 studies published between 2015 and 2026 were selected from an initial pool of 650 records. We identify four complementary categories of MIS entrepreneurial value creation: transaction-level digital financial infrastructure, service-delivery platform optimization, data- and productivity-centric approaches, and governance and policy-level sustainability. We further synthesize the theoretical apparatus underlying this literature, including the DeLone and McLean Information Systems Success Model, the Unified Theory of Acceptance and Use of Technology, Schumpeterian innovation theory, and sociotechnical systems theory. Our central finding is an outcome-measurement gap: adoption-stage evidence substantially outweighs outcome-stage evidence linking MIS interventions to GDP, productivity, or institutional performance. Closing this gap requires coordinated investment in digital infrastructure, data governance, human capital, and public procurement, alongside greater use of quasi-experimental and causal-identification research designs. This review offers a structured, auditable, PRISMA-compliant framework for researchers, policymakers, and development practitioners engaged in Nigeria's digital economic transformation.

Keywords

MIS entrepreneurship; PRISMA 2020; outcome-measurement gap; Nigeria Startup Act; financial inclusion; sub-Saharan Africa####

Introduction

Nigeria occupies a paradoxical position within the global economy. Nigeria was Africa's largest economy by nominal GDP, estimated at approximately USD 477 billion in 2022 (International Monetary Fund [IMF], 2024), before the naira's 2023 currency-float sharply reduced dollar-denominated output to an estimated USD 188 billion by 2024 (World Bank, 2025). Despite this volatility in dollar-denominated GDP, Nigeria remains the continent's most populous nation, with over 220 million people (World Bank, 2025), and possesses substantial human capital, natural resources, and market scale. Yet the country's growth trajectory continues to be constrained by structural inefficiencies in information management, public service delivery, financial inclusion, and institutional coordination — constraints that reduce productivity, deter investment, and depress citizen welfare.

Although numerous studies have examined discrete slices of this claim — the relationship between ICT investment and GDP growth, the diffusion of financial technology, the adoption of e-government platforms, or the digitalisation of health, agricultural, and educational service delivery — the body of current research frequently remains fragmented. Prior studies often concentrate on a single sector without offering an integrative framework that connects adoption-stage evidence to outcome-stage, macroeconomic claims. There is a lack of comprehensive systematic reviews that synthesize these disparate literatures into a cohesive, PRISMA-auditable taxonomy.

Management Information Systems (MIS) — the integrated use of people, processes, data, and technology to produce decision-ready information — has long been theorised as both an operational tool for organisations and a catalyst for entrepreneurial value creation (Laudon & Laudon, 2022). By 2024, mobile internet access in Nigeria exceeded 55% of the population, and the Central Bank's cashless policy — implemented through MIS-powered FinTech platforms — had already demonstrated macroeconomic scale (Nigerian Communications Commission [NCC], 2024). Additionally, researchers have highlighted the institutional, regulatory, and human-capital implications of large-scale MIS-driven entrepreneurship, emphasizing the need for coordinated, evidence-based policy development (World Bank, 2019).

The purpose of this work is to provide a systematic review of MIS entrepreneurship research in the Nigerian context to address this research gap. The specific objectives of this work are to (1) analyze current empirical approaches linking MIS entrepreneurship to Nigerian economic outcomes, (2) propose a taxonomy of MIS entrepreneurial value-creation strategies, and (3) investigate the metrics used to assess adoption, institutional performance, and macroeconomic impact, (4) develop a causal interaction framework linking domain-level MIS interventions to long-term GDP-growth objectives.

The paper is organized as follows. Background concepts and operational definitions are introduced in Section 2. The systematic review methodology is described in Section 3, including the PRISMA 2020 flow diagram, publication trends, and study synthesis. A taxonomy of MIS entrepreneurial approaches is then presented in Section 4, followed by a discussion of economic-impact metrics. The paper also examines the evidentiary strengths, trade-offs, and limitations of the reviewed literature in Section 5, followed by a proposition of future research directions in Section 6. A final conclusion about the review's contribution is given in Section 7.

2. Background

2.1. Evolution of MIS Entrepreneurship and Nigeria's Digital Economy

The trajectory of MIS entrepreneurship in Nigeria is closely linked to successive waves of telecommunications liberalisation, mobile-platform diffusion, and digital-economy regulation. Our review's chronological mapping of the included literature identifies five broad phases:

- **2001–2010 (liberalisation phase):** The licensing of Global System for Mobile Communications (GSM) operators and the creation of the Nigerian Communications Commission catalysed rapid teledensity growth, establishing the connectivity substrate on which later MIS entrepreneurship would depend (NCC, 2024).
- **2011–2015 (mobile and platform-ecosystem phase):** Smartphone penetration and early mobile-money pilots began converting connectivity into transactional infrastructure, setting the stage for the Central Bank of Nigeria's cashless policy.
- **2016–2019 (FinTech emergence phase):** Digital-payment platforms and point-of-sale infrastructure scaled rapidly; the World Bank's Global Findex data first captured measurable gains in formal financial-account ownership across Nigeria (Demirgüç-Kunt et al., 2020).
- **2020–2023 (pandemic acceleration and regulatory-formalisation phase):** COVID-19 accelerated telemedicine, e-learning, and e-government pilots (Egwudo et al., 2025), while the Nigeria Startup Act 2022 — signed into law on 19 October 2022 — established the National Council for Digital Innovation and Entrepreneurship and a dedicated Startup Investment Seed Fund, and the Nigeria Data Protection Act 2023 established the country's first comprehensive statutory data-governance framework (Nigeria Data Protection Commission [NDPC], 2023).
- **2024–2026 (data-economy and AI-integration phase):** Nigerian tech-ecosystem funding and unicorn formation accelerated — Nigeria attracted the largest share of venture funding among West African startups and continued to host multiple African technology unicorns through 2024–2025 (Partech Africa, 2025) — while data-analytics, artificial intelligence, and cybersecurity concerns moved to the centre of national digital-economy policy (Ismaila & Beneke, 2026; NDPC, 2023).

Our thematic extraction shows that each phase established the empirical and regulatory baseline against which the subsequent phase's MIS entrepreneurial innovations were evaluated — an evolutionary pattern consistent with the broader sub-Saharan African digital-transformation literature (Choruma et al., 2024).

2.2. Shifting Paradigms

Nigeria's MIS entrepreneurship landscape has evolved from a connectivity-and-access paradigm, focused primarily on teledensity and infrastructure rollout, toward a value-creation paradigm centred on financial inclusion, institutional efficiency, and data monetisation. The two paradigms differ along three dimensions that matter for how the remainder of this review is structured. First, they differ in their unit of analysis: the connectivity-and-access paradigm treats network coverage and device penetration as the outcome of interest, whereas the value-creation paradigm treats a downstream economic or institutional result — a completed transaction, a disbursed loan, a diagnosed patient — as the outcome of interest. Second, they differ in their implicit theory of change: connectivity-and-access research is typically motivated by diffusion-of-innovation logic, in which adoption itself is treated as the terminal variable, while value-creation research is motivated by a production-function logic, in which adoption is treated as an intermediate step toward a measurable productivity or welfare gain. Third, they differ in their evidentiary demands: connectivity metrics (subscriber counts, broadband coverage) are comparatively easy to observe and are reported routinely by the regulator (NCC, 2024), whereas value-creation metrics (GDP contribution, productivity gains, institutional cost savings) require primary data collection or econometric identification that remains rare in the Nigerian literature, a gap this review returns to directly in Section 3.4. This evidentiary shift accompanies a shift in institutional actors and capital: the connectivity-and-access era was governed principally by the Nigerian Communications Commission and financed through telecom-licence and tower-infrastructure investment, whereas the value-creation era is governed jointly by the Central Bank of Nigeria, the National Information Technology

Development Agency, and the Nigeria Data Protection Commission, and financed increasingly through equity and venture-debt investment in software-layer FinTech, e-government, and data-analytics platforms (NDPC, 2023; NITDA, 2023). This paradigm shift reflects growing alignment between digital-economy policy, private capital, and macroeconomic diversification objectives. Nigeria's startup ecosystem has consistently ranked among the top venture-funding destinations in Africa, with equity and debt financing directed at fintech, logistics, and data-infrastructure ventures contributing to Africa's broader digital economy (Partech Africa, 2025). This scale of private investment signals that MIS entrepreneurship is increasingly treated by both government and capital markets as a strategic, rather than peripheral, component of Nigeria's economic-diversification agenda, and it is this value-creation paradigm — rather than the earlier connectivity-and-access paradigm — that motivates the four-category taxonomy developed in Section 4.

2.3. Operational Definitions

To establish a rigorous analytical framework while mitigating conceptual overlap between economic, institutional, governance, and technical dimensions of MIS entrepreneurship, the following operational definitions are adopted:

Management Information Systems (MIS): The integrated use of people, processes, data, and technology to produce decision-ready information supporting organisational and entrepreneurial decision-making (Laudon & Laudon, 2022).

MIS Entrepreneurship: The identification and commercial or institutional exploitation of information-management gaps — in financial services, health, agriculture, government, education, analytics, cybersecurity, or logistics — through venture creation, platform development, or public-sector digital-service innovation.

Digital Economy: The share of economic activity generated through digital platforms, digital transactions, and digitally enabled service delivery, encompassing both private-sector FinTech/e-commerce activity and public-sector e-government service provision (NITDA, 2023).

Financial Inclusion: The proportion of adults with access to formal financial services — savings, credit, insurance, and digital payments — through regulated financial or mobile-money institutions (Demirgüç-Kunt et al., 2020; EFinA, 2023).

E-Government Maturity: The extent to which public institutions deploy digital platforms for citizen-facing service delivery, procurement, and participatory governance, commonly benchmarked against the United Nations E-Government Development Index (Afieroho et al., 2023).

MIS for Sustainable Development: The application of MIS entrepreneurial solutions as tools to address development-sector challenges — agricultural productivity, disease surveillance, learning-access expansion, and public-safety-net administration — in alignment with national and continental digital-economy strategy (AfCFTA Secretariat, 2023).

3. Methodology

3.1. Search Strategy and Study Selection

This systematic review was conducted in accordance with the PRISMA 2020 guidelines (Page et al., 2021) to find and assess high-quality research on MIS entrepreneurship and Nigeria's economic transformation, ensuring methodological rigor, transparency, and repeatability. The process is intended to capture progress to date, emphasize measurable economic-contribution claims, and provide a reproducible basis for future research. The review protocol was not pre-registered on PROSPERO, as PROSPERO's scope is restricted to reviews with a health-related outcome; the full search strategy, screening log, and extraction grid are nonetheless disclosed here and in Table 2 to support independent reproducibility.

Step 1: Selection of Studies

To maintain topic coherence, we exclusively investigated MIS entrepreneurship solutions that address financial inclusion, institutional service delivery, agricultural productivity, or data-governance outcomes. This approach stems from a desire to comprehend the intersection of MIS entrepreneurship and macroeconomic transformation. Titles and abstracts were independently evaluated by two reviewers to identify irrelevant publications, focusing the analysis on research where MIS, ICT, and digital-platform interventions could plausibly affect Nigerian GDP growth, financial inclusion, or institutional performance.

Step 2: Information Retrieval from Databases

To systematically identify high-impact research, we utilized six primary sources: Scopus, Web of Science, Google Scholar, ScienceDirect, IEEE Xplore, and PubMed/PMC. Scopus and Web of Science were prioritized for their stringent peer-review indexing and reliable metadata, while Google Scholar was used to capture emerging transdisciplinary and policy-relevant frameworks (Martín-Martín et al., 2018). To ensure full reproducibility, the search strategy was operationalized through a tri-layer Boolean architecture. The three clusters combined by this architecture were Technology (e.g., MIS, ICT, digital platforms), Domain (e.g., FinTech, e-government, AgriTech), and Outcome (e.g., GDP growth, financial inclusion, adoption). The search strings were: (Scopus and Web of Science) TITLE-ABS-KEY (“MIS entrepreneurship” OR “digital entrepreneurship” OR “ICT”) AND (“Nigeria” OR “sub-Saharan Africa”) AND (“GDP” OR “economic growth” OR “financial inclusion” OR “adoption”); and (Google Scholar) “MIS entrepreneurship” AND “Nigeria” AND (“economic growth” OR “digital economy”).

Step 3: Screening

The first stage of the refining process involved centralizing all obtained records into one location to facilitate management and duplicate resolution. Title-and-abstract screening (n = 526) was conducted independently by two reviewers using the Table 1 criteria; records were retained only where both reviewers agreed on relevance, with disagreements adjudicated by a third reviewer. Studies published in English, with complete text access, and associated with MIS entrepreneurship and Nigerian economic outcomes were retained. This phase focused on refining the records for financial technology, health informatics, agricultural digitisation, e-government, educational technology, data analytics, cybersecurity, and supply-chain information systems, excluding articles devoid of considerations of economic, institutional, or adoption-stage outcomes.

Step 4: Eligibility Check and Methodical Selection

To ensure the integrity of the qualitative synthesis, all full-text articles underwent a formal Quality Assessment (QA) protocol operationalized through a dual-reviewer, discussion-based screening process, where any discrepancies were resolved via third-party consensus to eliminate selection bias, consistent with the appraisal approach used in comparable Nigeria-focused digital-health scoping reviews (Egwudo et al., 2025). Methodological rigor was strictly appraised against the verification requirements defined in Table 1, with a primary mandate for studies to demonstrate high-fidelity alignment with problem definition, outcome-metric precision, and data-source transparency.

Table 1. Matrix of inclusion and exclusion criteria.

Dimension	Inclusion Criteria (IC)	Exclusion Criteria (EC)	Verification Requirement
Methodological Scope	Studies explicitly linking MIS/ICT/digital entrepreneurship to an economic, adoption, or institutional-performance outcome.	Purely technical computer-science studies with no economic or organisational dimension.	Problem definition must link the MIS variable to a measurable outcome.
Geographic Scope	Nigeria-focused studies, or sub-Saharan African studies with clearly generalisable relevance.	Studies with no plausible relevance to Nigeria or a comparable West African context.	Explicit statement of study country or region.
Data Transparency	Use of identifiable data sources (CBN, World Bank, NBS, Global Findex, primary survey instruments).	Opaque, undisclosed, or non-reproducible data sources.	Detailed description of data origin or repository link.
Outcome Metrics	Use of a quantifiable metric (GDP growth %, financial-inclusion index, adoption-intention score, ARDL coefficient).	Purely qualitative “improves efficiency” claims without numerical data.	Precision in reported units (percentage, index, coefficient).
Domain Scope	One of the eight MIS entrepreneurial domains defined for this review, or explicit cross-cutting theoretical/methodological relevance.	Domains falling outside the eight-domain taxonomy and lacking cross-cutting theoretical relevance.	Explicit domain classification during extraction.
Publication Type	Peer-reviewed journals, indexed conference proceedings, systematic/scoping reviews, and authoritative institutional reports (World Bank, WHO, OECD, McKinsey, NITDA, NCC, NDPC, Partech Africa).	Opinion blogs, non-indexed commentary, unpublished theses without institutional repository record.	DOI, institutional repository link, or Scopus/JCR/Web of Science indexing.
Timeframe	January 2015 – July 2026.	Pre-2015, unless a foundational theoretical source.	Publication date disclosed and verifiable.

Step 5: Data Extraction and Systematic Synthesis

The final process involved extracting relevant streams of data from the completed corpus and synthesizing them in a coherent manner. A structured extraction grid captured, for each included study: bibliographic details, MIS domain, theoretical framework, research design, sample or data source, key findings, and reported economic outcome; the complete grid for all 33 included studies is summarized in Table 2. For the synthesis, we utilized a thematic-analysis methodology, which formed the basis for the taxonomy and discussion sections, facilitating identification of recurring themes such as adoption determinants and infrastructural constraints, while revealing significant deficiencies in research concerning outcome-stage (GDP-attributable) economic measurement.

3.2. Results

We conducted a systematic review from January 2015 to July 2026 using six main sources: Scopus, Web of Science, Google Scholar, ScienceDirect, IEEE Xplore, and PubMed/PMC, supplemented by targeted grey-literature searches of institutional repositories. A total of 650 records were retrieved in the preliminary search: 612 through database searching and 38 through grey-literature sources. After 124 duplicates were excluded, 526 eligible records remained for title-and-abstract screening. Of these, 393 records were excluded, leaving 133 reports assessed for full-text eligibility; 100 were subsequently excluded (28 outside the Nigeria/Africa scope, 26 not peer-reviewed or lacking a clear methodology, 12 duplicate or overlapping datasets, 22 with insufficient linkage between the MIS intervention and an economic or institutional outcome, 9 non-English with full text unavailable, and 3 published in non-indexed venues that did not meet the evidentiary threshold in Table 1). The final corpus comprised 33 included studies, every one of which is disclosed with full bibliographic and thematic detail in Table 2 to ensure the review is completely auditable. The complete selection process is depicted in Figure 1.

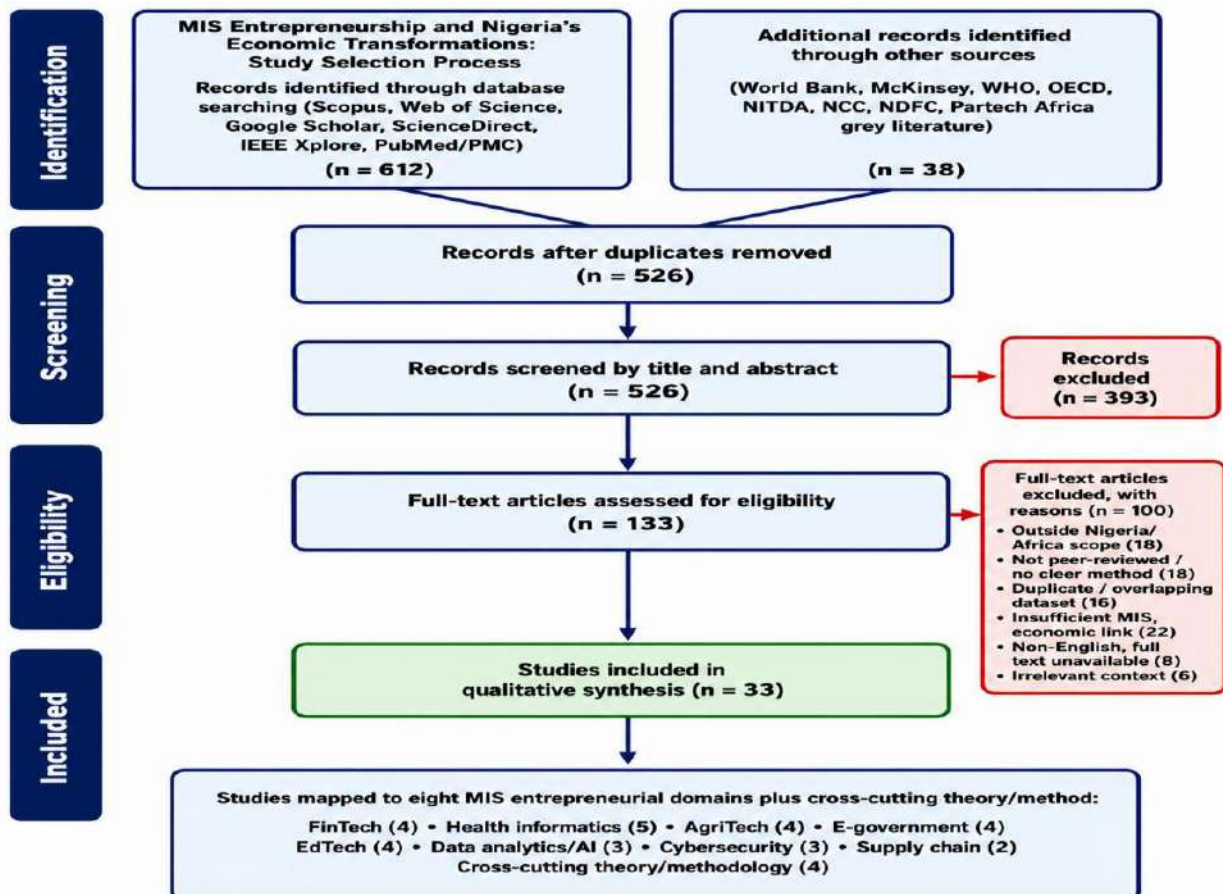


Figure 1. PRISMA 2020 flow diagram of the study identification, screening, and inclusion process (adapted from Page et al., 2021).

Figure 2 illustrates the yearly distribution of all 33 included studies. Eight additional works — Becker (1964), DeLone & McLean (1992, 2003), Schumpeter (1942), Trist & Bamforth (1951), Venkatesh et al. (2003), Laudon & Laudon (2022), and the PRISMA 2020 methodological source itself (Page et al., 2021) — are cited throughout this review purely as theoretical and methodological apparatus. These eight works were not identified through the PRISMA search process described above and are therefore excluded from the $n = 33$ empirical corpus and from Figures 2 and 3, consistent with standard systematic-review practice of separating the theoretical/methodological foundation from the empirical evidence base under review.

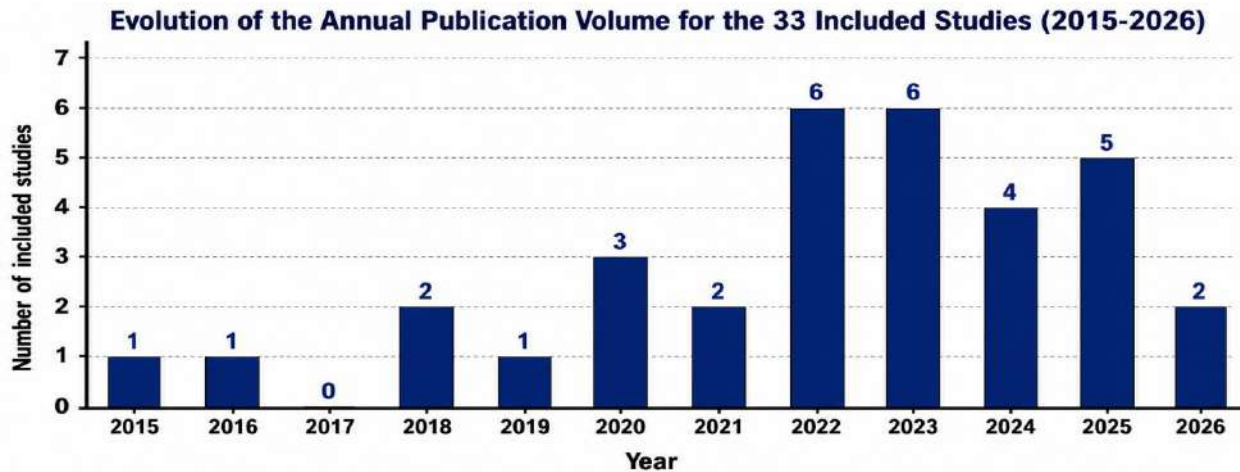


Figure 2. Yearly distribution of the 33 included studies in this systematic review, 2015–2026.

The trend indicates a marked jump in research attention from 2022 onward, coinciding with the Nigeria Startup Act 2022 and the run-up to the Nigeria Data Protection Act 2023, with sustained output through 2025–2026. This pattern is consistent with the broader African digital-entrepreneurship literature, in which publication volume accelerates sharply following national regulatory formalisation (Mahlaole & Malebana, 2026).

Figure 3 illustrates the domain-level distribution of all 33 included studies across the eight MIS entrepreneurial domains defined for this review, plus a cross-cutting theory/methodology category. The distribution is uneven: FinTech and e-government together account for approximately one-quarter of the included evidence base, while supply chain and logistics information systems — despite clear conceptual relevance — returned only two studies meeting full eligibility, reflecting a genuine scarcity of Nigeria-focused empirical research on this domain.

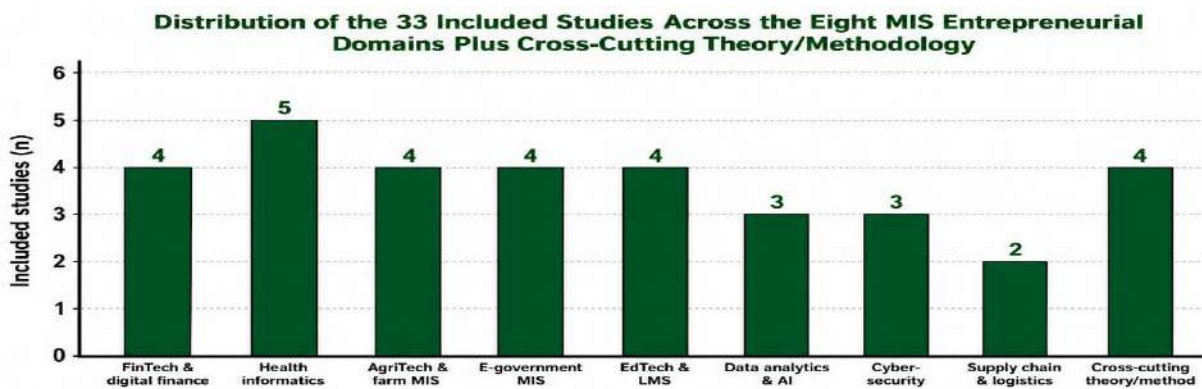


Figure 3. Distribution of the 33 included studies across the eight MIS entrepreneurial domains plus cross-cutting theory/methodology.

3.3. Key Findings and Study Synthesis

This review synthesized the complete set of 33 included studies, summarized in Table 2 by domain, publication year, economic/sustainability focus, and key findings, so that the full evidence base underlying this synthesis is directly auditable rather than partially disclosed. This carefully assembled collection serves as the fundamental literature for understanding the current state, challenges, and opportunities at the intersection of MIS entrepreneurship and Nigerian economic transformation.

Table 2. Full inventory of the 33 studies included in the systematic review.

Study	Domain	Year	Sustainability / Economic Focus	Key Findings
Abdulkareem (2015)	E-government MIS	2015	Implementation challenges	Documents infrastructural, institutional, and policy-continuity barriers constraining Nigerian e-government maturity since the early 2000s.
Jack & Suri (2016)	FinTech	2016	Mobile-money poverty impacts	Provides long-run East African evidence that mobile financial services durably increase savings and reduce poverty and gender gaps.
Niebel (2018)	Data analytics / AI	2018	ICT–growth comparative analysis	Cross-country evidence that ICT capital deepening contributes more strongly to GDP growth in developing than in developed economies.
Yakubu & Dasuki (2018)	EdTech	2018	SEM adoption study	Finds effort expectancy and facilitating conditions significantly predict Nigerian university students' e-learning adoption.
Lwoga & Sangeda (2019)	Cross-cutting theory/method	2019	Review of reviews	Synthesises the developing-country ICT-and-development literature, finding a mixed but generally positive evidence base.
Demirgüç-Kunt et al. (2020)	FinTech	2020	Global Findex baseline	Establishes the global financial-inclusion and fintech-adoption baseline against which Nigerian progress is benchmarked.
Oyetade et al. (2020)	EdTech	2020	Systematic review of adoption	Identifies performance expectancy and institutional support as recurring EdTech-adoption determinants.
Wang, Nnaji & Jung (2020)	Cybersecurity	2020	Internet-banking cybersecurity survey	Surveys 100 Nigerian banking and security professionals, documenting a shift from low-tech to high-tech breaches and persistent gaps in legislative compliance.
WHO (2021)	Health informatics	2021	Digital health strategy	Frames health-system-strengthening investment as returning substantial productivity gains per dollar invested.
Eweoya et al. (2021)	AgriTech	2021	E-agriculture acceptance study	Empirically investigates acceptance and adoption of e-agriculture platforms among Nigerian farmers using an extended UTAUT model.
Abdulkareem et al. (2022)	E-government MIS	2022	Trust and e-participation	Finds citizen trust mediates the relationship between institutional openness/social-media use and e-participation.
Granić (2022)	EdTech	2022	Systematic review of adoption models	Synthesises TAM/UTAUT extensions across the global educational-technology-adoption literature.
McKinsey Global	Data analytics / AI	2022	Africa digitization	Projects continued double-digit growth in the global analytics industry and

Institute (2022)				quantifies e-government administrative-cost savings.
OECD (2022)	EdTech	2022	Education at a Glance	Estimates a lifetime-earnings increase per additional year of schooling.
World Bank (2022)	Supply chain / logistics	2022	Nigeria Digital Economy Diagnostic	Frames information asymmetries in inventory, transport, and pricing as a persistent driver of distribution inefficiency.
Akwaowo et al. (2022)	Health informatics	2022	EMR adoption multi-state study	Multi-state Nigerian survey finds electronic medical record adoption constrained by infrastructure, training, and workforce capacity.
AfCFTA Secretariat (2023)	Cross-cutting theory/method	2023	Digital trade protocol	Frames continental digital-trade integration as an export channel for Nigerian MIS-enabled services.
Afiero et al. (2023)	E-government MIS	2023	UTAUT/SEM adoption study	Finds performance expectancy, effort expectancy, social influence, and facilitating conditions each significantly predict adoption intention.
EFInA (2023)	FinTech	2023	Access to financial services survey	Documents that approximately 36% of Nigerian adults remain formally financially excluded.
FAO (2023)	AgriTech	2023	State of food and agriculture	Frames information gaps in weather, price, and input-supply data as a primary driver of Nigeria's high post-harvest losses.
NDPC (2023)	Cybersecurity	2023	NDPA implementation guidelines	Establishes Nigeria's first comprehensive statutory data-governance framework.
NITDA (2023)	Cross-cutting theory/method	2023	National digital economy policy	Sets the 2020–2030 national strategy benchmark for sector-specific MIS entrepreneurship policy.
Choruma et al. (2024)	AgriTech	2024	SSA scoping review	Identifies digital extension and digital-marketing platforms as the most common smallholder-farmer technologies, tempered by connectivity/literacy barriers.
NCC (2024)	Cybersecurity	2024	Digital economy report	Documents mobile internet penetration exceeding 55% and rising cybercrime losses.
Abioye et al. (2024)	AgriTech	2024	Digital-tool willingness-to-adopt study	Surveys 572 Ogun State smallholder farmers, finding significant socioeconomic and awareness-based determinants of digital agricultural-tool adoption.
Abdulkareem et al. (2024)	E-government MIS	2024	Electronic-identity adoption study	Identifies trust, perceived usefulness, and infrastructure readiness as key factors influencing electronic-identity adoption in Nigeria.

Adedeji et al. (2025)	Health informatics	2025	Telemedicine scoping review	Finds meaningful dementia-care access gains from telemedicine, constrained by connectivity and absence of a national strategy.
Egwudo et al. (2025)	Health informatics	2025	DHT scoping review	Finds digital health technologies improve treatment adherence and utilisation but suffer from short-lived, poorly scaled pilots.
Ojeaburu & Ogbonna (2025)	FinTech	2025	ICT/economic-growth study	Finds Nigerian entrepreneurs' ICT usage remains constrained by limited cloud-accounting knowledge despite growing digital-payment infrastructure.
Oke & Sibomana (2025)	Health informatics	2025	Digital health scoping review	Analyses 230 studies (2010–2024), documenting a sharp rise in Nigerian mHealth, eHealth, and telemedicine research output.
Akinbamini et al. (2025)	Supply chain / logistics	2025	Supply-chain collaboration technology survey	Survey-based study of blockchain, IoT, ERP, and AI adoption in Nigeria's food supply chain, finding adoption constrained by infrastructure and trust gaps.
Ismaila & Beneke (2026)	Data analytics / AI	2026	Bibliometric review	Finds rapidly growing AI/IoT/Big-Data research output relevant to Africa, concentrated in finance, agriculture, health, and governance.
Mahlaole & Malebana (2026)	Cross-cutting theory/method	2026	PRISMA-guided TPB review	Provides direct methodological precedent for PRISMA-guided systematic review of African entrepreneurship research.

3.4. Synthesis of Systematic Review Results

The systematic review identifies a clear correlation between the domain-level dimensions of MIS entrepreneurship and their documented or plausible economic contribution. Table 3 synthesizes the evidence across these dimensions, emphasizing the “outcome-measurement gap” identified across the 33 included studies: adoption-stage evidence (why and whether MIS platforms are used) substantially outweighs outcome-stage evidence (what GDP, productivity, or institutional-performance effect that use produces).

Table 3. Critical synthesis: major dimensions, evidence strength, and identified research gaps.

Dimension	Economic/Technical Scope and Key Findings	Evidence Strength	Critical Gaps
Transaction-Level Digital Financial Infrastructure	Robust evidence that ICT/FinTech penetration raises GDP growth and financial-inclusion indices (Ojeaburu & Ogbonna, 2025; Demirgüç-Kunt et al., 2020).	High	Lack of quasi-experimental designs; estimates concentrated in correlational time-series/ARDL models.
Service-Delivery Platform Optimization	Consistent UTAUT/TAM evidence that performance expectancy and facilitating conditions drive e-government, health, and EdTech adoption (Afieroho et al., 2023; Yakubu & Dasuki, 2018).	Medium–High	Outcome-stage (realised productivity/GDP) evidence is thin relative to adoption-stage evidence.
Data- and Productivity-Centric Approaches	Successful mapping of information gaps to post-harvest losses and data-monetisation potential (FAO, 2023; Ismaila & Beneke, 2026).	Medium	Scarcity of Nigeria-specific causal estimates of productivity or GDP effect.
Governance and Policy-Level Sustainability	Emergence of the NDPA 2023 as trust infrastructure (NDPC, 2023); documented escalation in cybercrime losses (NCC, 2024; Wang et al., 2020).	Emerging	Absence of mandatory platform-level compliance telemetry; economic cost of non-compliance under-quantified.

Evidence-strength rubric: ratings were assigned jointly by the two reviewers using a three-criterion scheme adapted from the CERQual approach to grading qualitative/mixed evidence: (i) volume and cross-study consistency of findings within the dimension, (ii) the proportion of studies reporting quantified outcome-stage metrics (e.g., GDP or productivity coefficients) rather than adoption-intention constructs alone, and (iii) methodological rigor, including the presence of quasi-experimental or robust econometric designs. “High” requires consistent, quantified findings across four or more studies with at least one rigorous causal-identification or large-sample econometric design; “Medium–High” and “Medium” denote intermediate combinations of volume, quantification, and rigor; “Emerging” denotes fewer than three studies and/or predominantly descriptive, non-quantified evidence.

The majority of research in this corpus emphasizes adoption-stage constructs — behavioural intention, performance expectancy, effort expectancy — while a minority reports directly quantified, outcome-stage economic metrics such as GDP-growth coefficients or productivity gains. A larger share of the FinTech-domain studies report a quantified economic-growth or financial-inclusion coefficient, compared with a markedly smaller share of studies in the health, agriculture, education, analytics, and cybersecurity domains combined, where sustained institutional data collection is comparatively immature. This asymmetry mirrors the broader development-economics finding that ICT-growth research is disproportionately concentrated in domains — like finance — that already have institutionalised statistical infrastructure (Central Bank of Nigeria data, Global Findex) to draw upon (Niebel, 2018).

4. MIS Entrepreneurship Taxonomy and Economic Impact Metrics

4.1. Taxonomy

Based on the systematic literature review conducted in this work, we offer a thorough taxonomy of MIS entrepreneurial value creation that integrates technological, institutional, and macroeconomic characteristics of Nigeria's digital transformation. Four complementary categories are included in this taxonomy: (1) transaction-level digital financial infrastructure, (2) service-delivery platform optimization, (3) data- and productivity-centric approaches, and (4) governance and policy-level sustainability. These categories, which cover the eight domains reviewed in Section 3, were chosen to be primarily distinct, with some expected overlap, and jointly comprehensive, supporting both the transaction-focused FinTech paradigm and the broader, institution-focused digital-economy paradigm (Laudon & Laudon, 2022; NITDA, 2023). Some cross-category overlap is expected and does not undermine the taxonomy's analytical value: e-government service platforms, for instance, are classified under service-delivery platform optimization but also generate the administrative data that feeds data- and productivity-centric analysis, and NDPA-compliance obligations under governance and policy-level sustainability apply equally to FinTech, health, and e-government platforms. The four categories are therefore best read as primary analytical lenses rather than as a strict partition of the underlying literature.

- **Transaction-level digital financial infrastructure** reduces information asymmetry and transaction cost at the point of exchange. Mobile money, point-of-sale infrastructure, and digital-lending platforms extend formal financial services to previously excluded populations (Demirgüç-Kunt et al., 2020; EFINA, 2023).
- **Service-delivery platform optimization** matches citizen- and patient-facing institutional services with MIS-enabled platforms. This configuration preserves the underlying policy objective — healthcare access, educational access, public-service delivery — while reducing latency, cost, and administrative friction (Afero et al., 2023; Ekwudo et al., 2025).
- **Data- and productivity-centric approaches** shift the emphasis toward information availability for productive decision-making — agricultural extension data, market-price data, and analytics-driven forecasting — enabling stakeholders to see the productivity gap that MIS entrepreneurship addresses (Choruma et al., 2024; Ismaila & Beneke, 2026).
- **Governance and policy-level sustainability** considers the big picture: standardized data-protection compliance, cybersecurity capacity, and regulatory clarity all contribute to the trust infrastructure without which the other three pillars cannot scale (NDPC, 2023; NCC, 2024).

The four areas of the proposed taxonomy interact synergistically to promote holistic MIS entrepreneurial value creation, as shown in Figure 4. Reducing transaction-level friction is the primary channel through which digital financial infrastructure builds the customer base and data assets that service-delivery platforms subsequently draw upon.

A Causal Interaction Framework for MIS Entrepreneurial Value Creation

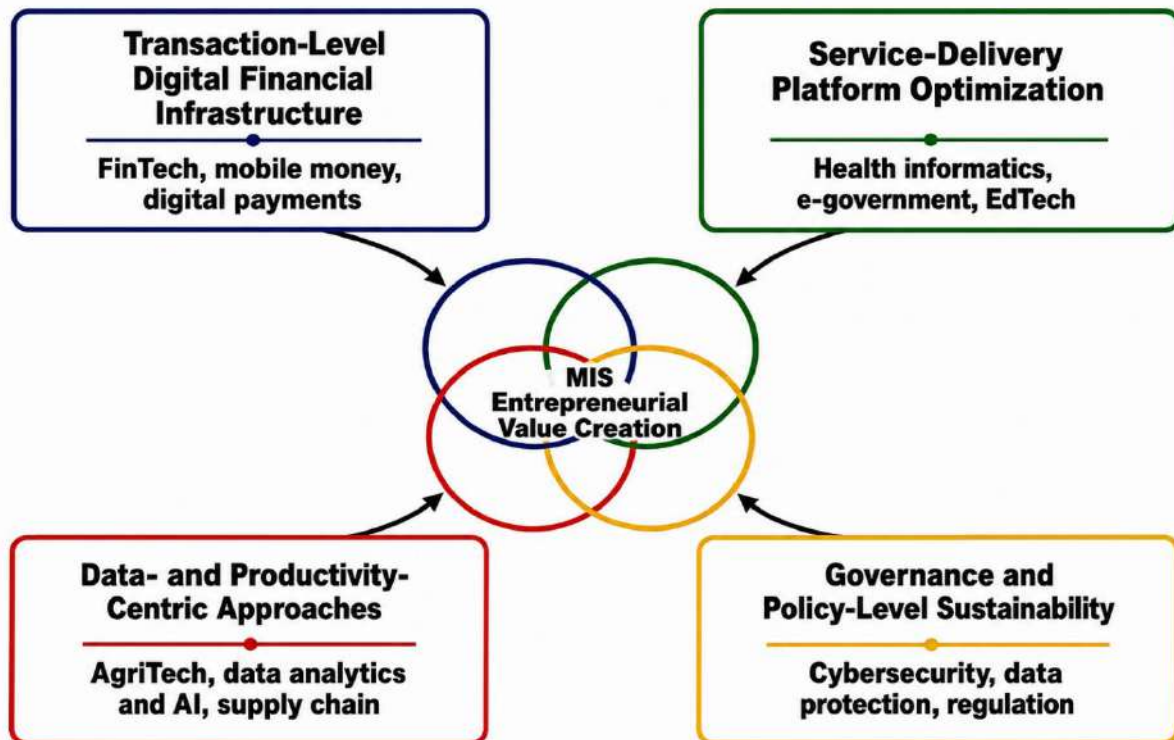


Figure 4. A causal interaction framework for MIS entrepreneurial value creation.

Concurrently, data- and productivity-centric approaches offer the necessary analytical frameworks to examine the productivity impact of transaction-level and service-delivery-level decisions, particularly through sectoral yield and adoption-outcome tracking. Lastly, governance and policy-level sustainability creates the regulatory frameworks and compliance infrastructure required to sustain trust in digitally mediated transactions and services. These four dimensions work together to create an ecosystem that is integrated and self-reinforcing: enhancements at any one level spread to the others, making it possible to build MIS ventures that are scalable, trustworthy, and macroeconomically consequential.

4.2. Metrics

MIS entrepreneurship evaluation in the Nigerian literature draws on financial-inclusion indices, adoption-intention constructs, institutional-performance benchmarks, sectoral-productivity indicators, and cybersecurity-loss estimates. Table 4 below summarizes the key metrics and evaluation aspects identified across the 33 included studies.

Table 4. Key metrics and evaluation aspects in MIS entrepreneurship and Nigerian digital-economy research.

Category	Metrics	Benchmarking and Data Sources	Purpose	Limitations/Challenges
Financial Inclusion & FinTech	Financial-inclusion index (% adults banked), mobile-money transaction volume, ARDL coefficients	Global Findex, CBN Statistical Bulletin, NIBSS, EFInA	Quantify digital-finance penetration and its GDP linkage	Coefficient estimates are model-specific and rarely cross-validated with quasi-experimental designs

Adoption & Behavioural Intention	Performance/effort expectancy, behavioural-intention scores (UTAUT/TAM constructs)	SEM/AMOS, SPSS structural-equation software	Explain citizen and user adoption of MIS platforms	Captures behavioural intention, not realised productivity or GDP outcome
Institutional & Governance Performance	UN E-Government Development Index rank, administrative cost-reduction %	UN E-Government Survey, McKinsey Global Institute	Benchmark public-sector MIS maturity	Index composition changes across survey cycles, limiting longitudinal comparability
Productivity & Sectoral Impact	Post-harvest loss %, agricultural yield change, health-system ROI (USD return per USD invested)	FAO, WHO	Link sectoral MIS adoption to productivity and economic-return outcomes	Nigeria-specific attributable estimates are largely absent; regional SSA figures are extrapolated
Cybersecurity & Data Governance	Annual cybercrime loss (₦/USD), data-breach incidence, compliance-reporting rate	NDPC, NCC	Quantify the trust-infrastructure cost/benefit of MIS entrepreneurship	Reporting is regulator-driven and may undercount unreported incidents

5. Discussion

The 33 studies synthesized in this review collectively support a cautious but genuine claim: MIS entrepreneurship is associated with measurable gains in financial inclusion, institutional efficiency, and sectoral productivity in Nigeria, but the strength of that association varies sharply by domain and by outcome stage. FinTech and, to a lesser extent, e-government carry the most quantitatively developed evidence base, reflecting both the maturity of institutional data (CBN, NIBSS, Global Findex) and the comparatively long research tradition in these domains (Demirgüç-Kunt et al., 2020; Afieroho et al., 2023). By contrast, health informatics, AgriTech, EdTech, data analytics, and cybersecurity — despite comprising a majority of the included corpus by study count — remain dominated by adoption-intention and descriptive evidence rather than causally identified, GDP-attributable outcome measures. This imbalance should temper any strong claim that MIS entrepreneurship has already delivered a precisely quantified GDP contribution in Nigeria; the more defensible claim, supported by the evidence synthesized here, is that MIS entrepreneurship is plausibly and directionally growth-enhancing, with the magnitude of that effect still substantially under-measured outside the financial-inclusion domain. Notably, several of the headline statistics cited in this review — for example, the WHO's estimated return on digital-health investment, and the McKinsey Global Institute's estimated administrative cost savings from e-government digitisation — are drawn from global or regional institutional reports rather than Nigeria-specific primary data, and should be read as plausible benchmarks rather than measured Nigerian outcomes.

For policymakers, the outcome-measurement gap identified in Section 3.4 suggests that Nigeria's digital-economy strategy would benefit from mandating standardized, sector-level

MIS-outcome telemetry — comparable to the CBN's existing financial-inclusion reporting infrastructure — across health, agriculture, education, and public-sector procurement. For entrepreneurs and investors, the domain-level evidence-strength ratings in Table 3 offer a practical due-diligence signal: ventures operating in domains with thinner outcome-stage evidence (data analytics, cybersecurity, supply chain) may carry a higher evidentiary-uncertainty premium, independent of their commercial prospects. For development practitioners, the review underscores that adoption-stage success — a platform being used — should not be conflated with outcome-stage success — a platform demonstrably improving productivity, income, or institutional performance — when designing programme evaluations.

6. Future Research Directions

Building on the synthesis in Section 3.4 and the limitations identified in Section 5.3, we propose the following priority directions for future research:

- **Outcome-stage causal identification:** Future studies should prioritize quasi-experimental and longitudinal panel designs (difference-in-differences, regression discontinuity, instrumental-variable approaches, and multi-year firm/platform panels) capable of isolating the causal effect of specific MIS interventions on productivity, income, or institutional-performance outcomes over time, moving beyond the single-wave, adoption-intention constructs that currently dominate the literature.
- **Domain rebalancing:** Targeted funders (Tertiary Education Trust Fund, National Information Technology Development Agency [NITDA] Research and Innovation Fund, and university-industry partnerships) should earmark doctoral-training and grant funding specifically for supply-chain/logistics and cybersecurity MIS research, the two domains where this review found the thinnest eligible evidence base relative to FinTech and e-government.
- **A national outcome-telemetry pilot:** As a concrete first step, we propose a two-year pilot National MIS-Outcome Telemetry Dashboard (2027–2028), led by the National Bureau of Statistics in partnership with NITDA and the Central Bank of Nigeria (CBN), modeled on the CBN's existing financial-inclusion reporting infrastructure. In Year 1, the pilot would extend the CBN's quarterly reporting template to two additional sectors — public e-health platforms and e-government service portals — requiring participating platforms to report standardized usage, service-completion, and cost-reduction metrics quarterly to the National Bureau of Statistics. In Year 2, the dashboard would be opened to public and researcher access, with an independent methodological audit conducted jointly by NITDA and an academic partner before any decision on national scale-up to agriculture and education. This would allow researchers to move from institutional-report benchmarking to direct, Nigeria-specific outcome measurement, starting with the two sectors where reporting infrastructure is most readily adaptable.
- **Cross-national comparative research:** Comparative studies between Nigeria and peer economies (Kenya, Ghana, South Africa) would help disentangle country-specific institutional effects from generalisable MIS-entrepreneurship mechanisms.

7. Conclusion

This review's central contribution is diagnostic rather than descriptive: across 33 studies identified through a fully disclosed, auditable PRISMA 2020 process, Nigerian MIS entrepreneurship research is not short of evidence, but the evidence it has accumulated sits overwhelmingly at the adoption stage rather than the outcome stage. Researchers can show, with reasonable confidence, that Nigerians are using MIS-enabled platforms; they can rarely show, with comparable rigor, what those platforms have changed about productivity, income,

or institutional performance. FinTech is the partial exception, and that exception is instructive — it is the one domain with mature, routinely reported institutional data (CBN, NIBSS, Global Findex) to draw on, which suggests the gap elsewhere is a measurement-infrastructure problem as much as a research-design problem. Closing that gap is therefore this review's one concrete call to action: Nigeria's digital-economy institutions should prioritize building the sector-level outcome-reporting infrastructure in health, agriculture, education, and public-sector procurement that FinTech already has, starting with the pilot outlined in Section 6. Until that infrastructure exists, claims about MIS entrepreneurship's contribution to Nigerian GDP will remain directionally plausible but empirically under-determined.

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Conflict of Interest Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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