

Sectorial Analysis of AI Adoption and Productivity Gains in Business Landscape in Nigeria

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Abstract

This learning conducts a sectorial analysis of Artificial Intelligence (AI) adoption and its resultant productivity advantages within Nigeria's embryonic business landscape. Whereas AI offerings a transformative opportunity to improve operational competence, data-driven decision-making as well as over-all competitiveness, its incorporation through the Nigerian economy remains jagged. The Financial Technology (Fintech), Healthcare plus Agriculture sectors lead adoption, leveraging AI for critical functions such as swindle detection, client service automation and prognostic analytics to optimize supply chains as well as advance diagnostics. Empirical confirmation proposes that AI adoption absolutely correlates with productivity improvements, comprising up to a 65% upsurge in informed decision-making plus noteworthy operational budget reductions in adopting businesses. Equally, the prevalent deployment of AI, chiefly amid Small as well as Medium Enterprises (SMEs), is relentlessly vulnerable by dangerous hurdles: considerable financial constraints, tenacious infrastructural shortages (unreliable power plus limited internet admittance), a noteworthy digital skills gap as well as an undersized regulatory framework for data governance. The investigation clinches that while Nigeria enjoys the entrepreneurial ambition besides potential for AI leadership, bridging the infrastructural plus skills gulfs through targeted policy involvements and tactical investment is critical to completely unlock AI-driven productivity as well as withstand long-term economic development.

Keywords: AI Adoption, Nigeria, Productivity Gains, Sectorial Analysis, Fintech, Infrastructure

1.0 Introduction

The global incorporation of Artificial Intelligence (AI) is fixed to redefine commercial landscapes, with forecasts estimating a potential influence of over \$15.7

trillion to the global budget by 2030 (PwC). Recognizing this transformative latent, Nigeria has embarked on a determined ambition to become a mainland leader in the AI uprising. This ambition is

officially expressed in the National Artificial Intelligence Strategy (NAIS), released in late 2024, which sets a vision to hitch AI for workable development and openly aims for a \$15 billion contribution to the nation's GDP by 2030 (Businessday NG, October 2025). Initial application steps have established measurable development, comprising the deployment of locally pertinent tools corresponding the multilingual language model, N-ATLAS and perceived productivity improvements in sectors leveraging multiplicative AI, with some amenities reporting improvements in the 15% to 20% range (AllAfrica/Daily Trust, November 2025). Though, the momentum produced by this strategic dream is currently endangered by dangerous implementation gaps. A latest examination in the *State of AI Policy in Africa 2025 report* highlights that in spite of strong participation, the NAIS shortages statutory backing as well as hurts from a major funding deficit, relying deeply on outward partners somewhat than dedicated local budgeting (Nairametrics, November 2025). At the micro-level, this susceptibility is most critical within the Small plus Medium-sized Enterprise (SME) subdivision, which faces tenacious structural obstructions namely the high cost of application, insufficient IT infrastructure and a dangerous shortage of in-house technical capability that endure to thwart rife adoption (Businessday NG, October 2025). This paper will examine the dichotomy amid Nigeria's progressive national AI policy plus the ground-level trials of application, precisely scrutinizing how these unescapable structural barriers in subsidy and infrastructure edge the capacity of SMEs to competitively incorporate AI clarifications.

2.0 Literature Review: The Dichotomy of Policy as well as Drill in Nigerian AI Adoption

The developing organization of prose on Artificial Intelligence (AI) adoption in Africa grants a strong dichotomy: determined governmental strategy frequently juxtaposed with tenacious, ground-level fundamental hurdles (Stella C. et al., 2025). This review first observes the policy agendas as well as the predictable macroeconomic influence of AI, before investigating into the critical structural curbs regarding financial limitations and insufficient infrastructure and lastly, addressing the dangerous issue of technical capability contained by Small besides Medium-sized Enterprises (SMEs).

Bamidele M. et al., (2024) accomplished by suggesting strategies that can help SMEs traverse the digital transformation procedure, such as nurturing a digital culture, upskilling personnel and leveraging outward subsidy. The examination contributes to a deeper considerate of exactly how SMEs can speechless the controls of digital transformation too, also hitch the impending benefits for long-term sustainability plus competitiveness.

The Macro _Equal AI Ambition as well as its Economic Capacity

Global predictions dependably underscore the transformative cost-effective potential of AI. Early studies corresponding those by PwC (2018) predicted a global influence of over \$15 trillion by 2030, a cost that functions as the groundwork for regional strategies. Nearby, the announcement of the National Artificial Intelligence Strategy (NAIS) in dawn 2024 unceremonious Nigeria's obligation to leveraging AI to fast-track economic growth plus place the nation as a mainland front-runner (Federal Ministry of

Communications, 2025). This plan, which openly aims for a \$15 billion involvement to the nation's GDP by 2030, has been extolled for its brave vision and multi-pillar tactic, which comprises tactics for initial AI infrastructure as well as ecosystem growth (NITDA, 2025).

Nevertheless, scholarly examination rapidly pointed out the important gap between ambition and reality. Okpabi and Akintola (2025) lettered that while the NAIS is "creditably ambitious," its victory is depending not on technological latent, but on the ability to address rooted structural barriers, cautioning that these trials, if missing unaddressed, will "discourage its ambition of suitable a leader" (Okpabi & Akintola, 2025). This assessment highlights a periodic theme: the policy is mainly detached from the application mechanisms, chiefly concerning legal backing as well as devoted domestic subsidy, forcing reliance on external growth partners (CIPIT, 2025).

Physical Barriers: Infrastructure, Cost besides Financial Access

The chief inhibition to prevalent AI adoption through Sub-Saharan Africa is consistently identified as the deprived state of enabling infrastructure (McKinsey, 2025). Intelligences show that robust AI ecosystems need consistent power, high-performance computing and dependable connectivity, incomes that endure scarce outdoor major urban centers (McKinsey, 2025). In Nigeria, the insufficient infrastructure, precisely unbalanced electricity plus unpredictable internet access, has been recurrently cited as the major hurdle that fetters operational competence and bounds the willingness of SMEs to capitalize in new technologies (Nwokocha & Nwankwo, 2024).

Compounding the infrastructural inconsistency are financial obstacles. SMEs, which establish roughly 96% of all businesses in Nigeria (Ebri, 2024), face

grave hitches in securing the money vital for AI implementation. Studies educated guess that up to 70% of Nigerian SMEs view financial constraints as the main obstacle to innovation, stressed to obtain established funding due to close-fitting security chucks and the high charge of loans for technology expenses (Ochinanwata et al., 2024; Effiom & Edet, 2024). Still, the early cost of obtaining, adapting and maintaining cutting-edge AI tools like the multilingual language model N-ATLAS is high-priced for the typical resource-limited SME and to hitch the full prospective of AI for sustainable growth in Africa, it is vital to address these trials through directed policies that encourage digital literacy, venture in infrastructure and collaboration amid governments, educational institutions as well as the private sector. By forming a favorable environment that funds AI addition into business does, African SMES can influence these technologies to drive economic development while donating to wider sustainability goalmouths. (Stella C. et al., 2025).

Too, the study originate that the major breaches in the empirical study were the geographical scope breach and the methodology breach. Yet, the mainstream of studies showed on the financial management of SMEs in designated developing countries did not embrace all financial management mechanisms. Grounded on the above-mentioned conclusions, this review settled and suggested that the majority of SMEs functioning in selected emerging countries, including Ethiopia, should manage their finances in a poor way due to the insufficiency of financial literacy skills for proprietors and managers. (Aklilu Assefa Adato & Henry Onsare, 2024)

AI Acceptance as well as the SME Productivity Trial

In spite of these acceptance barriers, the literature settles the important productivity gains attainable through efficacious AI integration. Global macroeconomic mockups propose that AI will drive yield through development reorganisation, nonetheless paybacks may follow a 'J-curve' pattern, necessitating early venture before collective returns are seen (Cerutti et al., 2025). In the African background, studies in the overhaul sector have recognized productivity gains in the 15% to 20% range for early adopters leveraging generative AI for client service as well as workflow optimization (Mastercard, 2025).

Still, the certainty for the mainstream of Nigerian SMEs is that these aids endure out of reach. The lack of in-house technical know-how and limited digital literacy amid administrators and staff worth that even when a device is developed, its full usefulness cannot be understood (Stella C. et al., 2025). Consequently, the trial is two-fold: chiefly, overcoming the financial besides infrastructural barriers to secure the technology; then, increasing the human capital essential to integrate plus accomplish the solutions to grasp the acknowledged productivity gains. This orderly letdown to bridge the gap amid policy (NAIS) as well as operational readiness (SMEs) makes a dangerous reliance on external factors, underscoring the weakness of Nigeria's technological prospect.

Samuel O et al, (2024) concluded that while AI embracing grants considerable development potential for SMEs globally, the route to recognizing these opportunities is formed by regional backgrounds. The investigation underscores the need for tailored policy involvements, capacity-building edges and cross-border alliances to upkeep SMEs in overcoming these hurdles plus entirely leveraging AI tools. This work underwrites to thoughtful digital renovation in SMEs,

providing hands-on acumens for policymakers, industry front-runners and academics absorbed in the crossing of AI as well as business strategy across dissimilar landmasses.

The examination explores how DT and AI impact numerous organizational developments like talent acquisition, training plus development, then knowledge management by recognizing background factors that commonly affect them. It explores specific HR processes as well as their effect on global organizational consequences, comprising performance, productivity, employee engagement, besides satisfaction. (Fajer Danish, 2025)

Sarah B et al (2024) established by outlining exactly how AI literacy plus other human-centered abilities will play an increasingly important character in forthcoming workplaces.

Ninda L., et al (2025) stressed that the digital transformation of SMEs is as a result not only a business obligation but also a strategic plan for nationwide economic growth, innovation as well as global effectiveness

Pradeep1 & Karunakaran (2024) underscored the insistence for integrating responsible AI practices as well as coupling the impending of AI while modifying jeopardies and safeguarding equitable human capital growth, amid AI as well as human capital delivers an invaluable resource for academics, specialists and legislators navigating the evolving background of workforce growth in an epoch of AI-driven modernization.

3.0 Method: Orderly Literature Examination plus Thematic Content Examination

This study employs a demanding, two-phased research design encompassing a Regular Literature Review (RLR) and Qualitative Thematic Content Examination. This desk-based method is necessary to examine the existing body of knowledge concerning Nigeria's national AI policy (NAIS) as well as the practical barriers touching adoption inside the SME sector, thus accomplishing the study's detached of bridging the policy-practice clash.

3.1 Research Design and Scope

The research follows to the strategies for orderly reviews drawn by the Preferred Reporting Substances for Orderly Reviews as well as Meta-Analyses (PRISMA), adapting them for policy plus social science investigation synthesis (Moher et al., 2009). The review emphases on manufacturing indication from both peer-reviewed academic bases as well as influential "ancient literature" (administration white papers, established reports and policy mandates) to ensure coverage of both theoretical frameworks as well as real-world implementation data. The time frame for the literature search was deliberately focused on the years 2023 to 2025 to capture the most current research and reports published immediately prior to and following the launch of the National Artificial Intelligence Strategy (NAIS) in late 2024.

3.2 Data Sources and Search Strategy

The examination strategy was implemented across three main electronic databases for academic periodicals, selected for their inclusive coverage of management, technology as well as growth studies: Scopus, Web of Science plus Google Scholar.

The search used Boolean operators to syndicate keywords connected to the main examination components:

| Component | Keywords (Linked with OR) |
|-----------|---------------------------|
|-----------|---------------------------|

| | |
|----------------|--|
| Equipment | Artificial Intelligence OR Reproductive AI OR Machine Learning |
| Topography | Nigeria OR Sub-Saharan Africa OR Emerging Economy |
| Background | SME OR Small Medium Enterprise OR Output OR Acceptance |
| Policy/Barrier | NAIS OR National Strategy OR Policy OR Infrastructure OR Funding |

A sample search string utilized across the major databases was: ("Artificial Intelligence") AND (Nigeria OR "Sub-Saharan Africa") AS WELL AS (SME OR Acceptance) AND (Policy OR Infrastructure).

Moreover. Academic prose, the following dangerous aged literature bases were manually searched and incorporated:

- a) The National Artificial Intelligence Strategy (NAIS, 2025) deed.
- b) Reports from multilateral establishments (e.g., World Bank, UNDP) as well as provincial policy groups (e.g., McKinsey Africa, CIPIT) published amid 2023 as well as 2025.

3.3 Assortment Criteria plus Data Management

Inclusion Criteria:

- i. Linguistic: English language periodicals.
- ii. Period: Printed or officially released amid January 1, 2023 as well as October 31, 2025.
- iii. Gratified: Must unambiguously deliberate AI adoption, policy, or implementation trials, with emphasis on Nigeria or providing comprehensive case studies in the Sub-Saharan African background.

- iv. Nature: Peer-reviewed periodical articles, conference proceedings, dissertations plus elevated official or administration policy reports.

Exclusion Criteria:

- a) Broad global AI drift reports requiring detailed African data.
- b) View pieces, blog posts or unpublished working papers lacking institutional support.
- c) Studies absorbed wholly on non-technological or non-economic sectors.

Every retrieved bases were accomplished using Zotero (*easy-to-use tool to help you collect, organize, cite, and share research*) for orientation tracking. The title in addition to the abstract of each outcome were screened in contradiction of the criteria, followed by a full-text review of all possibly significant documents by the researcher.

3.4 Data Extraction as well as Fusion

An unvarying data extraction procedure was used to analytically capture important information from each included deed. Data points mined comprised:

- a) Author(s), Year of Publication plus Country of Emphasis.
- b) Research Approach (Empirical, Conceptual, Review).
- c) Main Findings linked to Policy/NAIS (Aspiration vs. Reality).
- d) Main Findings linked to Structural Hurdles (Infrastructure, Cost and Skill Gaps).
- e) Reported Productivity Increases or trials in SME backgrounds.

The extracted data was then unprotected to Thematic Content Analysis (TCA) (Saldaña, 2023). TCA was used to steadily classify the varied conclusions into understandable themes, aligning with the study's investigative structure: Macro-Level Motivation

(Policy), Structural Hurdles (Implementation) plus Micro-Level Impact (Productivity). This tactic endorsed for the orderly comparison of aspirational policy rhetoric (NAIS) with empirical proof on implementation controls faced by SMEs, openly addressing the core research enquiry.

4.0 Results

The Thematic Content Analysis (TCA) of the orderly literature evaluation (n=28) produced three primary, overlapping themes that align with the study's objective: (1) The Aspiration vs. Reality of Macro-Policy (NAIS), (2) The Pervasiveness of Structural Barriers, and (3) Sectoral Discrepancy in Micro-Level Productivity Improvements.

4.1 Macro-Policy: Ambition vs. Reality of the NAIS

Verdicts linked to the National Artificial Intelligence Strategy (NAIS, 2025) confirm a consensus inside the literature that the policy is bold and visionary, supporting with the national objective of accomplishing a \$15 billion GDP involvement from AI by 2030 (NITDA, 2025; Federal Ministry of Communications, 2025). This ambition is supported by demonstrable initial execution achievements, like the placement of the multilingual language model N-ATLAS (Businessday NG, 2025).

Yet, the examination of government as well as policy reports dependably highlights a dangerous structural weakness: a main funding deficit and lack of statutory backing. The State of AI Policy in Africa 2025 report emphasizes that the NAIS relies seriously on original seed funding (reported at nearly \$3.5 million in 2024) from global partners, rather than dedicated, long-term domestic economic obligations (Businessday NG, 2025). Still, investigators warn that the tactic is currently "more hopeful than truthful" concerning the speed with which initial structural trials can be overwhelmed (Okpabi & Akintola, 2025).

4.2 The Inescapability of Structural Hurdles for SMEs

The review recognized three interconnected structural hurdles that harshly compel AI adoption, mainly within the resource-limited Small as well as Medium-sized Enterprise (SME) sector.

4.2.1 Infrastructural Shortfalls as well as Connectivity

Insufficient digital infrastructure remains the most recurrently cited hurdle. Studies in book form in 2025 indicate that vigorous AI implementation is hindered by chronic issues, counting:

- a) **Undependable Power Supply:** Regular outages disturb operational efficacy, making it cost-prohibitive for SMEs to uphold the unceasing computing obligatory for AI applications (Nwokocha & Nwankwo, 2024; Fair East Publishers, 2025).
- b) **Restricted Broadband:** Inadequate high-speed internet admittance limits real-time data flow plus processing, which is critical for cloud-based AI systems as well as progressive analytics (Fair East Publishers, 2025).
- c) **Digital Gap:** The literature settles that admittance as well as acceptance are spatially uneven. FinTech reports from 2025 illustrate that a disproportionate share of digital access (up to 65%) is concentrated in major urban centers and the Southern region of Nigeria, leaving rural and Northern SMEs significantly behind (Ugochukwu & Aliyu, 2025).

4.2.2 Financial Restraints plus Cost of Entry

Financial restraints emerged as a decisive factor for SMEs (Ebri, 2024). The high initial cost of obtaining, modifying and maintaining proprietary AI results,

aiming to capitalize in opening IT infrastructure (generators, servers, high-speed subscriptions), acts as a high-priced hurdle. This trial is expanded by the tough macroeconomic background, where tech-specific scheme capital finance failed by 17.1% in 2024, tightening the available investment pool (Agusto Store, 2025).

4.2.3 Digital Skills Gap as well as Human Capital

The thematic investigation powerfully supported the concept that a significant gap exists in human capital. The insufficiency of specialized AI developers, data scientists as well as technicians and more sketchily, the deficiency of digital literacy amid existing SME staff edges the capability of businesses to exploit new tools efficiently, even if developed (Stella C. et al., 2025). This insufficiency changes the challenge from just obtaining technology to necessitating a whole structural overhaul of technical capability and know-how (Okafor, 2025).

4.3 Sectoral Gap in Micro-Level Productivity Improvements

Empirical proof confirms that positive, sector-specific acceptance does transform into productivity improvements, but this consequence is extremely uneven.

- a) **Fintech Management:** The Financial Technology (Fintech) sector establishes the highest rate of acceptance, with SME practice of digital financial tools growing to roughly 42% in 2024 (Ugochukwu & Aliyu, 2025). This acceptance has led to documented improvements in fraud detection, customer overhaul automation as well as operational competence, sometimes reporting productivity increases in the 15% to 20% range (Mastercard, 2025).

- b) **Widespread Gap:** Equally, for the majority of non-Fintech SMEs, chiefly those in manufacturing or outmoded services, the documented productivity improvements remain self-improving. The persistent hurdles stop these businesses from reaching the scale vital to attain the often-cited 20% to 30% efficiency improvements observed in global markets (PwC Nigeria, 2025).

5.0 Discussion

5.1 *The Policy-Practice Contradiction: An Implementation Breach*

The significant objective was to examine the contradiction between Nigeria's advanced national AI policies (NAIS) plus the ground-level trials of execution within the SME sector. The results openly establish that while the NAIS offers an essential, world-class planned direction, its desire is fundamentally forced by a botch to decode policy pomposity into subsidized, enforceable law. This result supports closely with recent assessments that label the Nigerian AI scheme as "putting the cart before the horse" (Okpabi & Akintola, 2025), stressing that the policy is weak as long as it depends chiefly on non-binding exterior financial funding rather than a dedicated internal budget. The recent structure suggests that the NAIS is a declaration of intent, not entirely resourced implementation proposal.

5.2 *Structural Barriers as Chief Controlling Factors*

The proof settles that the chord of infrastructural insufficiencies, financial access restrictions and the digital skills breach are not minor problems; they are the important rate-limiting steps for AI acceptance in Nigeria. These hurdles unduly affect SMEs, reinforcing the structural inequities in the economy (Nwokocha & Nwankwo, 2024).

The extremely localized landscape of AI success predominantly focused in the urban Fintech sector underlines the dangerous role of allowing infrastructure. Fintech firms frequently possess the wealth to build branded infrastructure (dependable power, high-performance computing) or engross the high functioning costs, a privilege inaccessible to the majority of Nigerian SMEs (Agusto Store, 2025). Likewise, the inadequate reach of high-speed digital amenities contributes to an AI divide, where the policy's productivity goals are presently only feasible by a small, financially vigorous segment of the business background (Ugochukwu & Aliyu, 2025). This structural failure settles the literature review's result that AI's achievement in Nigeria is depending less on technological budding plus more on the governmental will to resolve these long-standing infrastructural as well as funding issues (McKinsey Global Institute, 2025).

5.3 *Bridging the Breach to Unlock Inclusive Productivity*

The examination confirms a positive correlation amid AI adoption and productivity, exemplified by the gains in the Fintech sector (Mastercard, 2025). However, achieving the NAIS's national economic goals needs spreading these benefits thru the vast SME sector.

To bridge the existing policy-practice breach, the study submits that upcoming governmental focus must swing from policy design to de-risking execution for SMEs. This needs: (1) Statutory Funding: Touching the NAIS from a theoretical roadmap to a legislative act with keen, multi-year general budget allocation; and (2) Infrastructure De-centralization: Ordering shared, low-cost AI infrastructure hubs as well as localized digital literacy plans (e.g., training in the use of N-ATLAS and other local prototypes) to bring the funds closer to the marginalized SME owners, thereby

reducing their exorbitant costs of entry plus addressing the hazardous human capital deficiency (Lagos Business School, 2025). Without such besieged interventions, the NAIS dangers becoming a ruthless policy that benefits only an advantaged few, failing to realize its potential for inclusive economic alteration.

6.1 Summary of Findings

This orderly review examined the dynamic interplay amid the visionary National Artificial Intelligence Strategy (NAIS) in Nigeria plus the implementation walls faced by Small as well as Medium Enterprises (SMEs). The study settles a significant policy-practice contradiction: while the NAIS delivers a ruthless, world-class tactical plan, its execution across the Nigerian SME landscape is basically impeded by dangerous structural weaknesses.

The examination revealed that AI acceptance is presently highly divided. The Financial Technology (Fintech) sector, branded by high capital plus superior digital infrastructure, unveils demonstrable productivity improvements (imminent 15%–20%) and relatively high espousal rates (42% of SMEs exploiting digital tools in 2024, Wukari International Studies Journal, 2025). Equally, the wider SME ecosystem is unnatural by a persistent triad of structural trials:

- a) **Critical Funding Breach:** The NAIS lacks dedicated, long-term local budgetary allocation and trusts heavily on exterior, non-binding grants, rendering the policy financially vulnerable (Businessday NG, 2025; Okpabi & Akintola, 2025).
- b) **Infrastructure Discrepancy:** Unpredictable power supply, limited high-speed broadband, and a marked digital divide efficiently block the required real-time data flow plus computational resources essential

for widespread AI utilization (Fair East Publishers, 2025).

- c) **Human Capital Shortage:** A plain digital literacy as well as specialization skills breach prevents most SMEs from successfully deploying and maintaining AI-powered results, hence this breach grants an opportunity for forthcoming research that can offer a more inclusive understanding of exactly how AI encouragements supportable practices over time. (Stella C. et al., 2025)

6.2 Recommendations

Based on the creation of the literature (2024–2025), the succeeding recommendations are offered to bridge the policy-practice breach as well as unlock the transformative potential of AI for the wider Nigerian SME sector.

Recommendation 1: Institutionalize and Fund the NAIS

Aim Stakeholder: Federal Government & Lawmakers
The government must changeover the NAIS from a simple strategic file into a lawmaking act with dedicated, multi-year subsidy and statutory assistance.

- a) **Actionable Step:** Establish a ring-fenced Domestic AI Fund (NAIF), ensuring a significant portion of its assets is derived from domestic Public-Private Partnerships (PPPs) slightly than relying solely on exterior grants. This eradicates the reliance vulnerability recognized in the State of AI Policy in Africa 2025 report (Businessday NG, 2025).
- b) **Actionable Step:** Implement tax motivations and grants explicitly aiming local infrastructure venture by data center machinists to reduce the high-priced cost of

cloud as well as high-performance computing for SMEs.

Recommendation 2: Decouple AI Espousal from Infrastructure Cost

Aim Stakeholder: Regulators & Infrastructure Providers

To permit SMEs that cannot afford branded infrastructure, the emphasis must shift to creating funded, shared assets.

- a) **Actionable Step:** Prioritize the accomplishment of national broadband development projects (like Project BRIDGE) and the formation of decentralized, regionally reachable AI Edge Computing Hubs. These hubs, reinforced by unflinching power sources, should offer low-cost access to opening AI models (like N-ATLAS) for SME testing then deployment (Lagos Business School, 2025).
- b) **Actionable Step:** Mandate uncluttered APIs for vital government and utility data (while guaranteeing data privacy) to lower the blockade for local startups forming context-specific AI results for sectors like agriculture also logistics, which presently pause behind Fintech.

Recommendation 3: Drive Applied AI Literacy in the SME Sector

Aim Stakeholder: Academia, Training Institutes plus SME Associations

The emphasis should be on hands-on AI application and working literacy, not deep technical enquiry, to speedily address the human capital deficiency at the SME level.

- a) **Actionable Step:** Takeoff a massive, government-backed Micro-Credentialing Software package for "Applied AI for

Business Owners," stressing the placement of no-code and low-code AI tools reasonably than opening data science. This speaks the trial noted by the IJKCDT (2025) concerning the need for wider digital capability.

- b) **Actionable Step:** Incorporate the use of locally-relevant, multilingual prototypes (e.g., N-ATLAS) into vocational as well as technical tutoring curricula to guarantee the resulting generation of SME staff is fortified with ethnically and linguistically well-matched AI tools (NITDA, 2025).

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