

Leveraging Digital Data for a Credible and Cost-Effective Census



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EXECUTIVE SUMMARY

Nigeria has not conducted a reliable national census since 2006. This has left policymakers reliant on outdated and contested data. The planned 2023 census was budgeted at N896 billion and designed as the first fully digital count. However, it was indefinitely postponed after N234 billion had already been spent.

Traditional nationwide headcounts are fiscally unsustainable, politically contested, and increasingly constrained by insecurity. Yet accurate demographic data remain essential. They are the foundation for resource allocation, service delivery and long-term planning.

To address this persistent data gap, this brief advocates a hybrid census model that draws on existing administrative data. These include the National Identity Number (NIN), Bank Verification Number (BVN), voter register, and SIM registration. Targeted field verification would capture population segments not yet recorded digitally.

This approach balances efficiency with comprehensive coverage. Hybrid models can save up to N300–400 billion. This would reduce per capita census costs by 40–50%.

Experiences from Ghana, South Africa, Rwanda, Kenya and Egypt show digital integration works. It delivers reliable results in resource-constrained contexts.

Nigeria must adapt these lessons to its unique institutional and security environment. Success will require a clear digital census framework. Data must be harmonised, hybrid approaches piloted and secure infrastructure funded. Public trust must also be built through transparent engagement.

WHY CENSUS REFORM CANNOT WAIT

[Nigeria's population, projected to reach 230 million by 2025, is growing at nearly 2.4% annually.](#) Without reliable demographic data, fiscal planning, infrastructure provision, and social services risk chronic misallocation.

Since independence, Nigeria has struggled to conduct a credible, widely accepted population census. Each attempt has been marred by political interference, technical shortcomings, and social distrust. Because population figures determine legislative representation and federal revenue allocation, all six post-independence censuses have been contested or underutilised.

The last census, in 2006, recorded 140 million people [but deliberately excluded ethnicity and religion](#). In a country where [identity is tightly linked to political power and public resources](#), this omission deepened scepticism and weakened legitimacy.

The planned 2023 census—budgeted at [N896 billion](#) (N3,900 per person, up from N1,300 in 2006)—was postponed due to elections and rising insecurity, leaving [N234 billion](#) in preparatory spending wasted. Beyond the financial loss, the delay further eroded trust in national data systems.

These repeated failures raise two urgent questions: Can Nigeria continue funding resource-intensive headcounts in a period of fiscal strain? And is the traditional census model still fit for purpose?

A national census remains indispensable. But without reform, Nigeria risks repeating a cycle of waste and inaccuracy. A hybrid approach—integrating existing administrative databases with targeted digital field verification—offers a credible, cost-effective, and politically less contentious alternative.

Table 1: Timeline of Post-Independence Nigerian Censuses and Their Trust Issues

Year	Highlights
1962/63	First post-independence census reported 45.26 million, annulled amid allegations of manipulation
1973	Technically improved, reported 79.76 million, but cancelled for political reasons
1991	Regarded as credible, reported 88.5 million people
2006	Technology-enabled but politically controversial, reported provisional result of 140 million people
2023	Planned fully digital census postponed indefinitely

Source: [National Population Commission](#)

THE POLITICS OF CENSUS REFORM

Census-taking in Nigeria is shaped by entrenched political economy dynamics. While the need for accurate demographic data is uncontested in principle, reform threatens established interests and power balances.

Four factors drive persistent resistance:

- **Revenue and representation** – Population figures determine federal revenue allocation and legislative seat distribution. Hence, states guard perceived advantages and resist figures that could reduce their share.
- **Ethno-religious balance** – Communities fear that an accurate count could shift political influence across ethnic and religious lines, upsetting delicate power arrangements.
- **Contractor interests** – Manual enumeration has long generated lucrative contracts. Digital methods disrupt these revenue streams, creating commercial opposition to reform.
- **Public trust deficits** – Decades of disputed results have eroded confidence in census integrity, making any new initiative vulnerable to suspicion.

Reform must be framed as non-partisan and anchored in national development priorities. Having state-level incentives—such as privileged access to harmonised datasets for planning—can help build subnational buy-in and reduce political resistance



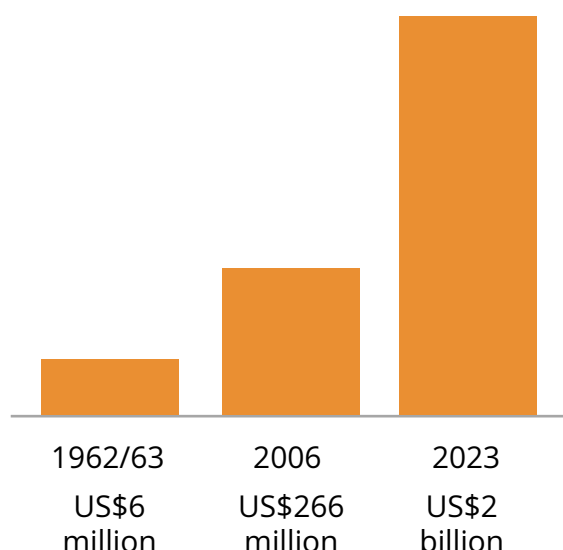
WHY NIGERIA MUST TRANSITION TO A DIGITAL CENSUS

Economic Rationale

Census costs have escalated from US\$6 million in 1962 to US\$266 million in 2006, and nearly US\$2 billion budgeted for 2023. These rising costs reflect growing population size, complex logistics and heightened security demands.

A hybrid model that integrates digital enumeration with selective field verification can significantly reduce costs in logistics, personnel and security while improving operational efficiency.

Figure 1: Nigerian Census Cost Comparison Bar Chart



Security and Accessibility

Insecurity, particularly in North-East, North-West and parts of South-East Nigeria, makes full manual enumeration risky and incomplete. Digital integration—which encompasses geospatial mapping, remote data capture, satellite imagery—enables coverage even in no-go areas, improving inclusion and reducing exposure of personnel.

Leveraging Existing Digital Assets

Nigeria already holds a rich digital infrastructure. This includes the [National Identity Number \(NIN\)](#), [Bank Verification Number \(BVN\)](#), [voter register](#), [SIM registration](#) and sectoral databases. Combined with satellite imagery, mapping technologies and real-time processing, these assets can enhance accuracy, reduce costs and limit opportunities for manipulation.

Figure 2: Nigerian Core Digital Databases



NIN

>122 million records of biometric and location data



BVN

>66 million records of financial identities



Voter Register

93.4 million people with age and location data



SIM Registration

>153 million identities linked to NIN

These core databases can be supplemented with others (NHIS, PENCOM, NELFUND, NCoS, FIRS, NSITF etc) that provide sector-specific data (e.g., health, education, taxation pension). Combined with satellite imagery, AI-driven validation and real-time processing, they provide a strong base for a digital-first census.

GLOBAL LESSONS FOR NIGERIA

Integrating existing administrative databases with traditional enumeration is an established global trend. Over the past decade, both advanced and emerging economies have successfully adopted hybrid models. These approaches which combine digital technologies with targeted fieldwork, improve efficiency, accuracy and timeliness while reducing costs.

Table 2: Lessons and Nigerian Adaptation in Census Practices

Country	Year	Innovation/Best Practice	Nigeria's Adaptation Needs
Ghana	2021	Tablet and GPS-based enumeration reduced costs and improved spatial mapping	Replicate with offline functionality for insecure and low-connectivity zones
South Africa	2022	Online self-enumeration eased field workload	Adapt model due to limited internet access and digital literacy challenges
Rwanda	2022	National ID integrated into census for improved accuracy	National ID integrated into census for improved accuracy
Kenya	2019	Mobile data kits boosted coverage in remote, hard-to-reach areas	Deploy mobile census kits to underserved rural and peri-urban communities
Egypt	2017	Satellite imagery used for settlement identification and planning	Apply GIS and satellite tools for pre-enumeration mapping and validation

**Global success is possible, but Nigerian adaptation must consider digital divide, security dynamics and political sensitivities.*

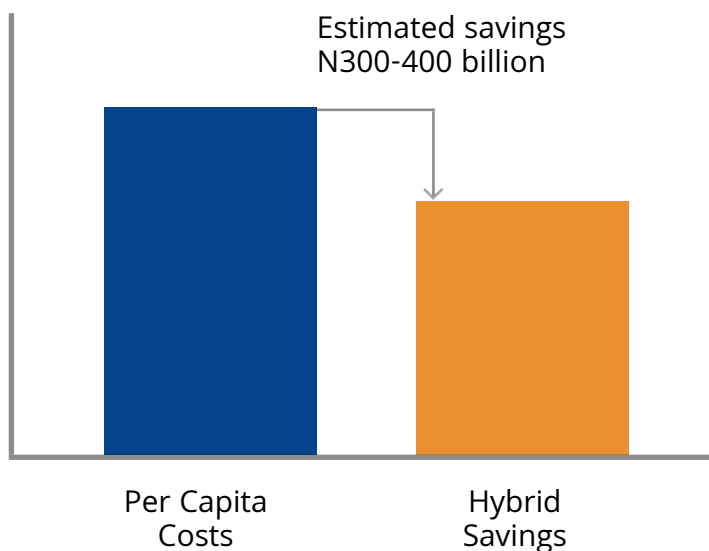
UNLOCKING THE BENEFITS OF DIGITAL CENSUS INTEGRATION

Digital integration is more than a technical upgrade; it is a governance enabler that underpins reliable and inclusive planning. Digital census adoption strengthens both data collection and its application to governance.

The major benefits are as follows:

- **Cost Efficiency:** A digitally integrated census system reduces logistics, personnel and security costs by up to N300–400 billion. Resources can be redirected to essential services while maintaining full coverage

Fig 3: Per Capital Cost Vs Hybrid Savings



A hybrid model using existing data (NIN, BVN, SIM etc) and targeted fieldwork can reduce logistics, personnel and security spending by 40-50%

- **Credibility & Trust:** Biometric verification and automated validation reduce duplication and omissions, as well as manipulation.
- **Timely Updates:** A digitally integrated census system enables regular 10-year cycles and timely inter-censal data updates.
- **Inclusive Coverage:** A hybrid census model can cover displaced, remote, and informal settlements often missed by manual counts. This promotes fair representation and equitable resource distribution.
- **Security resilience:** A digitally integrated census reduces reliance on field agents in high-risk areas.

MITIGATING THE RISKS OF REFORM

Digital census systems offer significant advantages, but they also present critical risks that, if unaddressed, could erode public trust and compromise operational success. These risks are most acute in four areas: cybersecurity, data privacy, institutional interoperability and political acceptance.

Table 3: Key Risks and Recommended Mitigation

Risk	Mitigation
Cybersecurity Threats (Digital platforms are vulnerable to hacking and data breaches)	To mitigate these threats, Nigeria should deploy end-to-end encryption, adopt ISO-compliant cybersecurity protocols, conduct regular independent security audits and enforce strict role-based access controls.
Data Privacy Concerns (Citizens’ personal information must be protected.)	Strengthening compliance with the Nigeria Data Protection Act 2023 is essential. Clear data handling protocols and public oversight mechanisms—including independent data protection officers—should be instituted to reassure the public that their information is safe.
Inter-Agency Data Gaps (Fragmentation among government databases can undermine census integrity)	A centrally co-ordinated data-sharing framework is needed, supported by interoperable technical standards and formal agreements between agencies. This approach will enhance data quality and ensure the reliable exchange of information.
Political resistance (Digital reform may face scepticism or opposition, especially at subnational levels.)	Bipartisan engagement, subnational incentives, and civil society inclusion.

Addressing these risks proactively will strengthen public confidence in the census process. When combined with the benefits of digital integration, effective risk management makes a modernised, trusted census both feasible and necessary for Nigeria’s development planning.

POLICY ROADMAP FOR A CREDIBLE DIGITAL CENSUS

To deliver a credible, inclusive and cost-effective census, Nigeria should adopt a hybrid model. This approach should strategically leverage existing digital infrastructure while retaining a targeted on-the-ground enumeration.

The following recommendations are pertinent:

1. Legislate a Digital Census Framework – The National Assembly should enact legislation providing legal authority to integrate existing national databases—such as the National Identification Number (NIN), Bank Verification Number (BVN) and INEC Voter Register—into census operations. This legislation should also strengthen cybersecurity provisions and data privacy protections, in line with the Nigeria Data Protection Act, 2023.

2. Harmonise Data Systems – Establish Census Coordination Council and secure national data warehouse. The Council, chaired by the National Population Commission (NPC), should include key ministries, departments and agencies to integrate fragmented data systems into a secure national population data warehouse. Such harmonisation will ensure interoperability, reliability and efficiency in census data management

3. Pilot Hybrid Census Projects – Pilot exercises should be conducted in three diverse states (urban, rural and conflict-affected) to test digital integration, identify data gaps and measure public trust levels before a full national roll-out. Findings from these pilots will inform operational planning and improve risk management strategies.

4. Invest in Infrastructure and Skills – Expand digital ID registration in underserved communities and improve secure digital connectivity nationwide. Equip NPC staff with modern data-capture tools and provide targeted training for enumerators, analysts and supervisors. Building technical competence is critical to effective digital census operations.

5. Institute Transparency and Engagement – Early and sustained public awareness campaigns are needed to build trust and reduce political resistance. Civil society organisations, religious and youth groups, traditional leaders and sub-national governments should be engaged through structured consultation and feedback mechanisms to encourage citizen participation.

FROM POSTPONEMENT TO PROGRESS

Nigeria stands at a demographic crossroads. The cost of delay is measured not only in billions of naira wasted, but in poorly targeted services, misallocated resources, and weakened public trust. Traditional nationwide headcounts have become fiscally untenable, politically combustible, and logistically insecure.

A hybrid, digital-first model offers a proven alternative. It will demand political courage, technical discipline, and transparent engagement. However, the rewards — credible data, fiscal efficiency, and restored confidence — are too great to ignore. If the next census repeats the failures of the past, it will not be for lack of solutions, but for lack of will. The choice before Nigeria's leaders is stark: reform now, or plan the nation's future in the dark.

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