Ecosystem Approach to Digital Identification Enrolment in Nigeria
Risks and Opportunities

April 2022
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Introduction

The implementation of digital identity systems in Nigeria is being managed by the Nigerian Identity Management Commission (NIMC). The commission was established by the NIMC Act 2007 with the mandate to create, manage, maintain and operate a national identity database, including the harmonisation and integration of existing databases. The Commission is also mandated to register citizens and non-citizens who are legal residents into the national identity database, and to issue national identification numbers (NIN) to those registered.

By 2017, 10 years after the NIMC’s establishment, only 20 million Nigerians (about 10% of the population), had been captured into the country’s digital identity database. In 2019, the Commission claimed that it needed 10,000 registration centres to operate optimally. At the time, the Commission only had 1,000 registration centres. To mitigate the logistical challenges, the Commission partnered with other public and private organisations in what is now referred to as the Digital Identity Ecosystem to accelerate the process and significantly increase the number of Nigerians captured on its database.

According to the NIMC, the Digital Identity Ecosystem is “a framework involving working with public and private service providing partners, to create an enabling environment for the effective and efficient mass enrolment of Nigerians and legal residents in Nigeria into a centralised, secure National Identity Database where digital identities are issued to everyone in the form of the National Identification Number (NIN).” With this approach, NIMC is able to partner with private and public entities for provision of data collection services and issuance of the NIN under the National Identity Management System (NIMS) programme.

These partnerships are expected to lead to the significant expansion of the national identity database through massive enrolment. However, the immediate risk posed by these partnerships is very clear. For example, it is not known whether licensed partners have the capacity to ensure the preservation, protection, sanctity, privacy, and security (including cybersecurity) of data collected into the national identity database as envisaged by the NIMC Act.
Nonetheless, the ecosystem approach has some benefits, including avoiding duplication as the existing facilities of government departments and private sector partners in Nigeria can be leveraged, as opposed to the NIMC having to build new ones.

The ecosystem approach is not unique to NIMC or Nigeria. The Unique Identification Authority of India (UIDAI) in its ecosystem adopts a network of tight-knit agencies supporting UIDAI for enrolment and authentication. Colombia has a private sector-led national digital identity ecosystem which manages interactions among four types of participants - users, issuers, verifiers, and trust providers. Pakistan's National Database and Registration Authority (NADRA) launched digital ID authentication on smartphones as part of its goal to revamp the country's identification system into a robust citizen-centric system rolling out digital public goods. This enables citizens to apply for ID cards and sign up for bank services via their smartphones. The World Economic Forum (WEF) lists more examples of digital ID ecosystems in its guide for digital identity ecosystems.

This research brief therefore looks at the ongoing drive by the NIMC to massively expand the digital identity database in the country through an ecosystem approach. The brief interrogates the ecosystem strategy adopted by NIMC, which enables the commission to work with private and public agencies to enroll citizens into the digital identity database. The research seeks to highlight the opportunities and risks in this approach and make recommendations to mitigate these risks.

In addition, the brief analyses the general pros and cons of digital identification. It charts the history of digital identification efforts in Nigeria, highlighting the pitfalls of previous efforts and extracting useful lessons from the experience. The research consolidates its proposition by looking at global best practices to inform its recommendations.
History of Digital Identification in Nigeria

Digital identification efforts in Nigeria can be traced to 1978 when the then Department of National Civil Registration (DNCR) was set up to issue national identity cards. Between 1979 and 2000, no significant achievement was recorded by the DNCR, partly due to the many disruptions in governance that Nigeria experienced at the time, due to military coups. This perhaps explains why it was shelved eventually. In 2001, the government awarded a contract for the provision of 60 million identity cards to a French company, SAGEM. This exercise was marred by the indictment of SAGEM by a French court, for bribing three federal ministers and others who were implicated in a USD 2 million bribery scandal at the time.

SAGEM was only able to produce half of the cards it was contracted to produce and declined to hand over the national identity database and system to the NIMC, with the parties failing to agree terms of settlement of the dispute. The NIMC’s Director General stated at the time that while the Nigeria government was willing to negotiate a settlement, SAGEM’s demands related to vendor and technology lock-in were unagreeable.

Since 2007 when the NIMC was established, Nigeria has had many digital identification projects across different sectors. This has resulted in the proliferation of digital identification and databases. There have been calls by many stakeholders, including the country’s president, for the harmonisation of the data, to create a unique system of identification in the country. There are at least 13 federal agencies and three sub-national units who have offered or are offering digital ID services, collecting similar biometric information of citizens in Nigeria. This is in addition to NIMC’s own previous effort to work with contractors to achieve its mandate of providing digital identification for Nigerian citizens and legal residents since 2007. Therefore, there is sufficient basis to assess the opportunity and risks inherent in the creation of digital ID databases in Nigeria, while exploring lessons from other countries.
Lessons from Recent Experiences

Nigeria’s journey to creating a digital identity database is not new. An assessment of previous efforts can help to foretell the likely problems that the process could face. In order to do this, previous efforts by NIMC and other digital identification efforts in Nigeria, such as the biometric SIM card registration exercise, the biometric voters card registration exercise, and the bank verification registration exercise are examined below.

NIMC and Chams PLC National ID Project

In 2006, the Nigerian government sent out a call for bids for the National ID project. Chams PLC, a Nigerian company that provides integrated identity management and identity and payments transactional systems and solutions,\(^{15}\) won the bid for the National Identity Card (NIC) concession. Chams subsequently invited MasterCard, a renowned global payments company, to work as one of its technical partners.\(^{16}\) Later, Chams accused Mastercard of colluding with its client, NIMC, to frustrate the concession.\(^{17}\) The NIMC rejected Cham’s claims, arguing that the concession agreement was terminated in February 2015 for non-performance.\(^{18}\)

The matter was litigated in court, with a Federal High Court in Nigeria in November 2019 issuing an interim injunction restraining the NIMC and Mastercard from “further manufacturing, producing, designing and or printing or authorizing the manufacturing, production, designing, and or printing of the National Identity Card”.\(^{19}\) In addition, the Federal High Court ordered all Nigerian banks not to honour any Mastercard transaction that had the logo of the NIMC on it, pending determination of a design infringement suit filed by Chams.\(^{20}\)

The national identity card, although designed primarily as an ID card, also has other functions that include the incorporation of bank transaction functionality such as cash withdrawals, balance enquiries, PIN change, bill payments, account transfers, and airtime purchases. It also features biometric functionality with electronic payments, and International Civil Aviation Organisation (ICAO) travel card.\(^{21}\)

To continue with the project, the NIMC focused on issuing National Identity Numbers (NIN) and de-emphasising the physical cards in compliance with the court order. In addition, the NIMC cut ties with Mastercard in the issuance of the cards, such that the court judgment would not affect the commission’s operations.
SIM Card Registration Exercise

In response to pressure mounted by security stakeholders in Nigeria, citing how unregistered SIM cards were aiding terrorism and other crimes in the country, the government in 2011 announced mandatory biometric SIM card registration, with the Nigerian Communications Commission (NCC) appointing SIM Card Registration Agents nationwide to help carry out the exercise. The agents were responsible for capturing biometric data of citizens, including fingerprints, and transferring the same to the NCC database. The Nation, a leading newspaper in Nigeria, detailed the woes of this exercise after two years, which included failed registrations, extortions of subscribers by the agents, and failure to abide by the standards and parameters set by the NIMC for the reliability of the captured data.

The NCC, after many years, said that a lot of improperly registered, unregistered and pre-registered SIM cards, characterised the exercise. Many registration agents were found to have either deliberately flouted the registration principles or refused to correct their mistakes when informed. Despite all the measures and warnings, many agents still fraudulently violate the SIM card registration rules. In 2013, Paradigm Initiative monitored a specific case where a laptop sold to an unsuspecting buyer by one of the NCC’s contracted registration agents still had the biometric data of subscribers captured during SIM card registration.

In late 2020, the government introduced a Revised National Identity Policy For SIM Card Registration, requiring users to link their SIM cards to their NIN, with threats to deactivate unregistered SIM cards by December 2020. This amounted to an admission that the biometric SIM registration exercise was a failure and that it had barely achieved one of its major objectives, which was to create a reliable database of subscribers.

A whitepaper published by the GSMA, an umbrella organisation representing the interests of network operators globally, posits that criminals and terrorists use prepaid SIM cards to help stay anonymous and avoid easy detection, noting that there has been no empirical evidence that mandating the registration of prepaid SIM users leads to a reduction in criminal activities. The whitepaper equally posits that there is no evidence that the prevalence of unregistered SIM users is linked to a greater risk of criminal or terrorist activities.

This brief does not disregard the relevance of digital identification to addressing societal issues, but demonstrates why it is problematic to pursue identification objectives as primarily a security measure or as a magic wand that will fix all problems when implemented.
Bank Verification Number (BVN) Exercise

The Bank Verification Number is a unique biometric identification for all bank customers that was introduced by the Central Bank of Nigeria\textsuperscript{29} in 2014 to “protect bank accounts of customers from unauthorised access, address issues of identity theft, thus reduce exposure to fraud, and enhance the banking industry’s chances of being able to fish out blacklisted customers”.\textsuperscript{30} Unlike the SIM card registration exercise, the BVN registration exercise to an extent met the standards required by the NIMC for digital identification database harmonisation. According to the NIMC, it was able to harmonise 11 million out of 35 million BVN records with the NIN database by May 2019.\textsuperscript{31} By January 2021, at least 15 million people with BVN had been linked with the NIN.\textsuperscript{32}

Research published by the International Journal of Engineering Research and Technology\textsuperscript{33} on the effect of the BVN on fraud management of selected commercial banks in Nigeria concluded that the BVN has a significant positive effect on reduction of identity theft and safety of depositors’ funds. The BVN also has a significant effect on fraud management of the studied commercial banks, according to the research.\textsuperscript{34}

A key difference between the processes deployed for SIM card registration and the BVN registration is in the method of data collection. While the Central Bank of Nigeria leveraged the platforms of its licensees, the banks, to implement the BVN registration exercise, the NCC contracted independent agents who somewhat frustrated the exercise due to greed to make as much money as possible from the exercise because their payments depended on the number of individuals they enrolled. The agents were focusing on reporting numbers without diligently carrying out the exercise.

Meanwhile, the wide gap between the total BVN registered numbers and the total number that NIMC found useful for its objectives shows the BVN registration exercise had its challenges as well, especially with respect to being a reliable database for digital identification.

\textsuperscript{29} O’Igwebuike, Newspaper Coverage of Bank Verification Number Enrolment in Nigeria;
\textsuperscript{30} EE Esomeme, A Critical Analysis of the Bank Verification Number Project introduced by the Central Bank of Nigeria, https://www.academia.edu/download/59763689/BankVerificationNumber20190617-75266-1y1jrsx.pdf
\textsuperscript{33} RA Nnachi, Effect of Bank Verification Number on Fraud Management of Selected Commercial Banks in Ebonyi State, Nigeria, International Journal of Engineering Research and Technology, ISSN 0974-3154, Volume 13, Number 6 pp. 1165-1172
\textsuperscript{34} Ibid
Permanent Voters Card (PVCs)
In 2012, the Independent Nigeria Electoral Commission (INEC) announced that it would issue permanent voters card (PVC) to all eligible voters in Nigeria.\(^{35}\) The PVC stores biometric data such as thumbprints.\(^{36}\) The card is designed to prevent multiple voting and other forms of voter fraud and will be used for identification, authentication and for voting, according to the INEC. The electoral body worked with private contractors, but in a slightly different context. While the technology and the machines for the PVC were provided by private contractors, the registration of voters was carried out by the INEC itself.

There were challenges with the registration process, but they did not prevent many voters from registering. For example, there were allegations that those who came to register were often asked to contribute money to purchase fuel for INEC officials to run their power generator at the registration centre.\(^{37}\) Similar allegations, including of extortion,\(^{38}\) have been made about NIMC’s registration centres.

The real lesson from the deployment of PVCs vis-a-vis digital identification objective lies in the argument that PVCs have not successfully ended electoral fraud. This was the primary reason it was introduced. Traditional issues such as vote buying and abuse of power of incumbency,\(^{40}\) voter intimidation, ballot box snatching/stuffing, underage voting,\(^{41}\) falsification of results and other associated electoral malfeasance remains.

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\(^{36}\) INEC, Permanent Voters Card (PVC), https://inecnigeria.org/permanent-voters-card-pvc/
The Role of Development Partners

In February 2020, the World Bank Board, working with other development partners including the European Union under its Identification for Development (ID4D) program with the goal of providing everyone on the planet with a legal identity by 2030, approved a loan of USD 115 million to enable the NIMC to increase the number of persons with a national ID number in Nigeria to 148 million by July 2024. The identity management system got additional co-financing of USD 315 million from the European Investment Bank and the French Agency for Development.

This funding will support the NIMC’s ecosystem model of driving enrollment through a significant increase in the number of registration centres. The support came with conditionalities that echoed civil society demands regarding the implementation of digital ID systems in Nigeria. For example, Nigeria is required to enact a data protection law. Also, cybersecurity impact assessments of NIMC licensees are required. These conditions are a good step towards mitigating some of the envisaged risks. However, these conditionalities only apply within the context of the support by these multilateral partners.

Through NIMC, the government has continued to drive mass enrollment without fulfilling these requirements which should have been necessary at the outset with or without conditionalities imposed by external stakeholders. This, therefore, reveals the weakness in the institutional capacity of NIMC to carry out digital identification objectives with all appropriate safeguards in place.

This will not exclusively be a NIMC problem. For a country that has pursued digital identification objectives since 1978, the enactment of relevant laws that would guarantee the establishment of appropriate safeguards would have gone a long way in mitigating some of the current challenges. Also, looking at the number of biometric data mining projects that have been carried out by the Nigerian government, it is inexcusable that the country is yet to enact a data protection law. Instead, the government issued a data protection regulation (Nigerian Data Protection Regulation, NDPR) in February 2019, a move that fills some gaps but which many stakeholders believe has not sufficiently addressed the data protection framework lacuna in Nigeria.

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45 Leadership Newspaper, World Bank’s $433m Loan Will Increase Registration Centres, NIN Issuance – Aziz, https://leadership.ng/world-bank-433m-loan-will-increase-registration-centres-nin-issuance/aziz/
In Kenya, for example, the court held that biometric data must be protected against unauthorised access and that there should be a sufficient data protection and security measure in place designed to prevent unauthorised data breaches. The court ordered that the implementation of National Integrated Identity Management System (NIIMS) and the processing and utilisation of data collected under the scheme should continue only on condition that an appropriate and comprehensive regulatory framework on the implementation of NIIMS that is compliant with the applicable constitutional requirements identified in the judgment is first enacted. This echoed the judgment of the Nigerian court in a suit filed by Paradigm Initiative on the implementation of digital identification system in Nigeria. This, perhaps, explains why Nigeria is working to elevate the NDPR into the status of an Act of the National Assembly.
Digital Identification: Pros and Cons

In a 2019 report titled “Digital Identification: A Key to Inclusive Growth”, McKinsey, the American management consulting firm, highlights the economic potential of good digital ID, describing it as an enabler of economic, social, and political activity in a digital age, and arguing that good digital ID is “a new frontier in value creation for individuals and institutions.” The World Bank identifies the risks of creating digital ID systems as exclusion; the risk of further isolating excluded groups; the possibility of privacy and security violations; identity theft; data fraud; cybercrimes and cyberattacks; vendor and technology lock-in; and unsuitable or unsustainable technology and design choices. They also identify weak civil registration systems, limited connectivity and other infrastructure challenges, lower literacy levels, low government capacity and trust, poor procurement, and insufficient cybersecurity capacity as risks specific to low and middle-income countries implementing digital ID systems.

Nigeria ticks almost all the boxes when it comes to the risks identified by the World Bank. However, many issues in Nigeria could be addressed through the implementation of a digital identification system. For example, Muhammadu Buhari, the incumbent Nigerian president, posits that digital ID will help the country better handle national security threats and enhance strategic national planning and efficient utilisation of the country’s limited resources. Also, the problem with ghost workers (someone recorded on the payroll system, but who does not work for the organisation) appears to be addressed through the implementation of digital ID systems in Nigeria.

All over the world, the implementation of digital ID systems continues to generate debates on its benefits and risks. The Indian Aadhaar program is one of the most talked-about digital identification systems in the world. With a population of about 1.3 billion people, India has covered about 90% of its population and 99% of its adult population. Opinions differ on the gains of the implementation of digital IDs in India. While critics posit that it has been plagued by a various internal and legal problems, as well as major leaks and vulnerabilities in the overall security of the system, proponents highlight the benefits of implementing the system, which include effective subsidy disbursal mechanisms; digital storage of documents; addressing fictitious property ownership; removal of ghost accounts and individuals; and offering a reliable means for identification.
Conclusions

The ecosystem approach to digital identification in Nigeria offers the NIMC the highest chance of fulfilling its mandate of providing digital identification for all Nigerian citizens and legal residents. In addition, the ecosystem approach serves to reduce or eliminate the duplication and wastage of scarce resources by the different data controllers, both private and public as they can harmonise and share data collection programmes.

There are, however, inherent risks and challenges including the failure to enact enabling legislation that can guide in the implementation of the approach, sabotage by data controllers who view the harmonisation as a lost opportunity to make money from the exercise, and blatant abuse of personal data and privacy.
For Nigeria to mitigate the identified risks in the NIMC’s ecosystem approach to digital ID enrolment in Nigeria, while maximising the benefits and opportunities, it is recommended that:

1. The NIMC must perform its regulatory functions in a more robust and structured way to create sanity in the digital identity ecosystem in Nigeria. In this regard, the NIMC should be inspired by its sister agencies, like the NCC in the telecoms sector, and the CBN in the banking sector. This is necessary to define the accountability expectations from both public and private licensees.

2. The government should adopt a user-centric approach to digital ID objectives, putting the users at the centre of any digital identity initiatives.

3. Government should conduct relevant and regular independent assessment of licensees’ cybersecurity and compliance as proposed by the World Bank. This should include a cybersecurity evaluation and audit framework for the ecosystem partners; regular cybersecurity audits of partners spanning government agencies and private sector-licensed partners to ensure compliance, certification of the ecosystem partners’ hardware and software used for NIMC business.

4. Cybersecurity requirements for the licensing of ecosystem partners must be conducted very urgently. These requirements must not be limited to support by the world bank but to involve enrolments being carried out outside of the support by the World Bank.

5. Urgently enact a comprehensive data protection law, including the provision for an independent data protection authority to help safeguard the data ecosystem in Nigeria.

6. Amend section 2b and 2c of the NIMC Act 2007 to achieve the following:
   a) Include the Ministry of International Affairs in the NIMC’s governing board.
   b) Clearly define “public-interest representation” to mean three persons who are knowledgeable in digital rights or in technology and human rights to replace the current designation which says three persons “who are knowledgeable in Information Communication Technology or Identity Management to represent public Interest”.

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**Recommendations**

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**Ecosystem Approach to Digital Identification Enrolment: Assessing the Opportunities and Risks in Nigeria**

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