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Biometric Verification & BVN in Payroll Management Systems

A Case Study of Kano, Niger & Kaduna

● **Policy Brief**

Integration of Biometric Verification and BVN in Payroll Management Systems in Nigeria

This brief assesses the scope of application of appropriately structured payroll management and Biometric Verification systems to the Civil Service at the sub-national level.

About BudgIT

BudgIT is a civic organization driven to make the Nigerian budget and public data more comprehensible and accessible across every literacy span. BudgIT's innovation within the public sphere comes with the creative use of government data by either presenting these in simple tweets, interactive formats, or infographic displays. Our primary goal is to use technology to intersect civic engagement and institutional reform.

Country Director: Gabriel Okeowo
Research Team: Vahyala Kwaga and Iniobong Usen
Creative Development: Michael Pabiekun

Introduction

There is much gain to be made, in terms of fiscal savings for public and private organisations, from the use of procedures, protocols and systems of identity verification. This is because there are numerous loopholes for fraud and exploitation and this is perhaps more sensitive in terms of Civil Service payroll systems. Yet, these concerns are not the only motivation for biometric systems, as the latter also generally provide a level of efficiency and precision to human recognition which is important for the supervision of public databases of personnel information.[1] In general, the use of these systems serve several purposes in the context of Civil Service reform, some of which are: a reduced payroll bill; instant reporting capabilities for prompt decision making; and the prevention of wastage and leakage due to the fact that wages are paid using factual information,

among other things.[2] However, there is a challenge with Civil Service Reform in Nigeria, generally, due to a number of institutional and socio-psychological factors that frown at innovation and moves towards efficiency.[3]

Generally, Biometrics can be described as the automated recognition of individuals based on their behavioural and biological characteristics. It is a tool for establishing confidence that one is dealing with individuals who are already known (or not known)—and consequently that they belong to a group with certain rights (or to a group to be denied certain privileges). It relies on the presumption that individuals are physically and behaviorally distinctive in a number of ways.

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1. See Biometrics and Recognition: Challenges and Opportunities, edited by Pato, J., and Millet, L. (2010). Whither Biometrics Committee; Computer Science and Telecommunications Board-Division on Engineering and Physical Sciences. National Research Council. National Academies Press, Washington DC. Available at: https://www.ncbi.nlm.nih.gov/books/NBK219896/pdf/Bookshelf_NBK219896.pdf. Date accessed-10/06/2022.
2. See Mede, N. (2016). "Nigeria's Experience with Identity Systems for Civil Service Reforms". Permanent Secretary-Federal Ministry of Budget and Planning-Federal Republic of Nigeria. Being a Paper Presented At the ID 4 Africa Annual Meeting– Rwanda, 2016. Available at: https://id4africa.com/2016/presentations/2-4-5_Ministry_of_Budget_and_National_Planning_Fatima_Mede.pdf. Date accessed-20/06/2022.
3. See "Professionals in Govt: Issues in Navigating the Policy Space in Nigeria" by Tunji Olaopa, on the 20th of June, 2022, in Thisday (Online) Newspapers. Available at: https://www.thisdaylive.com/index.php/2022/06/20/professionals-in-govt-issues-in-navigating-the-policy-space-in-nigeria/. Date accessed-21/06/2022.

Background

Thales[4] claims that Biometrics[5] can fulfil two basic functions: authentication and identification. These are important functions in the regulation of any Civil Service, as they provide evidence of the true identities of government employees and verify those identities. These concerns are non-trivial as Nigeria's emergence from manual payroll management systems has come with gaps, being exploited for fraud and corruption. In terms of losses, several states in the country (Bayelsa[6], Oyo[7], Kaduna[8] and Akwa Ibom[9] states, to name a few) have reported losses in double-digit billions of naira, involving tens of thousands of suspected 'ghost workers' (or, perhaps more formally-Non existent employees). The federal government has not been spared either, with the Nigerian Police reporting payroll fraud involving 'ghost workers' within the

force, which amounted to over **N14 billion naira** in 2017[10], alone. The savings made by the federal government via payroll reforms-specifically, the Integrated Personnel and Payroll Information System (IPPIS)-have been in excess of N220 billion naira from when the reforms were initiated, to 2015.[11]

However, 'ghost workers' are not the only form of payroll fraud in the Civil Service, as Kauji and Mustapha explain that: " … payroll fraud involves falsification of wages which also includes falsifying persons on the payroll (ghost names), and delayed termination of separated staff from the payroll".[12] Shimawua states that in addition to the obvious or apparent 'ghost workers' there are the "non-apparent" ghost workers, that are genuine

4. See "Biometrics: Definition, Use cases, Latest news"; Digital Identity and Security: Identity and Biometric Solutions, on 27th January, 2022, by Thales (Online) Webpage. Available at: https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/inspired/biometrics. Date accessed-13/05/2022.
5. Vadana and Kaur state that biometric identification is a system and process: " … in which the identity verification of individuals is performed based on the feature vectors, which are derived from the physiological and/or behavioural characteristics of humans. The categorization of a biometric system is done as per the number of traits utilisation for authentication purposes. There are various available methods for identification such as Face Recognition, Iris Recognition, Voice Recognition, Fingerprint Recognition, etc". See Vandana & Kaur, N. (2021). A Study of Biometric Identification and Verification Systems. International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE), 2021, pp. 60-64. DOI: 10.1109/ICACITE51222.2021.9404735. Date accessed-13/05/2022.
6. See "Nigeria: Bayelsa Loses N12 Billion to Payroll Fraud Annually", by Emmanuel Addeh, on the 9th of April, 2018, in Thisday Live (Online) Newspaper. Available at: https://allafrica.com/stories/201804090661.html. Date accessed-13/05/2022.
7. See "Oyo expunges 16,532 suspected ghost workers, pensioners from payroll", by Daily Post Staff, on the 11th of May, 2016, in the Daily Post (Online) Newspaper. Available at: https://dailypost.ng/2016/05/11/oyo-expunges-16532-suspected-ghost-workers-pensioners-from-payroll/. Date accessed-13/05/2022.
8. See "Kaduna Government Saves 120 Million Naira From Ghost Workers", in by Channels Television, on the 30th July, 2015, in the Channels Television website. Available at: https://www.channelstv.com/2015/07/30/kaduna-government-saves-120-million-naira-from-ghost-workers/. Date accessed-13/05/2022.
9. See "9,000 Akwa Ibom workers involved in 'salary scam'", by News Agency of Nigeria, on the 18th April, 2016, in the Cable (Online) Newsite. Available at: https://www.thecable.ng/9000-akwa-ibom-workers-involved-salary-scam. Date accessed-13/05/2022.
10. See "N14bn in 2017, N72bn in five years — FG's loss to 'ghost police officers'", by Damilola Ojetunde, on the 3rd April, 2018, in the International Centre for Investigative Reporting Website. Available at: https://www.icirnigeria.org/n14bn-in-2017-n72bn-in-five-years-fgs-loss-to-ghost-police-officers/#:~:text=The%20Federal%20Government%20lost%20the,on%20it%20payroll%20in%202017. Date accessed-13/05/2022.
11. See Mede, N. "Nigeria's Experience with Identity Systems for Civil Service Reforms", op.cit.
12. See Kauji, M., and Mustapha, B. (2019). Assessment of the Efficacy of Benford's Law in Detecting Payroll Fraud in Borno State, Nigeria, at p. 18. International Journal of Economics, Finance and Entrepreneurship (NIRA, IJEFE) ISSN: 2713-4679. Volume 6, Issue 1, Pages 14-27. Available at: http://www.arcnjournals.org/images/NIRA-IJEFE-6-1-2.pdf. Date accessed-13/05/2022.

public officials that collect illegal remuneration due to asymmetry of the payroll.[13] Some examples include public servants that collect unearned wages via fictitious means, i.e., due to having multiple jobs in the service, receiving many salaries using fake names, servants earning pay or allowances greater beyond their rank, staff on temporary absence or leave of absence that continue to earn full salary and employees on transfer or retirement whose names remain in the payroll.[14] While the instances of fraud may be diverse, they highlight the existence of deeper problems of exploitation of a governance and administrative system vulnerable to risk, due to high incentives for fraud and poor accountability.

Because these instances of fraud (which are in no way exhaustive of the 36 states of the federation, the federal government in tow, and represent a very minute amount of reported fraud) involve large sums of scarce revenue, the argument for reform is critical. This is moreso, when one observes the wage bill of the states is buckling[15] under the minimum wage law enacted by the National Assembly. In addition: "The states' allocations from the Federation Account have been a staggering issue and their Internally Generated Revenue (IGR) cannot settle their huge salary wage bills".[16]

Empirical studies on the effect of payroll reforms in Civil Service management, even at the state level, have shown a positive correlation between these reforms and government recurrent expenditure **(n=30; and also Abdulrahman and Kabir, et al,[17] with their n=100 empirical study).[18]** While literature reviews on Payroll reform at the state level are few and far between, it may be logically presumed that the same empirical correlation exists in the context of the states.

13. See Shimawua, D. (2020). Appraisal of Factors Responsible for "Ghost Workers" Syndrome in Public Service and its Impact on the Performance of the Sector in Nigeria, at p. 73. International Journal of Scientific Research in Technology, Applied Sciences & Health Studies p-ISSN: 2579 – 1036 | e-ISSN: 2579 – 1044 Volume 4, Number 1. Available at: http://internationalpolicybrief.org/images/2020/JULY/IJSRTASHS/ARTICLE7.pdf. Date accessed-13/05/2022.
14. See Shimawua, D. Appraisal of Factors Responsible for "Ghost Workers" Syndrome in Public Service and its Impact on the Performance of the Sector in Nigeria, op.cit., at p. 77.
15. See "NLC: Workers in 7 states to embark on strike over non-implementation of minimum wage", by Victor Ejechi, on 2nd January, 2022, in the Cable (Online) Newsite. Available at: https://www.thecable.ng/nlc-workers-in-7-states-to-embark-on-strike-over-non-implementation-of-minimum-wage. Date accessed-13/05/2022.
16. See "N30,000 minimum wage still a huge burden on states", by Solomon Ayado, on 24th January, 2020, in Business Day (Online) Newspaper. Available at: https://businessday.ng/features/article/n30000-minimum-wage-still-a-huge-burden-on-states/. Date accessed-13/05/2022.
17. See generally, Kaoje, A., Nabila, K., Idris, S., Gambarawa, J., and Lawal, U., (2020). Integrated Personnel and Payroll Information System (IPPIS) and Transparency in Government Payroll Administration in Nigerian Civil Service: A Unique Approach. In the Asian Journal of Economics, Business and Accounting, 19(3): 1-8, 2020; Article No. AJEBA.61704-ISSN: 2456-639X. Available at: https://journalajeba.com/index.php/AJEBA/article/download/30303/56856/. Date accessed-13/05/2022.
18. See generally, Ibanichuka, E., and Sawyer, M. (2019). Integrated Payroll System and Government Recurrent Expenditure In Nigeria. International Journal of Advanced Academic Research | Economic Evaluation | ISSN: 2488-9849. Vol. 5, Issue 4. Available at: https://www.ijaar.org/articles/Volume5-Number4/Economic-Evaluation/ijaar-ee-v5n4-apr19-p2.pdf. Date accessed-13/05/2022.

An Assessment of the adoption of Biometric Registration and BVN in Payroll Management System using SFTAS Reports

New approaches to governance focused on incentivizing reforms seem to have worked in recent times in Nigeria. For decades, several advocacy efforts aimed at effectuating critical reforms bordering on transparency, accountability and efficiency in the utilisation of the nation's scarce resources had proved abortive. However, the World Bank States Fiscal Transparency, Accountability and Sustainability (SFTAS) Program for Results (PfoR) which commenced in 2018 has ushered in a new set of reforms, leading to relatively increased fiscal transparency and accountability, strengthened domestic revenue mobilisation, strengthened efficiency in public expenditure and strengthened debt sustainability across several states in the federation.[19] The SFTAS Program for Results provides annual performance-based grants to States that meet the eligibility criteria—which requires them to publish on a timely basis the annual approved state budgets and annual audited financial statements—and achieve disbursement-linked result(s) (DLR) tied to an established performance/results framework of 13 disbursement-linked indicators (DLIs). One of the DLIs relevant to this brief is DLI 5—which is aimed at incentivizing states to adopt the use of biometric registration and bank verification number (BVN) in reducing payroll fraud. $125.86m dollars was earmarked as grants to be disbursed to states that integrate biometric registration and bank verification number (BVN) in their payroll management system over the 5-year duration of the SFTAS program.

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19. See the World Bank. State Fiscal Transparency, Accountability, and Sustainability (SFTAS) Program-for-Results (Website). SFTAS Program for Results. Available at: https://www.sftas.org.ng/about/#:~:text=SFTAS%20PROGRAM%20DESCRIPTION,implemented%20by%20state%20governments%3B%20and. Date accessed-17/06/2022.

Table 1: Grant available to States that integrate biometric registration and BVN in their payroll management system.

Period	Value	Amount
2018	**DLI 5.1:** Biometric capture of at least 60% of current civil servants completed and linked to payroll, and identified ghost workers taken off the payroll **DLI 5.2:** Link BVN data to at least 60 percent of current civil servants on the payroll and payroll fraud addressed	$16.74m
December 31, 2019	**DLI 5.1:** Biometric capture of at least 75% of current civil servants and pensioners completed and linked to payroll, and identified ghost workers taken off the payroll **DLI 5.2:** Link BVN data to at least 75 % of current civil servants and pensioners on the payroll and payroll fraud addressed	$25.56m
December 31, 2020	**DLI 5.1:** Biometric capture of at least 90% of current civil servants and pensioners completed and linked to payroll, and identified 'ghost' workers taken off the payroll **DLI 5.2:** Link BVN data to at least 90% of current civil servants and pensioners on the payroll and payroll fraud addressed	$41.78m
June 30, 2022	**DLI 5.1:** Biometric capture of at least 95% of current civil servants and pensioners completed and linked to payroll, and identified ghost workers taken off the payroll **DLI 5.2:** Link BVN data to at least 95% of current civil servants and pensioners on the payroll and payroll fraud addressed	$41.78m

In the first year, 19 states performed well on **DLR 5.1.** Save for the 2 states, Ebonyi and Yobe (that did not meet the eligibility criteria of publishing on a timely basis the annual approved state budgets and publishing their annual audited financial statements); $500k each was disbursed to every other state that achieved **DLR 5.1.**[20]

Box 1.
2018 List of states that achieved DLR 5.1: Bauchi, Delta, Ebonyi, Edo, Ekiti, Enugu, Gombe, Jigawa, Kaduna, Kebi, Kogi, Kwara, Niger, Ogun, Ondo, Osun, Oyo, Plateau, Yobe.

In the same vein, although 17 States achieved **DLR 5.2**, only 15 of those States, excluding Akwa Ibom and Plateau, received **$500k each**.

Box 2.
2018 List of states that achieved DLR 5.2: Akwa Ibom, Bauchi, Delta, Edo, Enugu, Jigawa, Kaduna, Kebbi, Kwara, Niger, Ogun, Ondo, Osun, Oyo, Plateau', Sokoto, Yobe

By December 31, 2019, while the number of states that had executed the biometric capture of at least 75% of current civil servants and pensioners increased to 24; 27 States had linked BVN data to at least 75% of current civil servants and pensioners on the payroll. As at the time of developing this brief, the assessment of 2020 is yet to be released. It is expected that more states would have adopted biometric registration and BVN in administering their payroll.

20. See "SFTAS Program-Final Results_April 2020 with analysis" (Google Sheet-Not for Publication). BudgIT Foundation.

Conclusion and Recommendations

It is no gainsaying that States no longer have the luxury of losing scarce government resources to sharp practices like payroll fraud. Current revenue mobilisation challenges prompt state governments to plug apparent leakages through which much-needed revenues are lost, to create fiscal space for spending in critical sectors of the economy.

The integration of biometric registration and Bank Verification Number (BVN) in the payroll management system of states has not only translated into savings for the states but has also earned the States grants from programs like the World Bank SFTAS Program for Results. In addition, it might be a signal that fraud and corruption are having fewer places to fester. Though, it should be noted that the persistence of such fraud must be seen within a meta context of poor accountability (specifically, 'internal' or managerial accountability)[21] in general. Quite recently, the Head of Service of the federation mentioned that over 1,500 illegal workers were discovered to have been admitted into the federal civil service (one ministry alone accounted for 1000 of those illegal hires) within the last year.[22]

However, it is disheartening that there have been next to no punishments or arrests following the 'discovery' of these workers and the syndicates said to be in control of these criminal enterprises.[23] What this means is that the use of Biometric verifications and BVNs must be accompanied by effective governance to actually punish offenders and send signals to the polity that such will not be tolerated.

Errant officers-who, considering the nature of how payroll is structured-would be many, should be identified, summarily dismissed and legal action should follow. In addition to the federal government, the sub-national units must take this as a priority, as such acts are not only crimes in and of themselves but have the propensity to bloat the state's recurrent budget.[24] In the main, it is imperative that states strive to conduct the biometric capture of all civil servants and link their BVN data to the payroll to ensure all ghost workers are eliminated in the system. That is the only way the full gains of integrating biometric registration and BVN in administering their payroll can be realised.

21. See Corduneanu-Huci, C., Hamilton, A., and Ferrer, I, M. (2013). Understanding Policy Change: How to Apply Political Economy Concepts in Practice, at p. 58. International Bank for Reconstruction and Development/The World Bank. 1818 H Street NW, Washington DC 20433
22. See "Halting Illegal Recruitment, Payroll Crime", by Punch Editorial Board, on the 12th of April, 2022, in the Punch (Online) Newspapers. Available at: https://punchng.com/halting-illegal-recruitment-payroll-crime/. Date accessed-17/06/2022.
23. See "Halting Illegal Recruitment, Payroll Crime", by Punch Editorial Board, in the Punch (Online) Newspapers, op.cit.
24. Ibid.