

Verification Intensity in Digital Human Resource Management: A meta-analytical Review of Nigeria's Federal Payroll System

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Abstract—Empirical literature on *Digital Human Resource Management* typologies clearly identifies *Strategic Integration* as a critical archetype, representing the organization where *digitalization* has enabled its formulation of Human Resource Strategy. Such organizations have not yet been seen anywhere, including those in the high-income countries that the typology was constructed for. This paper is a meta-analytical evaluation of this gap which it links more to an *incentive problem* than *organizational immaturity*. It defines institutional conditions inherent in the typology, as well as *verification intensity*, which measures the discrepancy between the actual and nominal positions of an organization in terms of digitalization. The paper extends the typology through principal-agent theory and political settlements approach in order to account for *stalling* as selective activation of systems with leaving aside verification subsystems which would render the controlling actors' decisions observable. Three propositions based on the framework are tested as well as just illustrated by the case of Nigeria's *Integrated Payroll and Personnel Information System* from 2014 to 2023. The volume of coverage increased from about 450 to 639 ministries, departments and agencies while verification controls, tested only once when they were measured at the same time, were proved to be off, and audit recommendations implemented at 19 per cent, which is confirmed by the Auditor-General's own public statements and the secondary analysis. Comparing with 32 Sub-Saharan African countries evaluated under the same *Public Expenditure and Financial Accountability* (PEFA) framework, Nigeria has a unique profile but not an anomaly, while a paired non-parametric test shows no evidence of payroll audit lagging behind other payroll controls regionally. The findings lend weight to the view that verification capability is a *governance* variable rather than a *technical* one.

Index Terms—Digital Human Resource Management; Verification Intensity; Integrated Payroll and Personnel Information System; Political Settlements; Public Expenditure and Financial Accountability

I. INTRODUCTION

The digitalization of governmental operations can be seen as a marker of administration development, the more digitalized a system, the more developed an institution is. Human resource management in the government represents a test case for the theory in question in that the human resource management systems not only store information but decide who gets paid, who gets promoted and who is responsible for these processes. In other words, the problem that a government digitizing its HRM system needs to be facing is not only what stage of digitization it has achieved but whether the people who used to control information and decisions in the previous system retain such a level of control and whether digitalization has led to greater transparency of decisions.

As Strohmeier (2020) concludes in his article, the highest stage of digital HRM (strategic integration) is still an ideal type rather than a reality, the study claims that none of such organizations has ever been discovered. Since the study does not make an important deduction from the situation described above: if the fourth ideal-type remains empty while the second one is overcrowded, it becomes clear the need to not just discuss the stages any more, but to understand why organizations stay on different stages.

It matters, however, because organizational inertia in this case is not speculative. The studies reviewed by Marler and Fisher (2013) yielded no empirical support that e-HRM could predict strategic outcomes, while Bondarouk and Brewster (2016) note that deviations from the American model have too often been seen as backwardness, rather than a logical reaction to differing circumstances. Four preconditions exist at the surface of Strohmeier's typology: existence of the HR strategy function, digital infrastructure, resources for HR department, and a fourth, left unstated by the author, that the actors controlling HR and payroll systems must have an interest in submitting to the supervision these systems provide. This is where the principal-agent theory plays its role. According to Eisenhardt (1989), agents behave in the interest of principals when their behavior is verifiable via information systems. Digital HRM is the kind of system in question, yet the theory assumes that the principals own it. When agents control the system, the same logic leads to the opposite result.

Specifically, this paper makes four original contributions. First, it makes explicit the institutional conditions underlying the typology. Second, it combines principal-agent theory with the typology by considering how political settlements can provide reasons for stalling and why it does not get addressed (Khan, 2018). Third, it tests three of its propositions using documentary evidence of the past decade in Nigeria's federal payroll system, rather than treating them all as propositions awaiting confirmation through future research, while placing this context within a wider country-level distribution of payroll control scores across 32 Sub-Saharan African countries, and noting that Nigeria stands out in its extremeness but not in its uniqueness. Finally, it responds to Bondarouk and Brewster's (2016) call for a political perspective on the exercise of power in e-HRM.

1.1 Statement of the Problem

The problem this paper addresses follows from a gap in Strohmeier's (2020) typology rather than from a gap in digital HRM practice as such. The typology specifies institutional preconditions for progression through its stages, three explicit and one left unstated, but treats all of them as satisfied by assumption rather than as conditions that can fail, so it cannot distinguish an organization that stalls for lack of capacity from one

that stalls because the actors controlling its HR and payroll systems have no interest in the observability those systems would create.

This is a problem in practice as well as in theory. Nigeria's Integrated Payroll and Personnel Information System expanded its coverage from roughly 450 to 639 ministries, departments and agencies between 2014 and 2020, a fact consistent with successful digitalization on Strohmeier's own two axes, while its verification controls were confirmed inactive the one time they were checked and audit recommendations have been implemented at a rate of 19 per cent. A framework that reads coverage growth alone as progress cannot, on its own terms, register this discrepancy as a problem at all. This paper treats the gap between reported digitalization and verified control as the object requiring explanation, and asks whether that gap is better read as an incentive problem than as a technical or developmental one.

1.2 Aim and Objectives

This paper aims to explain why digital human resource management systems in the public sector stall below their highest ideal-typical stage, using Nigeria's federal payroll system as the empirical case and testing that explanation against a decade of documentary audit evidence and against a cross-country distribution of payroll-control scores.

Four specific objectives follow from this aim:

1. To make explicit the institutional preconditions embedded in, but not stated by, Strohmeier's (2020) typology.
2. To extend the typology with principal-agent theory and the political settlements framework, introducing verification intensity as the variable that explains stalling.
3. To test, against documentary evidence from 2014 to 2023, whether verification-control activation and audit-recommendation implementation in Nigeria's IPPIS follow the pattern predicted by selective activation rather than by coverage growth alone.
4. To situate Nigeria's payroll-control profile within a comparator distribution of 32 Sub-Saharan African countries assessed under the PEFA framework, and to test whether payroll audit lags other payroll controls as a regional pattern rather than a Nigerian one.

1.3 Research Questions

The paper is organised around one main question and three sub-questions tested against the evidence, with three further questions noted as outside this paper's scope. The main question asks why a digital human resource management system's verification subsystem can remain inactive even as the system's operational coverage expands.

RQ1: Does verification-control activation vary independently of digitalization coverage in Nigeria's federal payroll system?

RQ2: Is verification-control activation lower where deployment control over the payroll system rests with the actors the system would expose?

RQ3: Where the audited party controls implementation of audit findings, does compliance remain low regardless of the severity of the finding?

RQ3: Where does stalling cluster across agencies?

RQ4: How do agents with and without independent standing differ in their resistance?

RQ5: Does non-activation persists only in the absence of a coalition able to force it?

The last three questions, corresponding to P2, P4 and P6 require multi-agency and longer time-series data that this single-case design does not supply. They are, therefore, left for future research, consistent with the scope stated below for P2, P4 and P6, respectively.

1.4 Research Propositions

Six propositions are made for this study, each stated so its disconfirmation is specified. However, only P1, P3, and P5 will be tested. On the other hand, P2 and P4 need multi-agency comparison, while P6 needs longer time-series than one country's decade supplies.

P1: Digitalization extent and verification-control activation vary independently.

P2: Stalling clusters at the Digital HRM I→II boundary.

P3: Activation is lower where deployment control rests with the actors the system would expose, net of capacity (separating this from Heeks, 2003).

P4: Agents with independent standing resist overtly; those without resist covertly.

P5: Where the audited party controls implementation, compliance stays low regardless of finding severity (separating this from a capacity account).

P6: Non-activation persists only in the absence of a coalition able to force it.

II. CONCEPTUAL REVIEW

2.1 The Digital HRM Typology and Its Assumptions

Digital HRM in Strohmeier's (2020) two-step approach comes from disentangling five terms which are used interchangeably in the literature. Digitization involves technical conversion of HR information in its analogue form into digital one. Digitalization refers to socio-technical exploitation of the conversion for operational or strategic purposes. Digital transformation is a type of digitalization aimed at strategic purpose only. Digital HRM emerges as a socio-technical consequence. Digital disruption refers to something quite different, it is involuntary, leads to marginalization of HR function, not digitalization.

The second step is the construction of a typology based on two dimensions, digitalization of HR practices and digitalization of HR strategy. HR strategy is defined according to Boxall and Purcell (2011) as deliberate planning adding value through helping to achieve overall organizational goals. HR practices are defined according to Ostroff and Bowen (2000) as activities providing employees with an opportunity to do the job effectively. The crossing of the two dimensions generates four ideal types. The first type is analogue HRM, it uses digital technology neither in HR practices nor in HR strategy. The second type, Digital HRM I, uses digital technology only in HR practices, in automation of recruitment, payroll and compensation to achieve higher efficiency, cost-effectiveness and quality. Digital HRM II uses digital technology in support of HR strategy already formulated, but not in its formulation. Digital HRM III uses digitization potential in HR strategy formulation, it produces digital HR strategy based on transfer from Bharadwaj et al. (2013) digital business strategy. Ideal types are considered following Doty and Glick (1994) and Weber (1904/1949).

There are four institutional preconditions implicit within this typology, three of them explicit and one of them implicit. For the axes of this typology to function there must be a separable strategy function: HR strategy and HR practice have to be separate from each other, implying the existence of an entity with the ability to design a strategy. In a federal bureaucracy, personnel policy is divided across statute, civil service regulation, appropriation law, and mandate of several agencies, making the need for such an entity

irrelevant, according to Suddaby (2010), and thus being a failure of construct clarity as opposed to empirical finding. The baseline level of infrastructure, connectivity, power, device availability, and data governance does not appear anywhere within the variables in question; it is taken for granted as a backdrop of the high-income literature on which the typology is based and as a universal truth elsewhere. Strategic capacity is presumed in the logic of how operational digitalization allows HR professionals to focus on value-adding activities (Grant & Newell, 2013): the ability to remove administrative tasks presumes the existence of something to move to; when there is no strategic function, then removal of administrative tasks means simply removing work. The fourth and last precondition, the idea of unitary organizational interest, is explicitly formulated in the original text: Strohmeier's (2020) distinction between voluntary and involuntary processes puts digitization, digitalization, digital transformation and digital HRM on the voluntary side, with only externally induced disruption involuntary. The scheme thus leaves no place for internally occurring disagreement among people operating the process regarding whether or not digitalization should happen.

Progression through the typology is explicitly described as starting at the second ideal-type and growing into the fourth, with paths within the type, born digital organizations, and de-digitalization put forward as empirical questions (Strohmeier, 2020). What is not offered is the explanation of the mechanism of progression or stagnation. It is especially evident against the backdrop of the empirical evidence: as Marler & Fisher (2013) showed in their review of forty studies, there is no evidence that e-HRM leads to strategic outcomes; moreover, the fourth ideal-type in the typology does not have any occupants.

Fiaz and Qureshi (2024), in a state-of-the-art review addressing the conceptual ambiguity that surrounds digital human resource management, work at the same definitional level as Strohmeier (2020), disentangling overlapping usages of digitization, digitalization and related terms across the wider literature rather than testing an empirical claim; it is treated here as a conceptual rather than an empirical source for that reason.

2.2 Theoretical Review

2.2.1 Principal-Agent Theory and Political Settlements

The study of agency theory examines relations wherein one side acts on behalf of another in the presence of asymmetric information (Ross, 1973; Jensen & Meckling, 1976). It is a theory of structure, where the principal is unable to see what an agent does and interests of the two are at least partly in conflict, the principal confronts a monitoring issue that contract alone cannot resolve. In Eisenhardt's (1989) review of the theory's evolution, information systems become a key element introduced by the agency theory since in situations where the principal is able to observe his agent's behavior and use of the information systems such as budgeting and accounting practices, the agent will be more likely to act in the principal's best interests. The personnel and payroll system is exactly what this proposition is about: its very purpose anywhere is to make the management of the labor force observable by whoever ordered it. The proposition has continued to be generalized to more modern settings, as seen in Feng and Chandra's (2026) adaptation of the same visibility principle to artificial intelligence agents.

Two further generalizations apply the theory to the bureaucracy. First, Moe (1984) applies the contractual framework to the public administration where the principal is not the owner and the agent is not a manager. Second, Waterman and Meier (1998) consider goal conflict and information asymmetry as variables rather than as givens since most of the public programs are accountable to multiple principals whose goals are in conflict.

Agency theory tells us what decision someone makes in a certain moment; it doesn't say much about why such decisions are being made for decades. Khan (2018) gives us the broader explanation of that needed, according to him, distribution of power within organizations defines effects of institutions and policies, and organizations support, reject or distort specific institutions depending on their interests and capacities. Distortion, being the process standing in-between adoption and rejection and involving retention of a formal institution with weakening of its effectiveness, is exactly what the stall is. The framework is explained in African political economy context by Behuria et al. (2017), and its universal validity is questioned by Kelsall (2018). As for

Nigeria, Roy (2017) claims that anti-corruption effort there is hampered by a settlement where resources are controlled by establishment groups unable to discipline each other, which provides stability in a factionally split society.

The two frameworks work on the different levels and don't compete. Agency theory helps us understand the incentive of the actor who controls the information system; political settlements framework helps us understand why no coalition emerges to change this incentive.

2.2.2 Alternative Theories Considered

Four alternative theories were examined and each suffers from the same shortcoming: it may be able to recognize the unfulfilled potential of digitalization, but none of them can explain the reasons why the relevant actors chose not to utilize it. The resource-based view may treat a digital HR strategy as the configuration of resources that provides competitive advantage where they are valuable, rare, inimitable and exploitable (Barney, 1991), but it cannot explain the fact why, having a certain resource, actors do not want to exploit it. A neo-configurational approach (Misangyi et al., 2017) sees outcomes as the result of a conjunctural combination of conditions rather than an effect of independent variables and may be useful in identifying which combinations of conditions occur alongside certain outcomes, yet it ignores the motivations of the actors involved and depends on the population of cases that cannot be provided by a single case argument. Institutional theory explains quite well why something would be adopted, seeing digitalization as a legitimate reaction to the expectations of donors and peers, but isomorphic pressure implies convergent use of a template rather than partial implementation; hence, it is puzzling why organizations adopt rather than cease their actions. Acceptance models in the UTAUT paradigm dominate empirical studies of Nigerian public sector digitalization and see the reasons for implementation in individual perception of usefulness and efforts required.

The design-reality gap is the strongest competitor, since it addresses the very same facts. In the case of e-government failure in developing nations, Heeks (2003) points to a mismatch between the assumptions embedded in the system and the local conditions, a concept widely applied in this literature (Nyansiro et

al., 2021). The problem with this approach is structural; it views failure as unintentional, caused by a mismatch between the design and its context with capacity building as an implication, but lacks the means to describe a situation where the system fails for one group but works for another. Thus, it is not accidental that a distinction is drawn between the two models; Proposition 3, which is tested in the Finding section, was formulated precisely for this purpose.

2.3 Empirical Review

Empirical work specific to Nigeria's Integrated Payroll and Personnel Information System is thin relative to the conceptual and theoretical literature reviewed above, and what exists is almost entirely perception-based rather than documentary. Kaoje, Kabir, Sani, Gambarawa and Ubandawaki (2020) surveyed 100 Treasury staff at Federal Pay Office locations in Sokoto and Birnin Kebbi and reported a significant, moderate positive relationship between IPPIS and payroll transparency and accountability, concluding that the system meaningfully improves administration once its internal controls are enforced. Alalade, Oladeji and Oyebamiji (2025) surveyed 250 respondents across the Office of the Accountant-General of the Federation, the Federal Ministry of Finance and the Office of the Auditor-General, and reported that IPPIS adoption predicted a 68.4 per cent improvement in accountability and transparency, concluding that the platform is a vital enabler of digital governance once supported by sustained institutional commitment.

These studies read IPPIS through the perceptions of the staff who operate it, and both reach a favourable verdict on transparency that sits, at first look, uneasily beside the documentary record examined in this paper. The literatures are not, however, strictly in conflict. A perception survey measures whether staff experience the system as more transparent than its paper predecessor, which reduced manual handling and self-reported ease of use could support on their own, while the documentary test in this paper measures whether the system's own verification subsystems are switched on and acted upon, a narrower and independently checkable question the surveys do not ask. Ukozor and Ikechukwu (2024), reviewing administrative obstacles across Nigerian universities through content analysis of secondary publications, report a more contested

picture at the Parastatal boundary this paper examines directly: IPPIS integration is described there as having constrained recruitment and contract-staff retention at federal universities and as a violation of university autonomy, corroborating the ASUU dispute discussed in the Nigerian case subsection above from an independent source and vantage point.

2.3.1 Gap in Literature

The perception-based studies (Kaoje et al., 2020; Alalade et al., 2025) measure whether staff experience IPPIS as more transparent, not whether its verification subsystems, the audit trail, application controls and duplicate-payment checks, are actually activated and acted upon, and neither study cross-checks staff perception against the Auditor-General's own audit findings. The conceptual and theoretical literature (Strohmeier, 2020; Fiaz & Qureshi, 2024) supplies a typology and a definitional clarification of digital HRM but, as argued above, offers no account of why an organization would stall at a given stage rather than progress, since neither treats the possibility that the actors operating a system might have an interest in leaving parts of it dormant. Agency theory (Eisenhardt, 1989) and the political settlements framework (Khan, 2018) have not previously been combined to address this question in a digital HRM setting. And no study identified in this review situates a single country's payroll-control profile within a cross-national distribution of comparable systems to test whether a documented pattern is a national peculiarity or a regional regularity, the comparison this paper conducts using PEFA's PI-23 data across 32 Sub-Saharan African countries. This paper's four contributions, stated in the Introduction above, are addressed to this combined gap: a documentary rather than perception-based test of verification activation, an explanation for stalling grounded in incentive rather than capacity, and a cross-national benchmark for a single-country finding.

III. METHODOLOGY

3.1 Design and Case Selection

The current research utilizes the design method of theory adaptation (Jaakkola, 2020); the existing theoretical framework, Strohmeier's (2020) typology of digital HRM, is maintained and expanded using another theory, principal-agent theory along with the

perspective of political settlements, to tackle the problem which cannot be solved with the existing framework, namely, the explanation of the reasons behind the positioning of organizations within the typology. IPPIS of Nigeria is the case for analysis and demonstration; it was chosen due to the consistent audit records of Nigeria's national auditing organization from 2016 onwards.

3.2 Method of Review and Source Appraisal

Integrative Review methodology, which suits the purposes of developing conceptualizations more than finding aggregation (Torraco, 2005, 2016), was used. However, full PRISMA protocol (Page et al., 2021) was not employed in that its purpose is pooling studies to answer an empirical question within existing literatures. In contrast, this research develops the bridge between two literatures that do not cite each other at all. Identification, screening and inclusion procedures are reported below in a PRISMA-like flow chart adjusted for an integrative review. Primary data sources were Scopus and Web of Science databases, secondary, EBSCO Business Source Complete database and Google Scholar (for Nigerian grey literature). The two search tracks, namely for the HRM and digitalization literature and for the Nigerian context and mechanism literature, were then combined after retrieval. Peer-reviewed articles and conference papers in English within 2007-2026 timeframe were chosen.

Three levels of rating the sources were developed, appropriate for theoretical, institutional and documentary literatures. The first level includes peer-reviewed articles in journals included in the indexing. The second level is comprised of institutional, governmental, legal and policy documents issued by identified institutions. The third level includes non-peer-reviewed materials, allowed only where the first-level or second-level source provides independent support for the same information. The peer-reviewed literature on IPPIS is very scarce, therefore the Nigerian case will be developed based mainly on the second-level primary documents: audits of the Auditor-General for the Federation, consolidated financial statements of the Accountant-General, agency publications and court file.

3.3 Method of Data Analysis and Testing of Propositions

Three of the six propositions developed in the Findings section, P1, P3 and P5, are tested empirically rather than only illustrated. The test is a within-case, longitudinal design, not a cross-sectional one: no dataset exists in which coverage, verification-control status and recommendation-implementation status are recorded per federal ministry, department or agency (MDA) per year in a form suitable for cross-tabulation, and where the underlying audit reports present that level of detail, it sits in an appendix table that could not be retrieved for this review. The test instead tracks three indicators, coverage, verification-control activation, and recommendation-implementation status, across five points in time between 2014 and 2023, drawn from the Auditor-General's own reports and public statements and corroborated, where possible, against a second, independent source. A longitudinal design suits propositions that predict independence across repeated observations, or a trend that does not improve over time, better than a single cross-sectional comparison could.

The evidentiary base for this test comprises, beyond the sources cited in the Findings section, the Auditor-General's dedicated audit of IPPIS controls (Office of the Auditor-General for the Federation, 2016), the Auditor-General's report on the FY2018 accounts (Office of the Auditor-General for the Federation, 2020), a public statement by the Auditor-General on recommendation implementation (Office of the Auditor-General for the Federation, 2019), a secondary analysis of the FY2016 report by an identifiable researcher (Amakom, 2018), and a Senate committee's record of the Accountant-General's own testimony (Punch Newspapers, 2016). Per the appraisal scheme above, Tier 3 items are used only to corroborate a claim a Tier 1 or Tier 2 source already establishes, with one exception stated at the point it is used: several coverage figures reported only in a Tier 3 source have not been independently verified against primary text, because the relevant appendix could not be retrieved.

3.3.1 Cross-Country Comparison Using PEFA Payroll-Control Data

Looking at the design set out in the preceding subsection, testing P1, P3 and P5, we see that it can

only show that selective activation operates within Nigeria's federal payroll system, it cannot show whether that pattern is typical of comparable public bureaucracies or a Nigerian peculiarity, since a single case tracked over time offers no basis for that comparison. A second, independent empirical component addresses this directly by situating Nigeria within a distribution of payroll-control scores drawn from other countries.

The Public Expenditure and Financial Accountability (PEFA) framework, a standardized methodology for assessing public financial management systems developed and supported by the World Bank, the International Monetary Fund, the European Commission and several bilateral donors, scores national systems on indicator PI-23, "Payroll controls," disaggregated into four sub-dimensions: 23.1, integration of payroll and personnel records; 23.2, management of payroll changes; 23.3, internal control of payroll; and 23.4, payroll audit (PEFA Secretariat, 2016). PI-23.4 is the closest available cross-national proxy for verification intensity as defined in this paper, since it measures whether payroll audits are conducted and whether their findings are acted on, the same function tracked directly for Nigeria in the Findings section.

All publicly accessible national-level PEFA assessments conducted under the 2016 Framework for a Sub-Saharan African country were retrieved from the PEFA Secretariat's public assessment registry (PEFA Secretariat, n.d.), yielding 47 assessment records across 32 countries. Where a country has been assessed more than once under the 2016 Framework, only the assessment closest in time to Nigeria's own 2019 assessment (PEFA Secretariat, 2019) was retained, to avoid treating repeated observations of the same country as independent and to keep the comparison roughly contemporaneous. Each record's national, final, public and 2016-Framework status was verified against the registry directly; three of the 47 records, including Nigeria's own, are flagged there as not having passed the Secretariat's own quality-assurance review, a limitation returned to in the Discussion subsection below.

PEFA's letter grades are ordinal, not interval: the distance between D and D+ is not established as equal

to the distance between B and B+. This paper follows the PEFA Secretariat's own published conversion of the seven grades to a numeric scale, D through A scored 1 to 4 in steps of 0.5, sourced to de Renzio (2009), for ranking purposes only, and restricts the resulting statistics to methods appropriate to ordinal data. Locating Nigeria's own score within the distribution is necessarily descriptive rather than inferential: Nigeria was this paper's case of interest before the comparator sample was assembled, so a significance test of its own extremity would be circular. The one hypothesis the comparator sample can test directly is whether payroll audit is systematically weaker than the other PI-23 sub-dimensions across the sample as a regional pattern, tested with the Wilcoxon signed-rank test, the paired non-parametric test appropriate to matched ordinal observations (Wilcoxon, 1945)

IV. FINDINGS

4.1 The Nigerian Case: IPPIS and the Verification Function

IPPIS was launched in 2007 under the Bureau of Public Service Reforms, domiciled in the Office of the Accountant-General of the Federation (Bureau of Public Service Reforms, n.d.). Its reach was strong and by 31 December 2020 it covered 1,226,681 public servants across 639 MDAs, disbursing N239,998,909,009.91 in gross salary that month (Office of the Accountant-General of the Federation, 2024).

Reach though, does not mean monitoring. A March 2016 audit found the audit trail unactivated and application, duplicate-payment and reasonableness controls switched off, loose enough that an officer in one MDA could edit another's payroll data (Office of the Auditor-General for the Federation, 2016). The consequences: nearly 300,000 payments totaling N330 million diverging from approved scale, forty payees drawing over N12 million monthly on no nominal roll, 152 officers with no personnel file, nearly 2,000 with no pension deduction at all. Every one of these is a deactivated control, not a missing capability, the

pattern a design-reality gap (Heeks, 2003) would predict is unintentional and trainable; this one isn't.

The pattern repeats in the accounts. The 2016 audit found payroll ledgers diverging from consolidated costs across 346 MDAs by N2,057,740,301.97, and a N36,031,959,963.27 disbursement variance the Auditor-General could not verify (Office of the Auditor-General for the Federation, 2018). By 2020, IPPIS-specific scrutiny had disappeared from the audit programme entirely, but the broader finding is worse: of 32 recommendations on the FY2019 accounts, 6 were implemented and 21 (66%) were not, against 106 MDAs exceeding personnel budgets by N78.76 billion unauthorized (Office of the Auditor-General for the Federation, 2023). Monitoring happens, but most times findings are filed and ignored.

The agency conflict surfaced explicitly once: ASUU objected that IPPIS violated university autonomy legislation and proposed a rival platform; the Federal Government's answer, filed at the National Industrial Court, was that the demand infringed its exclusive control of the payment platform (Federal Government of Nigeria & Ors v. Academic Staff Union of Universities, 2023). Neither side disputed digitalization. What was contested was which principal the system would answer to.

4.2 An Integrated Framework: Verification Intensity and Selective Activation

Strohmeier's (2020) two axes, HR practice digitalized and HR strategy digitalized, say nothing about what digitalization does to the people who operate it. Nigeria in 2016 (453 agencies, payroll centralized, no HR strategy) sits at Digital HRM I. A European ministry at identical coverage but with an enabled audit trail would sit at the same point on Strohmeier's map while differing completely on a dimension the map doesn't have.

That missing dimension is verification intensity: how far a configuration makes the discretionary decisions of those controlling HR information observable and attributable. A simple sketch of it:

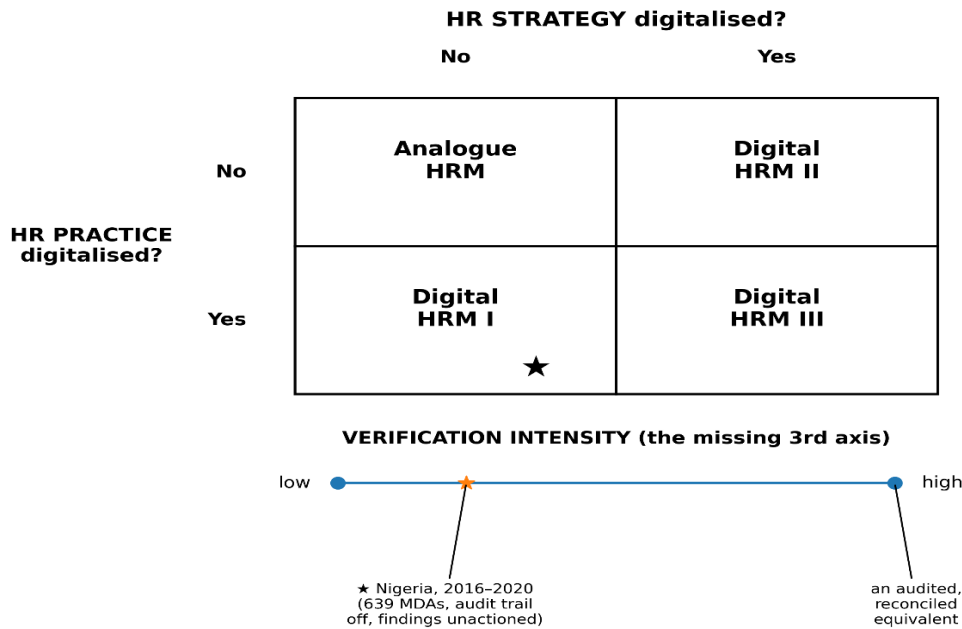


Figure 4.1: Digitalized HRM Axis

Nigeria moves rightward on the flat, printed page (453 to 639 MDAs) without moving at all on the axis that isn't printed. That's the whole mechanism in one picture: coverage growth is verification-neutral and cheap; the move to Digital HRM III requires reconciled, attributable data, and that's precisely the move that never happens, because it's the one that costs the controlling actor something.

Facing that cost, an agent in control has three moves: refuse openly (costly once adoption is mandated), comply fully (costly if discretion has independent value), or selectively activate, adopt the system, leave verification dormant, keep both the legitimacy of reform and the discretion of non-reform. Its signature

is exactly the pattern described above for the Nigerian case: coverage up, controls off, inaction on findings.

Agency theory explains one such choice. It doesn't explain the same choice held for sixteen years across administrations. Khan's (2018) political settlements framework does: organizations distort institutions, formally intact, substantively hollow, when no coalition has both the interest and the capability to force activation. That's also why Financial Regulation 3129's gross-misconduct sanctions are invoked repeatedly and applied never.

4.3 Propositions and Evidence

P1, P3 and P5 are tested against existing records below. P2 and P4 need multi-agency comparison

; P6 needs longer time-series than one country's decade supplies.

Table 4.1: IPPIS Coverage and Verification-Control Status, 2014–2020

Point in time	Coverage	Verification/control status
2014	~450/1,000+ MDAs (45%)	Not separately assessed
End-2016 (audit)	450 MDAs, unchanged	Audit trail, application controls, passwords confirmed inactive
Nov 2016 (Senate)	453 MDAs; ₦120bn savings claimed	Not assessed
FY2016 accounts	346 MDAs show ₦2.06bn variance	Auditor-General could not verify AGF's adjusted figures

Point in time	Coverage	Verification/control status
2020	639 MDAs	FY2020 observations don't mention IPPIS or examine any federal system's controls

P1: *Supported*. Coverage climbs steadily 2014 to 2020; in the one year both variables were measured together (2016), every control was already confirmed off while coverage kept rising, and scrutiny then vanished entirely by the point coverage peaked.

P3: *Partially supported*. Has a real institutional analogue (Constitution s.85(3)(a) direct MDA audit vs. s.85(3)(b) Parastatal self-accounting), and the

MDA/university/Parastatal split tracks the predicted direction, but activation status was never reported by category, so the precondition is confirmed and the outcome variable isn't yet measured within it.

P5: *The best-supported*. Three independent sources, an Auditor-General public statement, an independent 2018 analysis, and the compliance table itself, converge on the same low, non-improving rate.

Table 4.2. Predicted and Observed Patterns for Propositions 1, 3, and 5

Proposition	Predicted	Observed	Assessment
P1	Coverage, verification move independently	Coverage rose while controls stayed off; scrutiny lapsed as coverage peaked	Consistent
P3	Lower activation where deployment control sits with exposed actors	Institutional split tracks prediction; outcome not measured within it	Partially supported
P5	Low, non-improving implementation	19% compliance, three convergent sources, 2018–2023	Consistent

4.4 Cross-country evidence: Is Nigeria representative or exceptional?

Table 4.3. Nigeria's PI-23 Payroll-Control Scores Against a 32-Country Sub-Saharan African Comparator Sample

Measure	Nigeria	Comparator sample (n=32)
PI-23 overall	D	5 of 32 (15.6%) score D; none worse
PI-23.4 (payroll audit)	D	7 of 32 (21.9%) score D; none worse
D on all four sub-dimensions	Yes	4 of 32 (12.5%), incl. Nigeria

There arises a fundamental question to be answered in the light of above: Is Nigeria's profile *authentic*, or simply *selective*? The answer is: *Authentic*, since it is at the very bottom of a true regional distribution, not just an individual reading. Is this particular mechanism of audit lagging other controls a regional phenomenon too? No; there was no statistically significant difference in a Wilcoxon signed-rank test comparing PI-23.4 and PI-23.1 (n=31), $W=109.0$, $p=.81$, nor in

another comparing PI-23.4 to the mean of the other three sub-dimensions, $W=127.5$, $p=.52$. The selective activation remains justified by Nigeria's own performance, but not by this comparison to other countries.

4.5 Discussion of Findings

This paper's primary contribution is to Strohmeier's (2020) framework rather than against it: the typology's

vocabulary and ideal-types survive intact, but no longer stand alone, since verification intensity separates an organization's nominal position from its effective one and explains why the framework's own top type has no observed occupants anywhere, including in the high-income settings its literature draws on. Marler and Fisher (2013) found no evidence across forty studies that e-HRM predicts strategic outcomes. This paper reads that as the same finding, since the transition that would produce strategic outcomes is the one that imposes verification costs on the actors best positioned to prevent it. Nigeria is not an exception to the Western literature's pattern; it is the pattern with the mechanism visible, because a supreme audit institution documented what was switched off and what was ignored.

One recent study complicates this claim. Ruiz, Benitez, Castillo and Braojos (2024) report evidence from 351 firms that an integrated digital HR strategy is associated with improved performance, which could seem to supply the missing occupants for Strohmeier's fourth ideal-type. On the distinction that matters here it does not: their construct is compatible with digital technology executing a strategy rather than originating one, a distinction flagged here rather than adjudicated. A further consequence runs back to agency theory: Eisenhardt's (1989) proposition that verification through information systems induces agents to act in the principal's interest contains an unstated assumption about who controls the system; where that assumption fails, the same reasoning predicts the opposite outcome. And the paper answers Bondarouk and Brewster's (2016) call for political lenses on the exercise of power in e-HRM: the Nigerian stall is not a deficiency measured against a Western benchmark, but a rational response by identifiable actors to an instrument that would have made their conduct observable.

The practical implication follows directly from P6. If non-activation is an incentive outcome, further technological investment cannot remedy it, since additional modules, upgraded platforms and expanded coverage all leave the activation decision with the same actors, which is exactly what the Nigerian record shows: coverage grew while dormant controls went unaddressed and recommendations were implemented at 19 per cent.

V. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Strohmeier (2020) developed a typology the highest level of which he could not locate anywhere. The aim of this paper has been to argue that the latter is not due to lack of time or immaturity, nor could the framework as constructed have explained it, as its two dimensions measure the degree to which something has been digitized without ever mentioning the effect of such digitalization on the people who use it.

The addition of verification intensity as a third axis fills the gap. Change of stage in the typology is far from incentive-neutral: with each transition, the level of visibility of the discretion of the controlling actors is affected, and the latter in particular changes radically, which is the reason why organizations stop at that point. When the former are the controllers of the instrument, the optimal strategy for the latter is neither refusal nor compliance, but selective activation, i.e., adoption of the system but leaving its auditing functions deactivated. Political settlements theory explains the permanence of such strategies, in that no coalition can ever form that would have both the interest and the ability to enforce the activation.

A particularly clear example of such dynamics is provided by Nigeria's federal payroll system. Moreover, this paper has done more than describing such dynamic: three of the framework's six propositions have actually been tested, not only claimed, against a ten-year record of audits carried out in the country, and proved successful. Monitoring system was provided without audit trails being enabled. Numbers generated by it did not match the records of the office where the system operated. Audit findings were recorded but never acted upon. Coverage kept increasing throughout the period under study. An additional comparison with thirty-two other payroll systems operating in Sub-Saharan Africa locates this particularity within a distribution rather than in isolation, though not as a regional rule.

In essence, the point being made here is that this is not a tale of a developing bureaucracy. This is a story of what it is like when the very parties whose interactions make an information system observable decide how many of its functions to activate, a configuration that is neither unique to Nigeria nor to the public sector, and that is not rare. Over twenty years of digital HRM literature has been asking what it is that prevents the

strategic potential of these information systems from being realized; this paper's answer is that the potential is being withheld not by immaturity or insufficient technology, but by the interests of the actors who would be exposed by its full use, an incentive problem rather than a developmental one, and the place where any explanation, and any remedy, has to start.

5.2 Recommendations

Three recommendations follow from the findings above, aimed respectively at audit institutions, system design, and research practice.

Verification capability must be considered as a separate variable of governance and measured in its own right, separately from coverage. Audit organizations and oversight organizations must require that whether the audit trail, application controls and access controls are activated to be included as a separate line item in addition to enrollment and coverage statistics, because it is shown by the Nigerian experience that the two do not necessarily go together.

The separation between the operation of a personnel information system and the distribution of the payroll it governs must be considered a design issue, rather than a logistical one. When the same people control both of these functions, as is described above in the Nigerian case, the verification subsystem is the first thing to be sacrificed when such control is asserted; separating control over deployment from control over operation eliminates the incentive identified above.

When the audited party controls how the findings are implemented against it, then the implementation itself must be the subject of the oversight, not the findings. More precise or severe reiteration of a finding is, based on the experience discussed above with the propositions and evidence, not what improves compliance; it is removal of control over implementation that leads to compliance, as would be predicted by Proposition 6.

Research-wise, the emphasis should be on the comparative and longitudinal analysis that this individual case cannot provide. P2 and P4 need data from more than one agency/jurisdiction with various levels of statutory independence, including at least one well-endowed agency where agents, as opposed to principals, determine allocation of resources, because it will be a much better test for the framework than another poorly endowed case. As for P6, it needs to

follow a stalled system through change in the coalition capable of enforcing activation to see if there is activation without further technological investments, as the framework suggests. It will be possible to test P1 and P3 as cross-tabulations rather than time-series by retrieving the appendix tables for the entity level, especially the variance table from the FY2016 report.

VI. LIMITATIONS

Four limitations qualify these findings of this study. Firstly, the empirical test conducted is a single-case, longitudinal design, not a cross-sectional one: it tracks three indicators over time within one country's payroll system and cannot show how commonly the mechanism operates elsewhere. Secondly, the illustrative case is a single country and system, which limits generalization in the ordinary way, though the framework's scope condition is the distribution of control over the instrument rather than sector or region, so testing it requires cases selected on that variable. Thirdly, the documentary base has its own constraints: that the Auditor-General's FY2020 observations do not address IPPIS is consistent with this paper's argument but also consistent with scrutiny having migrated to a separate, unexamined report series, and nothing here rests on that silence. A fourth limitation attaches to the cross-country comparison presented above: PEFA's PI-23 sub-dimensions proxy verification intensity rather than measuring it directly, and the non-significant regional test of the audit-lag pattern is an absence of confirmation at the sample size available, not evidence against the mechanism, which remains supported by the Nigerian case specifically.

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