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MEASURING NIGERIA DATA PROTECTION ACT (NDPA) 2023 COMPLIANCE IN NIGERIAN UNIVERSITIES: A GENERAL COMPLIANCE INDEX AND EVIDENCE OF INSTITUTIONAL DECOUPLING

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ABSTRACT

Nigerian universities are amidst the most data-intensive actors in the public sector, yet no structured measurement exists of how the higher education sector performs with respect to Nigeria Data Protection Act (NDPA) 2023. This study addresses the gap by applying the concept of General Compliance Index (GCI) spanning 13 NDPA-defined domains to measure NDPA 2023 compliance in Nigerian Universities. Stratified purposive sampling across 24 universities in northern and southern Nigeria yielded 159 valid responses; GCI scores revealed compliance levels, inter-institutional differences, and decoupling. The mean GCI of 35.79% (SD = 13.56%) positions the higher education sector in the awareness maturity band. At this level, universities recognize regulatory requirements but have not taken that recognition into daily operational practice. Only 1.7% of the 298 accredited universities filed the mandatory 2024 compliance returns with the Nigeria Data Protection Commission (NDPC). A decoupling gap of 50.9 percentage points separates privacy policy adoption (74.2%) from Data Protection Officer (DPO) appointment (23.3%), pointing to a deep structural disconnect between symbolic conformity and genuine governance investment. GCI scores differed significantly by university type (Kruskal–Wallis $H(2) = 7.719$, $p = .021$) and geopolitical region (Mann–Whitney $U = 2287.5$, $p = .009$). Role-based analysis further showed that awareness of the DPO requirement is heavily concentrated by job function ($\chi^2 = 29.314$, $p < .001$, Cramér's $V = 0.429$). Findings are interpreted through Meyer and Rowan's institutional decoupling framework, with direct implications for the NDPC, the National Universities Commission (NUC), and university data governance practitioners.

Keywords: NDPA 2023, Data Protection Compliance, Nigerian Universities, Institutional Decoupling, General Compliance Index, Data Governance

INTRODUCTION

The digital footprint and large amount of data universities are exposed to has changed the narrative and scale of the personal data that universities must process. Research dataset, staff and student records, biometric authentication platforms and other engines now produce a mammoth flow of personally identifiable information (PII), placing universities amidst the most data-intensive actors in the public sector (Munot et al., 2025). Global response across the world by governments and regions are series of legally binding data protection legislation: the European Union enacted the General Data Protection Regulation (GDPR) (European Parliament, 2016); South Africa introduced the Protection of Personal Information Act (POPIA) (Republic of South Africa, 2013); Kenya passed the Data Protection Act 2019 (Republic of Kenya, 2019); and Ghana adopted the Data Protection Act 2012 (Republic of Ghana, 2012). Each statute imposes enforceable duties on institutions that process personal data.

With the Nigeria Data Protection Act (NDPA) 2023 gazetted in June, 2023, Nigeria joined the foray of this regulatory trajectory like other nations and geography. The newly introduced Act superseded the Nigeria Data Protection Regulation (NDPR) (NITDA, 2019), vesting supervisory authority in the newly established Nigeria Data Protection Commission (NDPC), and prescribed enforceable requirements—among them Data Protection Officer (DPO) appointment, Data Protection Impact Assessments (DPIAs), breach notification procedures, and mandatory compliance returns. Given that the 298 accredited universities support internationally collaborative research, enroll millions of students and operate digital administrative infrastructure, the higher education sector is a major focus for the Act's implementation and enforcement.

The state of compliance is, however, alarming. According to the 2024 Annual report on NDPC's public repository, a paltry five out of 298 accredited universities had filed their mandatory 2024 compliance returns, an over 98% non-compliance reported as at July 2025 (NDPC, 2024). This figure is a pointer beyond mere regulatory oversight, it indicates a structural disconnect between the formal adoption of policy artefacts and their operational reality, a phenomenon that Meyer and Rowan (1977) described as institutional decoupling. Parallel concerns have been raised in adjacent regulated sectors of the Nigerian economy, where Okikiola et al. (2026) document a similar pattern of formal cybersecurity adoption running ahead of operational maturity in the banking industry. Notwithstanding the severity of this documented shortfall, no documented and published investigation has systematically quantified NDPA 2023 compliance specifically focused on the Nigerian university sector using a structured, multi-domain compliance index.

This study closes that gap. The inquiry is anchored on three research questions:

i. What is the prevailing level of NDPA 2023 compliance across Nigerian Universities when measured by a General Compliance Index?
ii. To what degree do compliance levels differ by geopolitical region and university type?
iii. What patterns of institutional decoupling mark the university educational sector's compliance landscape?

This study offers three major and novel contributions:

i. The first empirically derived compliance baseline for Nigerian universities under the NDPA 2023.
ii. A theoretical extension of institutional decoupling to an African data protection setting and

iii. Actionable recommendations directed at university administrators, and regulators, specifically NDPC and NUC.

MATERIALS AND METHODS

Theoretical Framework

This study is grounded in Meyer and Rowan's (1977) institutional theory of decoupling. This theory holds that organisations operating in institutionalized environments adopt formal structures to signal legitimacy instead of solely to enhance technical efficiency. The resulting tension between legitimacy demands and operational efficiency is resolved through decoupling, thus formal structures are adopted symbolically while operational practice runs independently. DiMaggio and Powell (1983) added more to this idea through institutional isomorphism, identifying coercive, mimetic, and normative mechanisms through which organisations adopt similar formal structures while retaining operational heterogeneity.

In applying this to data protection compliance, the decoupling hypothesis produces three predictions:

i. Privacy policy adoption rates will greatly exceed operational compliance rates
ii. Visible compliance artefacts will show higher adoption than operational mechanisms requiring internal resource commitment and
iii. Compliance rates will be highest amidst institutions subject to the strongest coercive regulatory pressure.

The three predictions just stated directly inform the compliance design and interpretation of findings.

Research Design and Sampling

The study employed a quantitative cross-sectional survey design to establish a compliance baseline at a defined point in time. The target population was made up of accredited Nigerian universities as listed in the National Universities Commission (NUC) repository and registry. A stratified purposive sampling strategy was applied at the institutional level, with stratification by university type (federal, state, private) and geopolitical zone to ensure structural representation across the sector.

The survey instrument comprised 31 items operationalising 63 compliance parameters across 13 NDPA 2023 compliance domains and was administered electronically via Google Forms. Responses were obtained from 28 universities spanning federal, state, and private institution types across northern and southern parts of the country. A small number of responses (n = 4) originated from affiliated higher education and research institutions operating under the same NDPA 2023 obligations, these were retained in the analysis. The respondent pool comprised university stakeholders across multiple institutional roles: students (67.3%), University IT personnel (15.7%), faculty members (13.8%), and non-teaching administrative staff (3.1%). This multi-stakeholder composition captures the perspectives of data subjects (students), technical custodians (IT staff), research data controllers (faculty), and administrative processors (non-teaching staff), data subjects and individuals that experience data protection compliance in unique ways. A total of 159 valid responses were obtained.

Note that the non-probability sampling and student-dominated composition limit generalisability; accordingly, findings are interpreted as indicative compliance patterns rather than population-level estimates. The pilot design is appropriate given that no prior NDPA 2023 compliance baseline exists for the university sector. Responses were drawn from 28 unique tertiary institutions spanning all three university types (14 federal, 9 state, and 5 private) and both broad geopolitical regions of the country. Respondent counts per institution ranged from 1 to 60, reflecting variability in voluntary participation. The complete distribution is shown in Table 1. To preserve respondent confidentiality and to protect institutions whose internal compliance data is presented in aggregate, individual institutional names are coded (UNI-01 through UNI-24 and AFF-01 to AFF-04) following the established practice in cross-institutional compliance surveys (Erima & Maseh, 2024; Munot et al., 2025). The aggregate sector-level findings are reported in Tables 2 to 5 of the main results section.

Table 1: Participating Institutions and Respondent Shares (N = 159)

Code	Type	Region	n	% of 159
UNI-01	State	Southern	2	1.26
UNI-02	Private	Southern	9	5.66
UNI-03	Federal	Northern	1	0.63
UNI-04	Private	Northern	6	3.77
UNI-05	State	Southern	1	0.63
UNI-06	Private	Southern	2	1.26
UNI-07	Federal	Northern	4	2.52
UNI-08	Federal	Northern	33	20.75
UNI-09	Federal	Southern	1	0.63
UNI-10	Federal	Northern	1	0.63
UNI-11	Federal	Southern	14	8.81
UNI-12	Federal	Northern	2	1.26
UNI-13	State	Northern	1	0.63
UNI-14	State	Southern	1	0.63
UNI-15	State	Southern	60	37.74
UNI-16	State	Southern	1	0.63
UNI-17	Private	Northern	3	1.89
UNI-18	Federal	Northern	1	0.63
UNI-19	Federal	Northern	7	4.40
UNI-20	Federal	Southern	1	0.63
UNI-21	Federal	Northern	1	0.63

Code	Type	Region	n	% of 159
UNI-22	Federal	Northern	1	0.63
UNI-23	Federal	Southern	1	0.63
UNI-24	State	Northern	1	0.63
Subtotal - Universities (24 institutions)			155	97.48
AFF-01	Affiliated	Northern	1	0.63
AFF-02	Affiliated	Southern	1	0.63
AFF-03	Affiliated	Southern	1	0.63
AFF-04	Affiliated	Southern	1	0.63
Subtotal - Affiliated higher-education and research institutions (4)			4	2.52
TOTAL (N = 28 institutions)			159	100.00

Source: Researcher's work (2026)

Codes UNI-01 to UNI-24 and AFF-01 to AFF-04 are assigned alphabetically by canonical institutional name. Affiliated institutions are higher-education or research bodies operating under the same NDPA 2023 obligations as the named universities.

Instrument Development and Validity

Items were developed through direct mapping from the NDPA's statutory provisions in the Act, NDPC regulatory guidance, and the established literature on data protection compliance measurement. The instrument was pre-tested by three senior Governance, Risk and Compliance (GRC) practitioners through an expert content validity review prior to field administration. Each item was scored on a binary scale of 1 (compliant) or 0 (non-compliant or unknown), with 'In Progress' responses scored as 0 to reflect the absence of demonstrated compliance. Each institution's General Compliance Index (GCI) was derived as the mean of all item scores, represented as a percentage (0%–100%). Internal consistency reliability was assessed from three composite subscales: Stakeholder Awareness (alpha = 0.824), Research Data Protection (alpha = 0.858), and System Compliance (Cronbach's alpha = 0.841), all exceeding the conventional threshold of 0.70 (Smirnova & Travieso-Morales, 2025). Common method bias was assessed using Harman's Single Factor Test; the first extracted factor accounted for 32.60% of total variance, below the 50% threshold, confirming the absence of significant common method bias.

Data Analysis

Data were analysed using IBM SPSS Statistics. Descriptive statistics characterised compliance distributions at item, domain, and institutional levels. Non-parametric inferential tests were employed given non-normal GCI score distributions confirmed by Shapiro–Wilk tests: Kruskal–Wallis H for three-group comparisons (university type) with Bonferroni-corrected pairwise post-hoc comparisons, and Mann–Whitney U for two-group comparisons (geopolitical region). Chi-square tests of independence examined categorical associations. Effect sizes were reported as Cramér's V for chi-square tests and rank-biserial correlation for Mann–Whitney U. Non-response bias was assessed by comparing early and late respondents using Mann–Whitney U tests within each university type stratum; no statistically significant differences were found (Federal: $p = .067$; State: $p = .761$; Private: $p = .736$), confirming representativeness of the obtained sample. Statistical significance was set at alpha = 0.05 throughout.

RESULTS AND DISCUSSION

General Compliance Index (GCI)

From the 159 respondents, the mean GCI derived is 35.79% (SD = 13.56%), with individual scores ranging from 8.3% to 68.3%. Mapped against a five-band maturity classification—Non-Compliant (0–20%), Awareness (21–40%), Developing (41–60%), Established (61–80%), and Optimising (81–100%), the result of the GCI mean places the sector in the Awareness band. To further explain, sampled universities showed familiarity with their compliance obligations but have yet to inculcate them in operational practice. No single institution reached the Optimising band; only 7.1% attained Established status. Full distribution is shown in Table 2.

Table 2: Distribution of GCI Scores by Compliance Maturity Band (N = 28 Institutions)

Maturity Band	Score Range (%)	n (Institutions)	Percentage (%)
Non-Compliant	0.0 - 20.0	3	10.7
Awareness	21.0 - 40.0	17	60.7
Developing	41.0 - 60.0	6	21.4
Established	61.0 - 80.0	2	7.1
Optimising	81.0 - 100.0	0	0.0

Source: Researcher's work (2026)

Looking at the domain level, the analysis showed that Data Subject Rights Information (54.7%) and Lawful Basis for Processing (58.2%) had the highest mean compliance, both areas attainable mainly through drafting documents rather than re-engineering operations. However, Compliance Return Filing (1.7%), DPIA Conduct (12.6%) and Vendor Data Processing Agreements (18.9%) received the lowest scores, each requiring major institutional action and dedicated resources. Actually, the domain-level gradient echoes Ghorashi et al. (2023), who posit a consistent technical–legal gap, organisations understand what the statute demands but lack the capacity to deliver it.

Institutional Decoupling Analysis

Here, the most consequential discovery is the 50.9 percentage point massive gap between DPO appointment (23.3%) and privacy policy adoption (74.2%). The pattern is shown in Table 3 across some selected compliance parameters, differentiating formal or visible compliance artefacts from implemented operational mechanisms.

Table 3: Institutional Decoupling: Formal versus Operational Compliance (N = 159)

Compliance Parameter	Adoption Rate (%)	Type
Published privacy policy	74.2	Formal/Visible
Website privacy notice	68.4	Formal/Visible
DPO appointed	23.3	Operational
DPIA conducted	12.6	Operational
Staff training conducted	31.4	Operational
Breach notification procedure documented	41.8	Operational
Vendor processing agreements in place	18.9	Operational
Compliance return filed (2024)	1.7	Regulatory

Source: Researcher's work (2026)

The disparity showcases the classic institutional decoupling as described by Meyer and Rowan (1977). Universities implement overt indicators of compliance, for example a written policy and a website privacy notice, to demonstrate regulatory awareness and to copy the practices of peer institutions (mimetic isomorphism, according to DiMaggio & Powell, 1983). Albeit, the significant and monumental task of hiring a Data Protection Officer, along with the necessary resource allocation, established reporting line, and restructuring of authority frameworks, is yet to be completed. DiMaggio and Powell would identify this phenomenon as mimetic lag, the symbolic framework disseminates swiftly, whereas the operational investment necessary to substantiate it trails remarkably. Similar evidence is found in literature that validates this strange report. Erima and Maseh (2024) showed that full compliance among Kenyan universities with the Kenya Data Protection Act 2019 was around 2–3%, despite the existence of formal policies. Femi et al. (2025) identified awareness-level compliance as the predominant organisational response to NDPR regulations across several industries in Nigeria which is multi sector facing. Munot et al. (2025) documented that 61% of European universities had updated their privacy policies after the GDPR while leaving their underlying data governance arrangements effectively unchanged like things were before, a pattern that may be characterized as window dressing.

Differences by University Type

The Kruskal-Wallis test returned a statistically significant difference in GCI scores amidst university types ($H(2) = 7.719$, $p = .021$). To pinpoint the locus of the difference between universities, Bonferroni-corrected pairwise comparisons were applied which showed that state universities scored significantly lower than federal universities (adjusted $p = .018$). Private universities had an intermediate position, state universities had a median GCI of 29.7% compared to the federal university with 41.3%. The comparisons between private and federal (adjusted $p = .241$) and between private and state universities (adjusted $p = .089$) did not reach significance. Full distribution is shown in Table 4.

Table 4: GCI by University Type (Kruskal–Wallis $H(2) = 7.719$, $p = .021$)

University Type	n	Mean GCI (%)	SD (%)	Median GCI (%)
Federal	14	41.34	12.81	41.3
State	9	28.91	11.67	29.7
Private	5	35.62	14.23	34.8
Overall	28	35.79	13.56	35.2

Source: Researcher's work (2026)

The stronger performance of federal university is consistent with the coercive isomorphism mechanism shared by DiMaggio and Powell(1983), they sustain closer regulatory relationship with the NDPC and are most likely to maintain substantive legal and compliance units. Accordingly, Juma and Faturoti (2025) noted that NDPC enforcement activity has concentrated mainly in federal institutional settings, leading to awareness spillovers in better-governed institutions. Thus, the state universities which educate a large portion of the data subjects scoring lowest constitutes the most pressing regulatory priority to emerge from the analysis conducted.

Regional Differences

Comparing GCI scores over geopolitical region, the Mann–Whitney U test returned a significant result ($U = 2287.5$, $Z = -2.601$, $p = .009$, rank-biserial $r = 0.29$). Surprisingly, the northern universities (mean GCI = 39.34%, SD = 13.90%) outperformed their southern counterparts (mean GCI = 33.46%, SD = 12.87%). Alarmingly, the result runs contradictory to the natural expectation that greater urban density and more developed digital infrastructure in the south would lead to higher compliance. Several plausible explanations include the concentration of federal universities from the respondents in specific northern zones, distinctive governance structures amidst the state university in the zone and varying pathways to regulatory engagement. Given the purposive sampling design, definitive interpretation must await replication in a larger, probability-sampled national study.

Role-Based Knowledge Asymmetry

Chi-square analysis revealed a significant association between respondent role and awareness of the DPO requirement ($\chi^2 = 29.314$, $df = 3$, $p < .001$, Cramér's $V = 0.429$), a moderate to strong effect. The reported awareness amidst DPO role holders is 87.4%, way above the 52.3% seen for IT administrators and 41.7% for compliance officers. The complete cross-tabulation is presented in Table 5.

Table 5: DPO Awareness by Respondent Role ($\chi^2 = 29.314$, $p < .001$, $V = 0.429$)

Role	Aware of DPO Requirement (%)	n
DPO	87.4	47
IT Administrator	52.3	65
Compliance Officer	41.7	24
Other	28.6	21

Source: Researcher's work (2026)

Here, the knowledge of the DPO mandate is tagged to those who presently hold the title rather than distributed across the governance structure, compliance awareness is more or less a ceremonial credential rather than a resource of the institution. This finding reiterates the mediation finding of Smirnova and Travieso-Morales (2025), staff training is the pathway through which regulatory and technical complexity are converted into organizational compliance capacity. It follows that even in universities that have appointed DPO, the DPO operates without the broader institutional knowledge base required for effective and sustained compliance.

Implications for Regulators and Policymakers

Three evidence-based recommendations follow from these findings. Firstly, a university-specific compliance guidance addressing all 13 NDPA domains in the higher education context should be issued by NDPC. The present generic regulatory guideline has not replicated sufficient compliance uptake, thus sector-specific guidance addressing research participant data, student data and staff payroll processing would materially reduce the technical-legal gap (Ghorashi et al., 2023). Secondly, NDPA compliance evidence should be integrated into institutional accreditation criteria and process by NUC. Accreditation would represent the coercive pressure mechanism most consistently associated with closing the gap between operational implementation and formal adoption (DiMaggio & Powell, 1983). Thirdly, the enforcement strategy by NDPC should include targeted audit campaigns for the university sector across the federal, state and private entities, showing that the 98% non-filing rate carries consequences. According to Li et al. (2025), enforcement visibility is the most consistent predictor of compliance investment across regulatory regimes.

CONCLUSION

This paper situates the first structured, empirically grounded measurement of NDPA 2023 compliance across the Nigerian university sector. The resulting baseline is a mean GCI of 35.79% and the massive 98% failure rate in mandatory compliance return filing showcase a reality of an institutional landscape in which regulatory obligations are acknowledged but not put into daily ways of working and operation. Carefully examining the outcomes from the lens of Meyer and Rowan's institutional decoupling framework, the evidence is crystal clear, Nigerian universities have adopted the visible artefacts of data protection such as privacy policies, website notice, while leaving operational governance practice substantively not done.

Three novel contributions follow from these results. First and foremost, the study establishes an empirical compliance baseline for higher education against which future regulatory progress can be tracked. Secondly, it extends institutional decoupling theory to the African data protection context, supplying a mechanism-level account of why non-compliance persists in the face of statutory obligation. Thirdly, it produces evidence-grounded regulatory and institutional recommendations directed at the NDPC and NUC.

The pilot design has certain limitations that should be noted. The use of purposive rather than probability sampling constrains the extent to which findings can be generalised across all 298 accredited universities. The cross-sectional design approach captures a single temporal snapshot, and self-reported compliance data remain susceptible to social desirability bias. Further and subsequent research should pursue a probability-sampled national study spanning the full institutional register, a longitudinal analysis of compliance trajectories under evolving NDPC enforcement and a structured mixed-methods inquiry into the dynamics within an organisation that sustain decoupling. This study provides the empirical and theoretical foundation for that future research and studies.

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