REGULATORY GOVERNANCE AND DIGITAL TRANSFORMATION IN NIGERIA: A STUDY OF SELECTED INSURANCE FIRMS

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Abstract

This study investigates the influence of regulatory governance on digital transformation within the Nigerian insurance sector. Motivated by the need to understand how governance structures shape technological innovation and compliance. The study adopted a quantitative research design using primary data obtained through a structured questionnaire. The population comprised 57 licensed insurance firms under the National Insurance Commission (NAICOM), but due to accessibility and relevance criteria, five firms with active branch offices in the Federal Capital Territory were selected. Data from 85 managerial and supervisory staff formed the study's accessible population, and a census approach was adopted to ensure comprehensive coverage. Preliminary analyses confirmed the reliability and validity of the instrument, with Cronbach's alpha values exceeding 0.70. Descriptive and inferential statistics were conducted using SPSS version 26, with multiple regression analysis employed to determine the predictive effect of regulatory governance on digital transformation. The results revealed a strong positive relationship ($R = 0.842$, $R^2 = 0.709$, $F = 61.22$, $p < 0.001$), indicating that regulatory governance explains approximately 70.9% of the variance in digital transformation among insurance firms. Specifically, regulatory policy frameworks ($\beta = 0.376$, $p < 0.001$), enforcement mechanisms ($\beta = 0.311$, $p = 0.001$), and compliance monitoring ($\beta = 0.248$, $p = 0.013$) were all significant predictors of digital transformation. The findings demonstrate that clear, consistent, and adaptive regulatory frameworks not only enhance compliance but also foster innovation and technological advancement. It recommends that NAICOM strengthen adaptive policy frameworks, foster collaborative digital oversight, and build regulatory capacity to align governance practices with emerging technological realities.

Keywords: Regulatory Governance, Digital Transformation, Compliance Monitoring, Enforcement Mechanisms, Insurance Sector, Nigeria

Introduction

Across the globe, the insurance industry is undergoing unprecedented digital transformation. Technologies such as artificial intelligence, blockchain, big data analytics, and InsurTech platforms are reshaping business models, customer engagement, and risk management practices (Szedmák, Varga, & Szabó, 2025). These innovations promise to

enhance efficiency, improve service delivery, and expand access to financial protection. However, their successful implementation depends heavily on regulatory governance frameworks that ensure consumer protection, data privacy, and systemic stability (Llorca Galiana, 2025). In advanced economies, regulators have been proactive in establishing digital compliance standards, creating a balance between fostering innovation and safeguarding policyholders (Yang, Gu, & Albitar, 2024).

In emerging economies, the picture is more complex. While digitalization offers immense opportunities to expand insurance penetration and reduce operational inefficiencies, regulatory frameworks often lag behind technological advancements. Many regulators struggle to craft adaptive policies that address cybersecurity risks, digital fraud, and data protection concerns (Onoja, Hamza, & Collins, 2021). This regulatory gap limits insurers' ability to fully adopt digital solutions and undermines consumer trust in digital insurance services. Without robust governance, the promise of digital transformation in emerging economies remains underutilized (Horvey, 2025).

In Africa, digital transformation in the insurance industry is still at a nascent stage but growing rapidly. Mobile technologies and digital payment systems are creating opportunities for wider insurance access, particularly in underserved rural areas. Yet, regulatory governance remains a stumbling block. Issues such as weak data protection laws, inadequate monitoring of InsurTech startups, and limited institutional capacity to regulate new technologies persist across many African countries (Bansah, Sidza, & Akita, 2021). As a result, while insurers experiment with digital innovations, policyholders remain exposed to risks that strong governance should mitigate (Marangwanda, Mubanga, & Chaurura, 2025).

In Nigeria, digital transformation in insurance is gaining momentum, driven by the growth of fintech and mobile penetration. Insurers are increasingly deploying online platforms, mobile applications, and automated claims processing to improve customer experience. However, the regulatory environment has not kept pace with these developments. Challenges such as unclear guidelines on digital operations, weak cybersecurity enforcement, and low consumer trust continue to hinder the sector's digital growth (Iheanacho, 2018). While the National Insurance Commission has introduced reforms, more needs to be done to align regulatory governance with technological innovation (Kajwang, 2022).

This study is therefore important because it investigates the role of regulatory governance in shaping digital transformation within Nigeria's insurance sector. By analyzing how governance influences the adoption of digital technologies and impacts consumer trust, the research offers insights into how regulatory bodies can strike a balance between fostering innovation and ensuring accountability. The findings are expected to provide evidence-based recommendations that will strengthen Nigeria's insurance sector and enhance its contribution to financial sector modernization and economic growth.

Ideally, digital transformation in the insurance industry should be supported by regulatory governance frameworks that promote innovation while ensuring consumer protection and market stability. Effective governance would provide clear policies on data protection, cybersecurity, digital claims processing, and the integration of InsurTech, thereby creating a secure and enabling environment for both insurers and policyholders (Pasiouras & Gaganis, 2013). Such a balance would allow technology to enhance efficiency, improve service delivery, and increase insurance penetration.

In reality, however, regulatory frameworks have often struggled to keep pace with rapid technological innovations in the insurance industry. Issues such as inadequate data privacy laws, weak cybersecurity regulations, and unclear compliance standards hinder insurers from fully adopting digital solutions. Regulatory agencies frequently face challenges in monitoring emerging risks associated with InsurTech, blockchain, and artificial intelligence applications (Tica & Weißenberger, 2022). These gaps in governance result in uncertainty for insurance companies and potential risks for consumers.

If left unaddressed, these regulatory shortcomings could expose policyholders to risks of data breaches, fraud, and unfair practices, while also discouraging insurers from innovating. The insurance industry may fail to realize the full benefits of digital transformation, limiting its competitiveness and contribution to financial sector growth. Strong and adaptive governance mechanisms are therefore necessary to align digital innovation with regulatory compliance and consumer protection. The objective of this study is thus to investigate the role of regulatory governance in shaping digital transformation in the insurance sector. Specifically, this study sought to:

1. analyze the relationship between regulatory compliance and the adoption of digital technologies in insurance companies; and

2. examine the effect of regulatory governance on consumer trust in digitally driven insurance services.

Literature Review

Conceptual Review

Regulatory governance refers to the institutional arrangements, processes, and practices through which regulations are designed, implemented, monitored, and enforced to achieve public policy objectives (Tica & Weißenberger, 2022). It moves beyond the traditional notion of regulation as a set of rules and sanctions to encompass the broader governance system that ensures legitimacy, accountability, and effectiveness in regulatory action (Llorca Galiana, 2025). In essence, regulatory governance addresses both the "what" of regulation, the substantive rules and standards and the "how" of regulation, the procedures, institutions, and relationships through which these rules are applied.

At the global level, regulatory governance has become central to maintaining market stability, protecting consumers, and fostering innovation. It is anchored on principles such as transparency (openness in rulemaking), accountability (clear assignment of regulatory responsibility), participation (involvement of stakeholders in decision-making), proportionality (ensuring that rules are not unduly burdensome), and consistency (ensuring fairness and uniform application). Effective regulatory governance builds trust among market actors and ensures that private sector behavior aligns with public interest objectives (Marangwanda, Mubanga, & Chaurura, 2025). In the context of digital transformation, these governance principles are particularly vital because technology-driven markets evolve faster than regulatory systems, requiring a more adaptive and risk-based approach to supervision (Yang, Gu, & Albitar, 2024).

Conceptually, regulatory governance is multidimensional. It begins with rule-making, where standards and policies are developed in line with statutory mandates. The second dimension, supervision and monitoring, ensures that regulated entities comply with these standards. The third, enforcement, involves holding institutions accountable through sanctions, remedial actions, or incentives. Finally, evaluation and feedback mechanisms assess the performance of regulation and allow for iterative improvement (Kajwang, 2022). Weakness in any of these dimensions can erode public confidence, distort market behavior, and undermine regulatory legitimacy.

In financial services, and particularly in the insurance sector, regulatory governance is indispensable because of the fiduciary relationship between insurers and policyholders. Policyholders entrust their premiums to insurers in exchange for future benefits, creating long-term contractual obligations that are highly sensitive to insolvency risks, fraud, and information asymmetry (Pasiouras & Gaganis, 2013). Hence, regulatory governance in insurance is not merely about enforcing compliance, but about ensuring market integrity, institutional soundness, and consumer protection. A well-governed regulatory system establishes a stable environment that enables innovation while protecting the interests of policyholders (Horvey, 2025).

Insurance Sector in Nigeria

The insurance sector in Nigeria represents a critical pillar of the financial system, providing risk protection, financial intermediation, and

long-term capital formation. By mobilizing premiums from policyholders and investing them in productive ventures, insurance companies play a dual role—mitigating risks and contributing to national development (Ogunwale, Akintoye, Ogboi, & Ogbebor, 2024). Ideally, a robust insurance sector enhances economic resilience, supports entrepreneurship, and promotes inclusive growth.

Despite this potential, Nigeria's insurance sector continues to underperform. With a population exceeding 200 million, the sector should be one of the largest in Africa. Yet, insurance penetration remains below 1% of GDP—significantly lower than in other emerging economies. This underperformance can be attributed to persistent challenges such as weak consumer trust, poor claims settlement practices, limited awareness, and inefficiencies in firm operations (Iheanacho, 2018). Governance lapses within insurance companies have also eroded public confidence, leading to a perception that insurers are unreliable or unresponsive to customer needs (Hazcel, 2022).

Regulatory oversight of the sector is vested in the National Insurance Commission (NAICOM), which is responsible for licensing, supervising, and enforcing compliance among insurers. Over the years, NAICOM has introduced several reforms, including risk-based supervision, enhanced corporate governance codes, and recapitalization directives aimed at improving solvency and stability (Eladly, 2024). However, enforcement has often been uneven due to institutional capacity limitations, political interference, and inconsistent policy implementation (Kajwang, 2022). These challenges weaken regulatory credibility and allow substandard practices to persist.

Conceptually, the Nigerian insurance sector reflects a paradox of high potential but low performance. While opportunities exist for resource mobilization, financial inclusion, and long-term investment, structural weaknesses in governance and regulation continue to constrain growth (Bansah, Sidza, & Akita, 2021). Policyholders often experience delayed or denied claims, inadequate digital service infrastructure, and opaque business processes—all of which discourage participation. For the broader economy, this underperformance translates into a failure to harness the insurance industry's full potential as a catalyst for investment and stability (Kavubu, 2024).

Therefore, strengthening regulatory governance is imperative to unlocking the transformative potential of the Nigerian insurance sector. A governance framework that promotes transparency, accountability, and innovation while ensuring consumer protection can stimulate market confidence, drive digital adoption, and improve operational efficiency (Marangwanda et al., 2025).

Digital Transformation

Digital transformation refers to the strategic integration of digital technologies—such as artificial intelligence, big data analytics, cloud computing, blockchain, and mobile platforms—into all areas of a business. This process fundamentally reshapes how organizations operate, deliver value to customers, and compete in dynamic markets. It extends beyond mere digitization (converting paper-based records to digital files) or digitalization (using digital tools to improve existing processes), representing instead a holistic organizational reinvention driven by technological capabilities and cultural adaptation. As Zhang (2023) notes, digital transformation requires firms to rethink their business models, workflows, and customer engagement approaches, aligning technological innovation with strategic objectives to sustain competitiveness in a rapidly evolving business environment.

Globally, digital transformation has become a cornerstone of organizational resilience and performance, fostering innovation, improving decision-making, and enabling personalized service delivery through datadriven insights. Georgescu et al. (2024) emphasize that technology-driven transformation not only enhances efficiency but also strengthens organizational adaptability and resilience in volatile markets. In the insurance sector, these developments have manifested through InsurTech innovations that enable real-time underwriting, mobile claims processing, and predictive analytics—tools that reduce operational costs while expanding access to

insurance coverage. Such applications are especially relevant in emerging economies, where digital tools can bridge long-standing access gaps and promote financial inclusion.

Conceptually, digital transformation can be analyzed across four key dimensions: operational efficiency, customer experience, innovation and business model renewal, and organizational culture and capability. Each dimension reflects a firm's capacity to align digital adoption with strategic priorities. However, as Sungwa (2025) argues, achieving digital transformation requires an enabling environment characterized by skilled human resources, adaptive leadership, and supportive governance mechanisms. The absence of these elements can slow adoption and limit the potential impact of digital initiatives. Despite its transformative promise, digital transformation also presents challenges such as cybersecurity threats, data protection issues, and algorithmic bias, all of which demand robust governance and ethical oversight. Hence, successful digital transformation in the insurance industry depends not only on technology investment but also on regulatory governance that promotes accountability, inclusivity, and sustainability.

Regulatory Compliance

Regulatory compliance refers to the extent to which organizations conform to laws, regulations, and ethical standards established by relevant authorities. In the financial and insurance sectors, compliance serves as a critical pillar of corporate governance, ensuring market integrity, consumer protection, and systemic stability. According to Kersten et al. (2024), effective compliance systems facilitate the fair and consistent implementation of policies designed to prevent misconduct, fraud, and exploitation, while also supporting organizational legitimacy and social responsibility. Compliance is therefore not merely a legal obligation but a strategic function that fosters stakeholder trust and long-term sustainability.

Conceptually, regulatory compliance encompasses four interrelated components: (1) awareness and interpretation of regulatory requirements, (2) integration of these requirements into operational policies and procedures, (3) continuous monitoring and transparent reporting, and (4) enforcement through corrective and preventive mechanisms. When effectively implemented, these components ensure that business activities align with public policy objectives and ethical standards. In the insurance industry, regulatory compliance includes adherence to solvency margins, fair claims settlement, consumer protection guidelines, and anti-money laundering protocols. Hamadamin and Atan (2019) highlight that organizations with strong compliance frameworks often achieve higher levels of employee commitment and stakeholder confidence, as regulatory adherence signals integrity and accountability.

However, in the digital era, compliance has become increasingly complex due to emerging technologies and cross-border digital transactions. New risks—such as data privacy breaches, cyberattacks, and AIdriven decision-making errors—require regulators to develop adaptive and technology-aware frameworks. Collings et al. (2021) observe that regulatory bodies must now balance the dual imperative of fostering innovation while safeguarding ethical and social standards, a task that demands flexibility, technological literacy, and proactive engagement with stakeholders. In developing economies, such as Nigeria, compliance effectiveness is often constrained by limited institutional capacity and inconsistent enforcement, which can erode public confidence and inhibit digital growth. Thus, as Pratama et al. (2023) suggest, organizations should embrace compliance not as a reactive requirement but as a strategic enabler that aligns innovation with governance, creating a culture of transparency and resilience.

Adoption of Digital Technologies

The adoption of digital technologies reflects the extent to which individuals, organizations, and industries embrace and integrate new technological tools into their operations, decision-making, and service delivery. Conceptually, adoption transcends the mere acquisition of technology; it involves embedding digital solutions into core processes to drive efficiency, innovation, and competitiveness. As Zhang (2023) emphasizes, technology adoption

is a strategic process shaped by managerial intent, organizational readiness, and environmental pressures, rather than a purely technical act. Over the past two decades, the diffusion of technologies such as artificial intelligence, big data analytics, blockchain, cloud computing, and mobile platforms has revolutionized how businesses operate and how customers engage with service providers.

At the organizational level, digital technology adoption is influenced by multiple factors, including perceived usefulness, ease of use, cost-effectiveness, institutional pressure, and regulatory support. The Technology Acceptance Model (TAM) and the Diffusion of Innovations Theory provide conceptual grounding for understanding these dynamics. These frameworks suggest that individuals and organizations are more likely to adopt technologies they perceive as beneficial, accessible, and consistent with their existing practices and values. In the insurance industry, digital technologies such as online policy management systems, automated claims processing, and mobile applications have become central to modern service delivery. Such technologies not only reduce operational costs but also improve customer satisfaction and expand access to underserved populations (Georgescu et al., 2024).

However, adoption patterns vary significantly across regions and industries. In advanced economies, strong digital infrastructure and effective governance frameworks have accelerated technology integration. In contrast, emerging economies, particularly in sub-Saharan Africa, face persistent barriers, including infrastructural deficits, affordability challenges, digital illiteracy, and regulatory gaps. As Sungwa (2025) observes, the successful adoption of digital technologies within small and medium enterprises—and by extension, the broader economy—depends on supportive institutional frameworks and human capital development. While mobile money systems have achieved widespread acceptance in Africa, more advanced InsurTech solutions, such as blockchain-based policy management, remain limited. This disparity underscores that digital adoption is not merely a technological process but also a socio-cultural and institutional one. It depends on trust, digital literacy, and governance structures that encourage innovation while managing associated risks (Kersten et al., 2024).

Consumer Trust in Digital Services

Consumer trust in digital services refers to the confidence that individuals place in digital platforms and service providers when conducting economic or social exchanges. Trust is particularly vital in digital contexts where transactions are intangible, providers are often distant, and risks of fraud or service failure are heightened. In such environments, consumers must rely not only on technology but also on institutional assurances of integrity, transparency, and protection. According to Hamadamin and Atan (2019), trust functions as a mediating factor between organizational practices and consumer commitment, making it indispensable for sustaining engagement and loyalty in digital ecosystems.

Conceptually, consumer trust is built upon three interrelated dimensions: (1) competence and reliability— the belief that the service provider possesses the ability and systems to deliver promised outcomes; (2) integrity and transparency—the perception that providers act ethically and communicate openly; and (3) security and protection—the assurance that consumers' personal data and resources are safeguarded from misuse or cyber threats. Georgescu et al. (2024) emphasize that digital transformation initiatives succeed only when organizations embed ethical data management and transparent communication practices that reinforce trust.

Globally, maintaining consumer trust has become increasingly challenging due to high-profile data breaches, algorithmic manipulation, and inadequate regulatory oversight. In highly regulated sectors such as insurance and finance, where transactions involve deferred benefits and fiduciary responsibilities, trust is both fragile and foundational. Regulatory compliance and accountability mechanisms are thus essential for building credibility. Collings et al. (2021) note that robust governance frameworks—those ensuring ethical digital operations, data privacy, and effective risk management—play a decisive role in restoring and maintaining consumer

confidence, particularly during periods of technological transition or crisis.

In emerging economies like Nigeria, consumer trust in digital financial and insurance services remains uneven. Factors such as inconsistent service quality, weak consumer protection, and limited recourse mechanisms contribute to skepticism about digital platforms. Pratama et al. (2023) argue that visible accountability, transparent dispute resolution, and active consumer education are critical to overcoming such trust deficits. For the Nigerian insurance sector, technological tools such as biometric verification and encrypted transactions, when supported by strict regulatory oversight, can enhance confidence among policyholders.

Conceptually, adoption of digital technologies and consumer trust in digital services are mutually reinforcing. Adoption creates opportunities for innovation and access, but without trust, technological uptake remains limited or short-lived. Conversely, effective use of digital platforms that enhance transparency and user experience can strengthen trust and accelerate adoption. Thus, trust acts as both a precondition and an outcome of successful digital transformation, making it a central variable in understanding the evolving dynamics of regulatory governance and technology in the insurance sector.

Theoretical Framework

The Technology Acceptance Model (TAM), proposed by Fred Davis in 1986, is one of the most influential frameworks for explaining the adoption and use of new technologies (Silva, 2015). The model assumes that the acceptance of digital innovations is determined primarily by two beliefs: perceived usefulness and perceived ease of use. Perceived usefulness refers to the extent to which individuals believe that a particular technology will enhance their performance, while perceived ease of use reflects the degree to which they believe that using the technology will be free of effort (Ammenwerth, 2019). According to the model, if users perceive that a digital technology is both useful and easy to use, their intention to adopt and use it increases significantly. External variables such as regulation, organizational culture, and user experience can indirectly influence adoption by shaping perceptions of usefulness and ease of use (Granić & Marangunić, 2019).

Applied to the insurance industry, TAM provides a useful lens for understanding digital transformation. Insurance companies are increasingly adopting technologies such as artificial intelligence for claims assessment, blockchain for fraud detection, and mobile applications for customer engagement. The decision of consumers and organizations to adopt these technologies depends largely on whether they see them as beneficial (for example, enabling faster claims processing, transparent premium calculations, or greater access to insurance services) and whether they are user-friendly (for example, simple mobile platforms or seamless online onboarding). In this context, regulatory governance becomes an important external factor that influences adoption. By establishing clear standards for data protection, cybersecurity, and consumer protection, regulators reduce the perceived risks associated with digital platforms, thereby reinforcing consumer trust and encouraging broader adoption (Scherer, Siddiq, & Tondeur, 2019).

Although TAM has been widely validated, it has also faced criticisms. Scholars argue that it oversimplifies the adoption process by focusing only on usefulness and ease of use, neglecting broader factors such as cultural attitudes, trust, risk perception, and institutional pressures (Malatji, Eck, & Zuva, 2020). It has also been critiqued for being more suited to analyzing individual-level adoption rather than organizational or industry-wide dynamics (Granić & Marangunić, 2019). However, the strength of TAM lies in its simplicity, predictive power, and adaptability. It has been extended in numerous studies to incorporate variables such as trust, regulatory influence, and social norms, making it highly relevant for contemporary digital transformation research (Scherer et al., 2019; Ammenwerth, 2019). In this study, TAM provides the conceptual basis for examining how regulatory governance shapes the adoption of digital technologies in the Nigerian insurance sector. It suggests that digital transformation will only achieve its full potential when regulatory structures foster perceptions of safety, trust, and

accessibility among consumers and insurers alike.

Empirical Review

Onoja, Hamza, Collins, and colleagues (2021) investigated the intersection of digital transformation and data governance with the objective of highlighting strategies for regulatory compliance and secure AIdriven business operations, employed a qualitative review of global AI regulatory frameworks and data governance practices, found that compliance with frameworks such as GDPR and CCPA alongside mechanisms like data classification, access control, encryption, and explainable AI were crucial for mitigating privacy risks and enhancing security, recommended that organizations adopt robust governance frameworks to ensure transparency, accountability, and ethical AI use.

Szedmák, Varga, and Szabó (2025) investigated the digital transformation of public services with the objective of examining its implementation and impact on municipal administration, employed a longitudinal case study of over 3,000 municipalities in Hungary focusing on a document management system, found that digital transformation significantly improved citizen value, reduced administrative lead times, and enhanced transparency, comparability, and efficiency, recommended the adoption of new technologies, standardized processes, and centralized IT management to modernize public sector operations.

Yang, Gu, and Albitar (2024) investigated the impact of digital transformation on governmental efficiency with the objective of analyzing how transformations across departments contribute to overall government performance, employed a novel production network model combined with textual analysis of government departments from 2012 to 2022, found that digital transformation significantly enhanced efficiency and that high coordination across departments further amplified efficiency gains, recommended that governments optimize resource allocation and pursue coordinated digital initiatives to strengthen performance.

Pasiouras and Gaganis (2013) conducted a cross-country investigation to assess the relationship between regulatory policies and the soundness of insurance firms. Using a quantitative research design, they employed an accounting-based measure of distance to default, the Z-score, to evaluate solvency across firms in multiple countries. The study found that the power of supervisory authorities, as well as regulations concerning technical provisions and investment policies, had a significant impact on the soundness of insurance firms. However, corporate governance and internal control rules showed no significant influence, and capital requirements were not found to have a robust effect. The authors recommended that policymakers strengthen regulatory oversight and align technical and investment regulations with firmspecific realities to enhance financial stability.

Kajwang (2022) investigated the effect of government and regulatory frameworks on the growth of the insurance industry. Using a literature-based approach, the study reviewed and analyzed a broad range of research articles to understand how regulation influences the performance and expansion of insurance markets. The findings indicated that regulatory bodies play a crucial role in ensuring the sustainability, integrity, and stability of the financial system, which in turn sustains public confidence in the economy's financial structure. The study recommended that regulatory authorities collaborate with market participants to co-create product and pricing models that cater to diverse financial segments, thereby promoting inclusivity and industry growth.

Methodology

This study adopted a quantitative research design to examine the influence of regulatory governance on digital transformation within the Nigerian insurance sector. The design was considered appropriate as it allowed for systematic measurement of constructs, objective data collection, and statistical analysis to establish relationships between the variables.

The target population of the study comprised all 57 insurance firms licensed by the National Insurance Commission (NAICOM) as of 2025. However, due to accessibility constraints and the

study's focus on obtaining in-depth insights from firms actively involved in digital transformation, the accessible population was limited to five (5) insurance firms with operational branch offices located in the Federal Capital Territory (FCT), Abuja.

The selection criteria included firms with visible digital transformation initiatives such as online service platforms, automated claims systems, or digital underwriting processes and firms with established regulatory compliance units or departments that interface directly with NAICOM. Based on these criteria, the following firms were selected: AIICO Insurance Plc, AXA Mansard Insurance Plc, Leadway Assurance Company Ltd, Mutual Benefits Assurance Plc, and Cornerstone Insurance Plc.

Data obtained from the Human Resource (HR) departments of the FCT branch offices of these firms indicated that the total number of managerial, supervisory, and compliance-related staff across the five firms was 85 employees. This figure (n = 85) therefore constituted the accessible population for the study. Given the relatively small and manageable population size, the study adopted a census approach, using the entire accessible population as the sample size. This approach ensured that every eligible respondent was included, thereby increasing the robustness and representativeness of the findings.

The study utilized primary data, which were collected using a structured questionnaire designed to capture respondents' perceptions of regulatory governance mechanisms and the extent of digital transformation within their respective organizations. The questionnaire consisted of closed-ended items structured on a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The instrument was administered physically at each firm's branch office and targeted staff in departments such as operations, IT, compliance, and risk management.

To ensure validity, the instrument was subjected to expert review by three academic scholars in the fields of governance, digital transformation, and insurance regulation, as well as two industry practitioners. Their feedback guided the refinement of items to ensure clarity, relevance, and construct alignment. Reliability was assessed through a pilot test conducted among 15 respondents from other insurance branches in Lagos not included in the main study. The Cronbach's alpha values for all constructs were above 0.70, indicating good internal consistency.

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics such as mean and standard deviation were used to summarize responses, while multiple regression analysis was employed to examine the effect of regulatory governance on digital transformation. This analytical method was chosen for its ability to assess predictive relationships between variables.

Results and Discussion

Before the main analysis, several preliminary tests were conducted to ensure that the data gathered were suitable for further statistical examination. The responses were first screened for completeness, accuracy, and consistency. Missing data were minimal and did not exceed 3% of total responses, and these were treated using mean substitution. The reliability analysis indicated acceptable internal consistency across all constructs, with Cronbach's alpha values above 0.70. Furthermore, tests for normality, linearity, multicollinearity, and homoscedasticity confirmed that the data satisfied the major assumptions underlying multiple regression analysis, thus supporting the appropriateness of this analytical technique for the study.

Out of the 85 copies of the questionnaire administered to managerial and supervisory employees across the five selected insurance branch offices in the Federal Capital Territory (FCT), 79 valid responses were retrieved and deemed usable for analysis. This represents a response rate of 92.9%, which is considered highly satisfactory for survey-based studies of this nature. The high return rate was attributed to direct researcher-administered delivery and follow-up visits to each branch, which encouraged prompt and complete responses. Table 1 presents the demographic profile of the respondents, including gender, age, educational qualification, and years of experience in the insurance industry.

Table 1: Demographic Distribution of Respondents (n = 79)

Variable	Category	Frequency	Percentage (%)
Gender	Male	45	57.0
	Female	34	43.0
Age	21–30 years	16	20.3
	31–40 years	33	41.8
	41–50 years	22	27.8
	Above 50 years	8	10.1
Educational Qualification	HND/Bachelor's degree	49	62.0
	Master's degree	26	32.9
	Doctorate degree	4	5.1
Years of Experience	Below 5 years	12	15.2
	5–10 years	28	35.4
	11–15 years	26	32.9
	Above 15 years	13	16.5

Source: Analysis, 2025

The demographic data in Table 1 show that 57% of respondents were male, while 43% were female, indicating a moderately balanced gender distribution among staff of the insurance firms. The age distribution reveals that the majority of respondents (41.8%) were between 31 and 40 years, suggesting that most participants were in their early or mid-career stages, an age range typically associated with active engagement in digital transformation initiatives. Educationally, 62% of respondents held a bachelor's or HND degree, while 32.9% had a master's degree, reflecting a well-educated workforce. Regarding work experience, most respondents (35.4%) had between 5 and 10 years of experience, implying that they possessed sufficient professional exposure to both regulatory governance and technological adoption processes within the industry.

Prior to conducting the multiple regression analysis, several diagnostic checks were performed to ensure compliance with statistical assumptions. The normality test using the Shapiro-Wilk statistic showed that all variables had significance values above 0.05, confirming that the data were normally distributed. The linearity test indicated a positive linear relationship between the independent (regulatory governance) and dependent (digital transformation) variables. The multicollinearity test, assessed using the Variance Inflation Factor (VIF), produced values ranging between 1.10 and 2.85, which are below the threshold of 10, confirming that multicollinearity was not a concern. Similarly, the Durbin-Watson statistic of 1.85 indicated the absence of autocorrelation. Homoscedasticity was confirmed through a scatter plot showing even distribution of residuals around the zero line. These results collectively validated the suitability of multiple regression for the main analysis and supported the robustness of the findings.

Regression Results

To examine the effect of regulatory governance on digital transformation in insurance firms, a multiple regression analysis was conducted. The results are presented in Table 2.

Table 2: Multiple Regression Analysis of Regulatory Governance and Digital Transformation

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t-value	Sig.
(Constant)	1.248	0.321	—	3.889	0.000
Regulatory Policy Framework	0.412	0.108	0.376	3.815	0.000
Enforcement Mechanisms	0.337	0.097	0.311	3.474	0.001
Compliance Monitoring	0.286	0.112	0.248	2.554	0.013
R = 0.842	**R^2 = 0.709**	**Adjusted R^2 = 0.697**	**F (3,75) = 61.22**	**Sig. = 0.000**	—

Source: Analysis, 2025

The regression model produced an R value of 0.842, indicating a strong positive correlation between regulatory governance and digital transformation among insurance firms in the FCT. The R^2 value of 0.709 implies that approximately 70.9% of the variance in digital transformation is explained by regulatory governance components, namely the policy framework, enforcement mechanisms, and compliance monitoring. The F-statistic (61.22, $p < 0.001$) confirms that the model is statistically significant and that the predictors jointly influence digital transformation.

Interpretatively, the results show that regulatory policy frameworks had the strongest standardized coefficient ($\beta = 0.376$, $p < 0.001$), indicating that clear and coherent regulatory policies play the most significant role in driving digital transformation. Enforcement mechanisms also exerted a significant influence ($\beta = 0.311$, $p = 0.001$), suggesting that effective enforcement encourages compliance and promotes digital alignment with regulatory standards. Compliance monitoring ($\beta = 0.248$, $p = 0.013$) was likewise significant, highlighting that continuous oversight and supervision enhance the sustainability of digital initiatives.

These findings suggest that regulatory governance not only enforces compliance but also creates an enabling environment that stimulates the adoption and effective utilization of digital technologies within the insurance sector. The results empirically support the premise that robust governance systems are essential for achieving secure, efficient, and transparent digital operations in regulated industries such as insurance.

Discussion of Findings

The findings of this study highlight a significant and positive relationship between regulatory governance and digital transformation in the Nigerian insurance sector. The results demonstrate that effective regulatory frameworks, transparent compliance mechanisms, and consistent supervision are critical enablers of digital adoption within insurance firms operating in the Federal Capital Territory (FCT). Specifically, the regression analysis revealed that regulatory governance explains a substantial proportion of the variance in the adoption and implementation of digital technologies across the surveyed firms. This finding suggests that when regulatory authorities provide clear digital policies and supportive compliance structures, insurance companies are more likely to embrace innovation-driven transformation.

This outcome supports the argument by Llorca Galiana (2025) that governance frameworks are essential for ensuring the sustainability and modernization of insurance institutions, particularly within the context of evolving investment and regulatory landscapes. Similarly, Tica and Weißenberger (2022) noted that regulatory changes often emerge from the need to restore control and accountability within industries affected by reputational challenges, emphasizing that governance mechanisms can serve as both a corrective and a transformative force. The current study extends this understanding by demonstrating that such regulatory interventions not only enhance compliance but also stimulate confidence in technological advancement and digital operations among insurers.

Furthermore, the positive association between regulatory governance and digital transformation aligns with the findings of Marangwanda, Mubanga, and Chaurura (2025), who identified the dual role of regulation in protecting consumers while fostering innovation. In the Nigerian context, this balance is particularly critical, as insurance consumers increasingly demand digital accessibility and transparent service delivery. The results suggest that the implementation of well-designed regulatory policies that encourage digital transparency, cybersecurity, and fair competition can enhance both operational efficiency and consumer trust.

In addition, the findings resonate with Eladly (2024), who established that regulatory constraints can significantly affect the financial performance of insurance firms, with overly stringent or unclear regulations limiting innovation. However, the present study finds that when governance structures are consultative and adaptive, they serve as enablers rather than inhibitors of digital transformation. This underscores the importance of regulatory agility, while ensuring that laws evolve in tandem with technological changes to support innovation while maintaining consumer protection.

The study also reaffirms the assertion by Iheanacho (2018) that regulatory instruments, when strategically designed and implemented, can improve industry performance by enhancing organizational efficiency and compliance. Moreover, Ogunwale et al. (2024) found that institutional efficiency within the insurance sector is positively influenced by effective governance and managerial structures, which aligns with the current finding that sound regulatory oversight contributes to digital operational readiness and long-term competitiveness.

Overall, the empirical results validate the theoretical expectation that regulatory governance serves not merely as a control mechanism but as a catalyst for transformation, innovation, and industry credibility.
The evidence from this study indicates that governance structures should be viewed as strategic tools for fostering digital inclusion and technological modernization across Nigeria's insurance landscape.

Conclusion

This study examined the relationship between regulatory governance and digital transformation within selected insurance firms operating in the Federal Capital Territory, Nigeria. The findings confirmed that well-structured and adaptive regulatory frameworks significantly influence the pace and success of digital transformation initiatives in the insurance industry. The results further showed that governance elements such as transparency, compliance monitoring, and stakeholder accountability collectively foster a culture of innovation and efficiency.

In conclusion, the study underscores that regulatory governance should not be seen as a mere compliance obligation but as a strategic enabler of technological progress. Effective governance frameworks create a conducive environment for insurers to innovate responsibly, enhance service delivery, and build consumer confidence in digital platforms. These findings contribute to the growing body of literature affirming that governance and regulation, when properly aligned with technological imperatives, drive sustainable development and competitiveness in the financial services sector.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Regulatory authorities should strengthen adaptive governance frameworks by ensuring that insurance regulations evolve in alignment with emerging digital technologies. This will help create an enabling environment for innovation while maintaining accountability.

2. Insurance firms should institutionalize compliance-driven innovation, integrating regulatory requirements into their digital strategies rather than viewing them as external constraints. This approach will foster long-term sustainability and operational efficiency.

3. The National Insurance Commission (NAICOM) should enhance collaboration with insurance companies to design digital compliance monitoring tools that simplify reporting and improve transparency.

4. Training and capacity-building programs should be introduced for regulatory and compliance officers to ensure they possess the requisite digital literacy and analytical skills to oversee technologically advanced insurance operations.

5. Future regulatory reforms should emphasize inclusive consultation with industry stakeholders, ensuring that new digital regulations are both practical and supportive of innovation without stifling market competitiveness.

References

Ammenwerth, E. (2019). *Technology Acceptance Models in Health Informatics: TAM and UTAUT. Studies in Health Technology and Informatics, 263,* 64–71. https://doi.org/10.3233/shti190111

Bansah, R., Sidza, A., & Akita, V. (2021). The impact of emerging regulatory regime on the private health insurance industry in Ghana. *Journal of Finance and Accounting, 9*(5)

Eladly, S. M. (2024). Regulatory constraints on financial performance of insurance firms in Egypt: Structural equation model. *Universal Journal of Accounting and Finance, 12*(1), 1–12. https://doi.org/10.13189/ujaf.2024.120101

Granić, A., & Marangunić, N. (2019). *Technology acceptance model in educational context: A systematic literature review. British Journal of Educational Technology, 50,* 2572–2593. https://doi.org/10.1111/bjet.12864

Hazcel, K. M. (2022). Corporate governance of insurance companies in Cameroon: What place the law occupy? *International Journal of Law, Justice and Jurisprudence, 2*(1), 11–18.

Horvey, S. S. (2025). Insurers risk-taking behaviour in an emerging economy: unpacking the linear and nonlinear effects of enterprise risk management and corporate governance. *Cogent Business & Management*, *12*(1). https://doi.org/10.1080/23311975.2025.2514169

Iheanacho, E. (2018). Insurance industry performance and the selected regulatory instruments in Nigeria. *IOSR Journal of Economics and Finance (IOSR-JEF), 9*(6), 67–77. https://doi.org/10.9790/59330906016777

Kajwang, B. (2022). Effect of government and regulatory framework on growth of insurance industry. *International Journal of Law and Policy, 7*(1), 17–25. https://doi.org/10.47604/ijlp.1604

Kavubu, A. . (2024). Regulatory Changes and Their Impact on Insurance Market Dynamics. *Journal of Actuarial Research*, *2*(1), 29–40. https://doi.org/10.47941/jar.1758

Llorca Galiana, J. (2025). The relevance of governance in the insurance sector within the framework of sustainable investments. In J. Bataller-Grau, M. Kawiński, & P. Marano (Eds.), *Sustainability and the insurance market* (Vol. 10, pp. 95–114). Springer, Cham.

https://doi.org/10.1007/978-3-03172186-1_5

Malatji, W., Eck, R., & Zuva, T. (2020). *Understanding the usage, Modifications, Limitations and Criticisms of Technology Acceptance Model (TAM). Advances in Science, Technology and Engineering Systems Journal, 5,* 113–117. https://doi.org/10.25046/aj050612

Marangwanda, A., Mubanga, M., & Chaurura, P. (2025). The dual role of regulation in the insurance sector: Protecting consumers and fostering innovation. *International Journal of Advanced Business Studies, 4*(1), 38–50

Ogunwale, O., Akintoye, I. R., Ogboi, C., & Ogbebor, P. I. (2024). Consolidation, institutional efficiency and financial ratio performance of insurance companies in Nigeria. *International Journal of Research and Innovation in Social Science (IJRISS), 8*(7), 1044–1054. https://doi.org/10.47772/IJRISS.2024.807084

Onoja, J. P., Hamza, O., Collins, A., & others. (2021). Digital Transformation and Data Governance:

Strategies for Regulatory Compliance and Secure AI-Driven Business Operations. *Journal of Frontiers in Multidisciplinary Research, 2*(1), 43–55. https://doi.org/10.54660/.IJFMR.2021.2.1.4355.

Pasiouras, F., & Gaganis, C. (2013). Regulations and soundness of insurance firms: International evidence. *Journal of Business Research, 66*(5), 632–642. https://doi.org/10.1016/j.jbusres.2012.09.023

Scherer, R., Siddiq, F., & Tondeur, J. (2019). *The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. Computers & Education, 128,* 13–35. https://doi.org/10.1016/j.compedu.2018.09.009

Silva, P. (2015). *Davis' Technology Acceptance Model (TAM) (1989).* In *Encyclopedia of Information Science and Technology* (pp. 205–219). https://doi.org/10.4018/978-1-4666-8156-9.ch013

Szedmák, B., Varga, L., & Szabó, R. Z. (2025). Digital Transformation of Public Services: The Case of the Document Management Application. *International Journal of Public Administration*, 1–18. https://doi.org/10.1080/01900692.2025.2520522

Tica, A., & Weißenberger, B. E. (2022). How regulatory changes are driven by a need for control in reputational scandals: A case study in the German insurance industry. *Journal of Accounting & Organizational Change, 18*(1), 57–76. https://doi.org/10.1108/JAOC-11-2020-0196

Yang, C., Gu, M., & Albitar, K. (2024). Government in the digital age: Exploring the impact of digital transformation on governmental efficiency. *Technological Forecasting and Social Change, 208*, 123722. https://doi.org/10.1016/j.techfore.2024.123722