



**IMPLICATIONS OF ARTIFICIAL INTELLIGENCE ADOPTION AND
CORPORATE GOVERNANCE MECHANISMS: A COMPARATIVE
EMPIRICAL STUDY OF EUROPEAN UNION,
CHINA, AND NIGERIA**

***Mohammed, Ramon Samuel (PhD)¹, Fatogun, Olukunle Ibukun²,
Ajibade, Elizabeth Tobiloba (PhD)³***

¹*Department of Accounting, Federal University of Technology, Ilaro*

²*Department of General Studies, Federal University
of Technology, Ilaro*

*Corresponding Author(s)' email/Mobile: msamuelramon@yahoo.com/
[+2348037133213](tel:+2348037133213)¹, [+2349013461711](tel:+2349013461711)²*

Abstract

Artificial Intelligence (AI) has become a disruptive technology with the potential of transforming corporate governance (CG) by increasing transparency, monitoring effectiveness, and decision-making quality. Though its use is rapidly spreading throughout the world, there remain substantial differences in the governance impacts that arise from AI in advanced economies compared to those in developing nations. This research investigated the governance impacts that resulted from AI implementation through a comparative empirical study of corporations within the European Union (EU), China, and Nigeria from 2015 to 2025. The EU used represented a regulated and risk-based governance framework that applies to AI; China depicted a state-led and technology-focused approach to corporate governance, whereas Nigeria illustrated the impact of AI in an emerging economy. This study employed a hybrid empirical methodology involving comparative institutional assessment, secondary CG indexes, and case studies across banks, fintechs, and governmental agencies. Stakeholder theory, agency theory, institutional theory, and purposeful governance theory were applied to explain how AI impacts board governance, auditing, regulation, transparency, and stakeholder responsibility. The results found that the EU has adopted a rights-based and compliance-based model under AI Act whereas China has used a state-driven and strategic governance approach with emphasis on sovereignty. Similarly, Nigeria has demonstrated an emerging governance structure but fragmented in nature due to rapid development of fintech in absence of proper regulation. The study emphasized the importance of harmonizing the policies for AI governance which considered ethical considerations, issues related to accountability, privacy of data and algorithmic biases.

Keywords: artificial intelligence adoption, corporate governance, European union, China, Nigeria



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1. Introduction

Artificial intelligence (AI) is one of the biggest technological advancements made in the twenty-first century. Various companies across different industries are now using AI technologies to enable analytical predictions, automatic decision making, fraud detection and prevention, risk assessment, customer engagements, and strategic planning. AI systems are rapidly transforming the way organizational governance systems operate.

Corporate governance involves the processes, structures, and techniques involved in directing and controlling organizations. These processes ensure accountability, transparency, and regulatory compliance among other issues. However, the increasing involvement of AI in these governance processes creates new challenges to these principles because decisions will now be made by machines and not people.

Incorporation of artificial intelligence systems in corporate organizations poses several governance challenges such as whether there is need for boards to oversee AI technology; who should take responsibility for the decisions made by the algorithm; how can fairness and transparency be ensured; what are the regulatory requirements necessary in governing AI; how can developing countries utilize AI technology without compromising on institutional accountability?

Such questions have become prominent on the international stage since the introduction of the EU AI Act, 2024 China's algorithmic governance policies, and increasing ethical issues related to the use of AI. The EU's approach to the governance of AI technology focuses on respect for human rights, transparency, and accountability, whereas China employs a centralist approach to the governance of AI technology emphasizing sovereignty and social stability. As Nigeria becomes the most developed economy in Africa and the fastest growing economy in Africa in terms of digital space, a new governance context emerges.

This paper suggests that the adoption of AI technology goes beyond being a technological challenge but rather a governance revolution challenge. On the one hand, AI technology influences internal governance processes, such as boards, auditing, risk management, and managerial oversight. On the other hand, AI technology impacts external governance processes, including regulations, investors' supervision, accountability, and stakeholder engagement.

The research makes contributions to the field of global governance by: conducting a comparative empirical study on the governance of AI within the EU, China, and Nigeria; analyzing how AI influences internal and external governance processes; applying concepts from governance theory to the field of AI governance; and highlighting potential ways forward for purposive governance in the age of AI.

Despite the widespread use of AI in various industries, the governance framework has not kept up with the pace of AI adoption. Studies revealed a considerable gap between AI implementation and governance readiness, which places businesses at risk of ethical, operational, and reputational issues (Deloitte, 2025; Azhar, 2026). For example, studies such as Shen et al., 2025; Xue, 2025; Li et al., 2026 showed that although AI enhances productivity and lowers agency costs. It also poses new governance issues such as opacity, bias, and accountability. Moreover, some firms do not have effective AI governance



frameworks, leading to fragmented governance and increased systemic risks. These problems are particularly pronounced in developing countries such as Nigeria.

AI technology adoption in organizations has outstripped the development of corporate governance and regulatory frameworks. While companies increasingly use AI for decision making, financial management, human resources management, and consumer interaction, the governance frameworks are still ill-equipped to manage risks and ethical challenges linked to AI algorithms.

Numerous governance challenges related to the implementation of AI technologies have been reported around the globe to include algorithmic discrimination in employment and lending, lack of transparency in AI decision making, privacy invasion through AI, AI-related cyber-attacks, and AI-induced consumer manipulation (O'Neil, 2016; Barocas & Selbst, 2016; Buolamwini & Gebru, 2018; Pasquale, 2015; Zuboff, 2019; World Economic Forum [WEF], 2020). Other issues include poor corporate behavioral practices, lack of effective board oversight of the AI system, and consolidation of technological powers by large corporations (Davenport & Mittal, 2022; World Economic Forum, 2021; Srnicek, 2017; UNCTAD, 2021).

The European Union has used strong regulatory measures, for example, the AI Act that prioritizes risk assessment, human oversight and accountability (European Parliament, 2024). Conversely, China uses a state-centric governance regime that centers on strategic control and algorithmic governance (Roberts et al., 2021; Sheehan, 2022). Meanwhile, Nigeria still lags behind other countries in AI governance although it has witnessed rapid adoption of AI in sectors such as fintech, telecommunication, and digital banking. Current literature on AI governance focuses mainly on ethics, regulations, and technological innovations but does not have many comparative empirical studies on how AI adoption influences corporate governance (UNESCO, 2023; NITDA, 2024).

In addition, very few studies such as Mantymaki et al. (2022) and Batool et al. (2025) confirmed the links between AI governance and purposeful governance, that is, governance systems that incorporate sustainability and ethics among others.

In this regard, the study seeks to understand how AI adoption impacts the structure of corporate governance by looking at both the opportunities and challenges. The objective is to understand how governance systems can cope with disruption through technological changes and yet maintain integrity and compliance in corporate entities through a multi-theoretical framework based on cross-outcomes.

The broad objective of this research is to analyze the consequences of adopting AI on the governance structures within and outside the firm based on evidence gathered from the EU, China, and Nigeria. Specific objectives are to:

- (i) The analysis of the consequences of adopting AI on internal corporate governance structures;
- (ii) Implications of AI adoption on external corporate governance structures;
- (iii) Comparison of the AI governance structure in the EU, China, and Nigeria;
- (iv) The impact of institutional differences on the AI governance structures; and
- (v) The development of purposeful AI governance structure.

This research is guided by the following research questions:

- (i) How does AI adoption influence internal corporate governance mechanisms?



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- (ii) What are the implications of AI adoption for external governance mechanisms?
- (iii) To what extent are AI governance frameworks differing across the EU, China, and Nigeria?
- (iv) What institutional factors shape AI governance effectiveness?
- (v) What pathways can promote purposeful AI governance globally?

2. Literature Review

Conceptual Review

Concept of AI Governance

AI governance is defined as systems relating to institutions, laws, ethics, and organizations guiding AI technology developments and deployment. AI governance aims to promote accountability, transparency, fairness, security, and ethics. Literature on AI governance highlights three major governance models including: rights-based governance; market-oriented governance; state-focused governance.

EU constitutes rights-based governance model focused on ethics and human rights while China constitutes state-based governance model focusing on state strategy and centralized AI management. Nigeria represents an evolving governance model where its AI governance framework is yet to be defined.

Internal Corporate Governance Mechanisms and AI

Some of the corporate governance mechanisms that exist within organizations include: board oversight; internal audit; risk management; executive oversight; compliance; and ethics. AI influences internal governance through mechanisms including: automated monitoring; predictive audit; real-time compliance analysis; improved fraud detection; and AI-supported board decision making.

On the contrary, the use of AI creates some governance issues like: black box decision systems; diminished accountability; algorithm dependence; and cyber-security threats. Organizations that use AI tend to set up AI ethics committees and digital governance boards. AI adoption influences internal corporate governance mechanisms by improving monitoring through board oversight, auditing, risk management, and compliance and ethic functions while simultaneously introducing governance concerns relating to accountability, algorithm dependence, transparency, and cyber-security.

External Corporate Governance Mechanisms and AI

These include: regulatory oversight, shareholders' activism, market discipline, media pressure, and monitoring by civil society. AI creates increased pressure for external corporate governance due to rising worries about: data misuse, surveillance practices, consumer protection, bias and discrimination, and failure of transparency.

In the case of EU, the AI Act imposes compulsory compliance on high-risk AI through transparency, human oversight, and technical documentation. AI governance in China is anchored on centralized regulatory compliance and algorithmic supervision while that of Nigeria remains fragmented despite its development through fintechs regulations and data protection. The adoption of AI increases the importance of external governance mechanisms by creating new regulatory, ethical, and societal risks that require stronger oversight and accountability systems.



Theoretical Review

Agency Theory

Agency theory defines governance as a governance device against managerial opportunism. AI makes governance more effective through automated surveillance systems. However, AI could result in agency problems where algorithm designers dominate.

Stakeholder Theory

According to stakeholder theory, corporations should operate in such ways that they benefit societies. In AI governance, corporations will have to factor in considerations of employees, consumers, regulators, and communities involved in algorithm-based decision making.

Institutional Theory

According to institutional theory, governance varies among nations depending on the legal environment, culture, institutions, and other factors. The EU, China, and Nigeria have different institutional approaches towards the governance of AI.

Purposeful Governance Theory

Purposeful governance brings together sustainability, ethics, accountability, and social impact into a governing structure. This concept is becoming more popular in relation to AI governance considering the increasing call for responsible innovation.

Empirical Review

There have been attempts by scholars through numerous studies and recent studies to conduct an analysis and provide literature on AI Adoption for Internal and External Corporate Governance Mechanisms within nations and worldwide; yet gaps remain in the literature. Gaps in the literature were created using previous studies. There are a number of global frameworks for regulation and control of Artificial Intelligence, but EU Artificial Intelligence Act represents one of the first such comprehensive frameworks. From the information gained from the documentation, it is evident that in this legal framework, the EU considers human rights, transparency, accountability, safety and ethical usage of artificial intelligence.

AI Act classifies AI as unacceptable-risk, high-risk, limited-risk and minimal-risk, with greater compliance requirements for high-risk applications. The report also stresses corporate responsibility, mandatory conformance assessment, governance, and punishment for non-conformity. The report illustrates the ability of regulatory institutions to guide responsible AI development while ensuring the safety of citizens from algorithmic risks.

In Batool et al. (2025) on AI governance: A systematic literature review. The researchers conducted a systematic analysis of the existing literature on AI governance and outlined key governance dimensions including transparency, accountability, fairness, privacy, ethics, and regulatory compliance. The researchers concluded that research on AI governance has been gaining momentum rapidly because of the increasing use of AI systems across various domains and jurisdictions. In addition, the review has uncovered the lack of a universal approach to governing AI and the fragmentation of governance models among different jurisdictions. The review also discussed important issues related to algorithmic bias and data security.



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Arora et al. (2025) made AI Governance Comparisons between Europe and China and found significant differences in regulatory philosophy. While the EU model is mainly human-oriented, it places priority on individual freedoms, ethics, and democracy. On the other hand, the model used by China emphasizes the role of the government and prioritizes national security and economic competitiveness.

According to Fang (2025), China has made significant strides in its efforts to develop its AI governance framework. The research found that China's approach is centered on innovations and ensuring that there is social stability within the country at the same time. As a result, Fang believes that China can quickly implement policies using a centralized system of governance. Innovations are accelerated within China's governance systems while at the same time ensuring social stability and state supervision. According to Fang, the nature of China's centralized governance model allows for fast implementation of policies but causes problems of surveillance, data protection, and restrictions to oversight mechanisms.

Durodola (2025) found many areas lacking governance in Nigeria's AI governance system. These areas include a lack of regulatory institutions, inadequate digital technology infrastructure, technical skills, and lack of legislative measures for AI regulation. It was noted that the adoption of AI in Nigeria has been increasing in areas like finance and banking, telecommunication, and public service administration, but the governance structure for AI is still underdeveloped.

According to Kim et al. (2025), the EU AI Act profoundly impacts corporate governance practices by obligating firms to develop internal regulatory systems, risk assessment procedures, transparency measures, and human supervision frameworks. The research revealed that businesses functioning in the European Union had to incorporate AI governance within enterprise risk management and boardroom supervision. AI was seen to contribute to effective board operation, risk management, effective financial surveillance, and strategic decision making through predictive analysis. Nevertheless, AI use presents certain governance risks such as cybersecurity risks, ethical issues, opacity of automated decisions, and lack of sufficient human oversight.

Mirishli (2025) examined new legal and ethical considerations governing AI in various locations. It was observed that the world was moving towards regulating AI through guiding principles emphasizing transparency, fairness, human rights, and accountability in AI. Inconsistencies were noticed in how different nations regulated AI and the enforcement of ethical AI practices globally.

Ouabouch and Yahyaoui (2025) undertook a review of the link between AI and corporate governance. They noted that the use of AI affects board management, compliance procedures, auditing process, and engagement with stakeholders. AI offers significant opportunities but comes with several risks. Some of the advantages include operational effectiveness, transparency, and efficient monitoring systems, while the risks include ethical questions and poor data management.

Ishkhanyan (2025) discovered that the emergence of digital federalism was transforming global governance models via algorithmic regulatory mechanisms operated by state and multinational tech companies. It was argued that AI governance was increasingly becoming an issue of political power involving the control of data sovereignty,



digital infrastructure, and technological supremacy. Furthermore, Kalkan (2024) investigated the effects of AI technologies on corporate governance models and decision-making frameworks. It was found that AI increased the efficiency of board governance.

Weitzel (2024) examined AI governance within the context of corporate governance theory. It was discovered that existing models of corporate governance are inadequate in dealing with the governance problems created by autonomous AI systems. The article stressed that fiduciary responsibility, stakeholder protection, and organization accountability are key aspects when it comes to governing AI technologies.

Based on the analysis conducted, it can be stated that the topic of AI governance has turned into a global policy and corporate governance problem influenced by political regimes, institutional capacities, and technological progress. While EU countries follow a human-focused rights-based approach to AI governance based on accountability, transparency, and regulation, the Chinese approach is characterized by state-led initiatives. In turn, developing countries like Nigeria are faced with many problems in AI governance associated with underdeveloped institutions and infrastructure.

Furthermore, these works have found out that AI governance encompasses not only technical regulations but also issues related to corporate accountability, competition on the geopolitical scene, ethical considerations, and even digital sovereignty. While some universal principles of governance, including those relating to transparency, fairness, and accountability, are broadly recognized, their actual implementation varies considerably across the world. Therefore, there is an obvious necessity of establishing international standards of governance that will be effective in the age of technological revolution.

To sum up, from the information presented in this literature review, one can conclude that successful AI governance presupposes cooperation between multiple stakeholders, namely governments, corporations, international organizations, and civic society.

3. Methodology

The study employed an analytical multi-methods research design that entailed a combination of comparative institutional analysis, case studies analysis, and secondary quantitative data analysis. The multi-method was used because the study sought to investigate the implications of Artificial Intelligence adoption on corporate governance mechanisms across different countries, namely: the European Union (EU), China, and Nigeria.

The sources of data collection involved corporate governance reports, World Bank governance indicators, OECD artificial intelligence governance databases, EU artificial intelligence act documents, Chinese artificial intelligence governance policies, Nigeria fintech and regulatory reports, and annual reports of selected companies.

Secondary data covering 2015-2025 were obtained from the Word Bank Governance indicators; QECD AI Policy Observatory, and Nigerian Fintech and Regulatory Reports. The study covered organisations operating within the EU, China, and Nigeria. The selection of cases was EU Cases: SAP and BNP Paribas, China Cases: Alibaba Group and Tencent, and Nigeria Cases: Flutterwave and GTBank.



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Table 1
Variable Measurement

Variables		Indicators			Measurement
AI (Independent Variable)	Adoption	AI Investment deployment level, and in governance	intensity, and integration		Low=1, Moderate=2, and High=3
Internal Governance	Corporate	Board governance, auditing, regulatory risk management	AI-driven compliance,		Governance Index Score
External Governance	Corporate	Regulatory accountability disclosure	oversight, transparency, and		Governance Index Score
Institutional Governance		Regulatory infrastructure, effectiveness	quality, and digital policy		Institutional Capacity Index
Purposeful Governance		Ethical AI, stakeholders' engagement	sustainability and		Purposeful Governance Index

Source: Author's Compilation, 2026

4. Results and Discussion

Comparative Institution Analysis

European Union

Rights-Based AI Governance

AI governance by the EU is exemplified by the AI Act as being the most developed formal system worldwide. The Act divides the AI technology into prohibited AI, high-risk AI, limited-risk AI, and minimal-risk AI. Compliance with the high-risk systems requires strict standards for transparency, documentation, human supervision, and monitoring.

Governance Implications

An increasing tendency towards the establishment of AI governing committees within companies' boards, internal auditing incorporating algorithmic audit procedures, compliance being costly, and stakeholder satisfaction due to the transparency requirement. Critics say that excessive regulation can hinder innovation and impose heavy compliance costs on startups.

China

State-Driven AI Governance

The centralized system used by China features AI governance based on state dominance, national security, and technological strength. Algorithmic recommendation regulations, deep synthesis regulations, and data governance regulations are some of the instruments utilized by China.

Governance Implications

The presence of strict centralized monitoring systems; state dominance in corporate AI governance; quick adoption of governance directives; lack of transparency and accountability. China's firms have extensively incorporated AI into their operations and



governance. Chinese companies implement the use of AI very effectively into governance and operations within the fintech industry, surveillance, logistics, and e-commerce sectors.

Nigeria

New AI Governance Framework

The Nigeria case is one of new AI governance environments with rapid growth of fintech innovations but poor institutional frameworks. AI is being implemented in banking, mobile finance, telecommunications, and administration sectors.

AI Governance Challenges

They include: poor legal framework for AI, poor institutions, cyber security issues, poor data governance, and lack of AI literacy. Nonetheless, fintech organizations in Nigeria have begun implementing AI in their operations.

Comparative Analysis

Table 2

Comparative Output of Countries

Governance Dimension	EU	China	Nigeria
Governance Philosophy	Rights-based	State-centered	Adaptive
Regulatory Strength	Very high	High	Moderate/low
Transparency	Strong	Limited	Weak
Human Rights Focus	Strong	Moderate	Limited
Innovation Flexibility	Moderate	High	High
Institutional Capacity	Strong	Strong	Developing
External Oversight	Extensive	Centralized	Fragmented

Source: Researcher's comparative analysis review results, 2026

Discussion of Findings on Comparative Analysis

It is evident that the adoption of artificial intelligence fundamentally changes the governance systems within various locations. Nevertheless, the effectiveness of governance will depend significantly on the quality of institutions, the philosophy of regulation, and organizational capabilities. The model for the European Union focuses on accountability and transparency, while the extensive process of compliance will hinder innovation.

On the other hand, the model used in China facilitates quick implementation of AI technologies and coordinated strategic planning, although it might involve issues of surveillance and insufficient public accountability. Thus, artificial intelligence governance demands finding a balance between innovation and regulation, efficiency and ethics, automation and human control, and profitability and social responsibility. Purposeful governance is considered an essential concept that can effectively integrate ethical responsibility, stakeholder engagement, and sustainable innovation within the AI governance systems.

Case Study and Secondary Quantitative Data Analyses

Selected Case Studies

The study adopted multi case studies of organisations that significantly integrated AI into their operations and this is presented in table 3.



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Table 3

AI Integration and Operation

REGION	INSTITUTIONS/ORGANISATIONS	INDUSTRY
European Union	SAP and BNP Paribas	Software and Banking
China	Alibaba Group and Tencent	E-Commerce and Technology
Nigeria	Fluttwave and GTBank	Fintech and Banking

Source: Author's Compilation, 2026

Case Study Analysis

European Union (EU) Cases

SAP

SAP is among Europe's premier software developers for enterprises and a prolific user of AI-based business solutions, cloud computing technology, predictive analysis, and automation of governance processes. The company must navigate the challenging regulatory landscape of the EU, including the AI governance framework of the European Union and GDPR requirements.

Practices in the Adoption of AI

SAP uses AI in: enterprise resource planning (ERP); financial prediction; human resources management; compliance monitoring; and risk management systems. The company has incorporated AI ethics within its governance system in the form of ethics committees, transparency, and explainable AI systems.

Impact of AI on Internal Governance

Positive Impact

Greater board oversight; AI dashboards assisted in risk and operational performance management; advanced real-time analytics helped executives make better decisions; greater internal control over processes; automated compliance minimized operational inefficiencies; AI-based audit system improved internal auditing.

Negative Impact

AI algorithm black box; reliance on technical expertise limited managerial autonomy; and greater cyber security vulnerabilities.

Implications for External Governance

There is higher regulatory accountability under EU AI laws, stronger stakeholder confidence due to ethical AI disclosures, higher compliance costs because of strict EU governance regulations, governance outcome. SAP demonstrates a human-centric AI governance model, emphasizing transparency, accountability, and ethical oversight.

Governance Outcome

BNP Paribas reflects the EU's emphasis on ethical, sustainable, and transparent AI governance systems.

Chinese Cases

Alibaba Group

Alibaba Group has adopted an aggressive approach towards integrating AI across multiple domains: cloud computing, e-commerce algorithms, fintech, automation in



enterprises, AI agents, and large language models. Alibaba's AI investments and AI organizational structure have been significantly upgraded.

Implications for Internal Governance

Positive impacts

Centralized strategic governance and better strategic coordination through AI technology, AI has increased efficiency and innovation capacity.

Negative impacts

Centralization has led to dominance by executives, reduced algorithmic transparency; technology dependency is high, governance is externally oriented with strong alignment to government policies, government oversight has become more prominent, and lacks transparency compared to EU companies.

Governance outcome

The AI strategy governance of Alibaba can be characterized as state-aligned governance emphasizing competitiveness, scale, and technology superiority.

Tencent

AI implementation is done in social media, fintech, payment services, cloud technology, and cyber security infrastructure. Tencent created ethical AI policies and anti-fraud mechanisms.

Internal Governance Implications

In internal governance implications, better fraud identification techniques, better internal risk management processes, and better compliance monitoring. However, issues relating to surveillance and violation of individual rights, significant role of the government in governance processes, and poor independent governance processes could pose a challenge.

External Governance Implications

In line with China's AI policies, higher levels of state surveillance, and poor shareholder-focused governance processes.

Governance Implications

Tencent represents China's model of AI governance, whereby the government coordinates efforts towards AI governance, focusing more on regulatory compliance and the nation's digital strategy.

Nigerian Cases

Flutterwave

Flutterwave uses AI in fraud prevention, payment verification, transaction monitoring, and customer risk assessment. The firm operates in a rapidly evolving regulatory context with respect to AI governance processes.

Internal Governance Implications

The internal governance implications improved fraud monitoring techniques, faster processing of transactions, and improved efficiency. However, poor institutional AI governance frameworks, regulatory uncertainty, and governance issues related to scaling up operations could be a disadvantage.



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External Governance Implications

Close ties with the Central Bank of Nigeria, increased calls for accountability within the fintech industry, and international compliance issues could create beneficial impact.

Governance Outcomes

Flutterwave embodies a form of governance through adaptive AI governance that entails growth driven by innovation under evolving governance institutions.

Guaranty Trust Bank

The bank utilizes AI in: fraud analytics, digital banking, risk management, and automation of customer services. The bank has improved its IT governance oversight mechanisms.

Internal Governance Implications

Some of the likely impacts as a result of internal governance implications include improved operations governance, improved governance structures for IT, and fraud risks management. However, some negative impacts include lack of governance structures specific to AI, lack of infrastructure for AI, and lack of AI governance skills.

External Governance Implications

The impacts include rising regulatory demands, increasing pressure to comply with cyber-security, and digital banking accountability.

Governance Outcomes

Guaranty Trust Bank is governance through transitional model where the rate of uptake of AI technology exceeds the ability of institutions to govern. These case studies gave evidences on internal governance transformation, board governance, AI-driven auditing, regulatory compliance, transparency, risk management and stakeholder responsibility to address the consequences of adopting AI on internal corporate governance structures and the implications of AI adoption on external corporate governance structures.

Secondary Quantitative Data Analysis

The study used secondary comparative data analysis on environmental, social, and governance (ESG) reports; annual reports; governance disclosures; AI investments; regulatory reports; and academic literature. Secondary data covering 2015-2025 were obtained from the World Bank Governance indicators; QECD AI Policy Observatory, and Nigerian Fintech and Regulatory Reports. The study covered organisations operating within the EU, China, and Nigeria.



Comparative Indicators

Table 4

Comparative Output

Variable	EU Firms (SAP & BNP Paribas)	Chinese Firms (Alibaba & Tencent)	Nigerian Firms (Flutterwave >Bank)
AI Governance Maturity	High	High	Moderate
Regulatory Oversight	Very High	High (state-centered)	Emerging
Transparency Level	High	Moderate	Moderate-Low
Ethical AI Disclosure	Extensive	Moderate	Limited
AI Investment Intensity	High	Very High	Moderate
Internal Control Automation	High	High	Moderate
Board AI Oversight	Strong	Centralized	Developing
Cybersecurity Governance	Strong	Strong	Moderate
Stakeholder Accountability	Strong	Moderate	Developing
Compliance Costs	High	Moderate	Moderate

Source: Researcher's comparative analysis result, 2026

Comparative Empirical Interpretations

European Union Findings

EU firms had the following characteristics: high governance transparency; stakeholder protection; formal framework for ethics in AI; and regulatory accountability. However, compliance costs were very high; and regulation hindered the speed of AI implementation. Therefore, in the EU case, ethical legitimacy is valued more than fast technological growth.

China Findings

Chinese firms exhibited the following features: fast adoption of AI technology; highly centralized governance system; large AI infrastructure investments; and state coordination. However, there are: lack of transparency; no stakeholder influence; and high state involvement. Therefore, in the Chinese case, the system of governance is focused on national competitiveness.

Nigeria Findings

Nigerian firms featured: fast growth of fintech-based AI systems; improved fraud management capabilities; and growing digital governance mechanisms. However, there are: poor institutional governance; lack of regulations; low AI competency; and inadequate infrastructure. Therefore, in Nigeria, an adaptive model of governance is observed, where technological development moves ahead of governance regulations.



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Cross-Regional Comparative Analysis

Table 5

Cross-Regional Comparative Result

Governance Dimension	EU	China	Nigeria
Governance Orientation	Human-centric	State-centric	Market-adaptive
AI Regulation	Strict	Strategic-control	Developing
Transparency	Very High	Moderate	Moderate-Low
Innovation Speed	Moderate	Very High	High
Ethical Oversight	Strong	Moderate	Weak
Board Independence	Strong	Moderate	Developing
Stakeholder Protection	Strong	Moderate	Limited
Regulatory Enforcement	Strong	Strong	Emerging

Source: Researcher's cross-regional comparative analysis review results, 2026.

Discussion of Findings

Adoption of AI has been found to have transformative impacts on internal governance systems such as board monitoring, risk management, internal auditing and decision-making efficiency by means of automation, prediction, and data-based decision-making. External governance systems increasingly rely on AI related regulatory frameworks, transparency, and cybersecurity standards.

The European Union stands out for having the most developed ethical governance structures but slowest innovation as a result of regulatory rigidity. China represents a fast-growing trend of AI-powered firm transformation owing to centralization and coordination in governance systems. Nigeria displays fast-paced fintech innovations despite poor institutional capabilities in AI governance. Firms that display robust AI governance structures also exhibit higher levels of stakeholder trust, compliance, fraud management, and operational efficiency.

It was also found that the application of AI adoption increases regulatory scrutiny, transparency, cybersecurity and corporate accountability for both internal and external governance mechanisms worldwide, although the influence was more pronounced in EU countries which exhibited the most robust external governance structure and China owing to more developed digital infrastructure and AI-based governance practices.

By contrast, Nigerian companies gained moderate benefits because of infrastructural underdevelopment, lack of AI skills, and regulatory barriers. It was also found that countries with stronger institutions, better regulations, and advanced digital infrastructures proved superiority of AI governance results. This result indicated that institutional capacity significantly increases governance effectiveness.

The findings supported agency theory, stakeholder theory and institutional theory in reducing information asymmetry, improving transparency and accountability, as well as proving that governance outcomes differ significantly across institutional environments, respectively.



5. Conclusion

Through the comparative analysis conducted, the impact of AI adoption is shown to be transformative in terms of corporate governance both internally and externally within different institutional contexts. While in the EU the focus is on ethics and transparency of governance in favor of stakeholders' interests, in China, it is on centralized strategic control and rapid progress of technology.

In Nigeria, one can see the signs of a governance framework of a new kind, characterized by rapid innovation and yet undeveloped institutional regulation. Effective governance with the use of AI involves key governance concepts covered by the study include board-level AI oversight, algorithmic transparency and accountability, responsible AI frameworks, regulatory collaboration and alignment, cybersecurity governance, and stakeholder-centric governance frameworks.

The research indicates that corporate governance systems in the future will become ever more reliant on organizations' capacity to incorporate AI innovation alongside governance frameworks that enable efficiency, accountability, transparency, and sustainability to be balanced. It further concluded a purposeful AI Governance Framework incorporating ethics, transparency, sustainability, and accountability within corporate governance frameworks and called for an international debate on responsible AI governance with policy implications for firms, regulators, and emerging markets. Indeed, AI innovation emerges as a transformational factor in the field of contemporary corporate governance. As such, AI brings about an increase in efficiency, monitoring, and decision-making at the organizational level; yet, it is linked to governance risk which necessitates proper oversight systems and regulation.

The comparative analysis conducted for the EU, China, and Nigeria reveals how AI governance systems vary based on the existing institutions and political systems. In particular, the EU focuses on rights-based and accountable governance, China promotes strategic governance via centralization, and Nigeria has new governance challenges due to the fast-growing technological landscape. Future governance of AI would largely depend on integrating ethics, stakeholder accountability, transparency, and sustainability within governance systems.

Purposeful AI Governance Framework to Guide AI Adoption

The research suggests a "Purposeful AI Governance Framework" based on the following five pillars: Companies are expected to establish AI ethics committees and ethical reviews processes; AI technologies should be kept under meaningful human oversight; companies should disclose their AI decision-making and governance processes; AI governance processes should engage employees, customers, regulators, and civil society; and AI adoption should be aligned with ESG goals.

Policy Suggestions

- (i) Corporations should develop AI governance bodies; implement AI audit processes as part of internal controls; enhance AI transparency and accountability; and increase AI literacy among company directors.
- (ii) Regulators should create flexible AI regulatory regimes; enhance international cooperation in AI governance; create stronger cyber and data protection regulations.



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- (iii) To Nigeria and Other Emerging Markets, they should be a create national AI governance strategies; build regulatory capacities; conduct ethics education for AI; and foster responsible fintech innovations.

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**MOHAMMED, RAMON SAMUEL (PHD)¹, FATOGUN, OLUKUNLE IBUKUN²,
AJIBADE, ELIZABETH TOBILOBA (PHD)³**

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