

Digitalizing Democracy: A Critical Analysis of Barriers to E-Legislature Adoption in Nigeria's National Assembly.

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ABSTRACT

Legislative bodies worldwide are increasingly integrating digital technologies to enhance efficiency, transparency, and public engagement. In developing democracies such as Nigeria, however, the adoption of e-legislature systems remains limited. This paper proceeds from the argument that analog lawmaking can be made substantially more efficient through the strategic application of technology to core legislative functions such as bill drafting, voting, and committee management. This paper examines the integration of digital technologies into the legislative processes of Nigeria's National Assembly. It identifies the barriers to e-legislature adoption and analyses how these obstacles intersect with the constitutional and democratic functions of the legislature. Employing a qualitative case study design, the research triangulates primary legal instruments including the 1999 Constitution, the Standing Orders, and the Evidence Act with a thematic analysis of secondary literature, institutional reports, and comparative insights from e-parliament initiatives across Africa. The study reveals that while digital tools offer the potential to improve bill drafting, voting efficiency, and citizen access, the Nigerian legislature confronts profound obstacles. These include an outdated legal framework that does not fully recognize electronic legislative acts, inadequate digital infrastructure, limited technical capacity among legislative staff, and an institutional culture that privileges informal, paper-based traditions. The analysis further identifies a recurring tension between the speed of digital processes and the deliberative, consensus-oriented character of lawmaking. Across legal, institutional, and infrastructural dimensions, the barriers tend to reinforce one another, sustaining a pattern of fragmented automation rather than systemic transformation.

Keywords: E-legislature, legislative technology, digital governance, National Assembly, Nigeria.

INTRODUCTION

Across many countries, the way legislatures function is changing. Paper-based procedures are gradually giving way to digital systems. A shift that promises to make lawmaking more efficient, more transparent, and more open to public engagement. This transformation, sometimes described as the emergence of an "e-legislature" or "e-parliament," encompasses a range of applications. For example, computers are used to draft bills, record votes, manage committee work, enable remote participation, and give citizens access to legislative information (Lenz, 2019; Chartrand & Bortnick, 1980). The thinking behind these changes is straightforward. Technology can speed up the legislative process, cut down delays, and help lawmakers respond more quickly to changing social conditions. In an age where information and services drive economic activity, relying on computers for legislative work is increasingly viewed not as a luxury but as a basic requirement (Caldwell, 1967; Mbah, 2007).

In spite of these benefits, experience around the world shows that computerizing legislative work is not a simple matter. Wealthier democracies, like the United States, started introducing automated systems for voting, payroll, and bill tracking as early as the 1970s (Frank, 1977). But even in those settings, progress has been uneven. Institutional traditions, the autonomy of committees, and worries about centralizing information have at times slowed adoption (Chartrand & Bortnick, 1980). In developing countries, the hurdles are often more severe. Limited infrastructure, scarce funding, and low levels of digital familiarity among legislators and staff can stall

e-legislature efforts or push them off course (Lenz, 2019). What this suggests is that while the potential advantages of computerization are widely recognized, whether those advantages materialize depends a great deal on each country's legal framework, its institutional arrangements, and its capacity to manage technological change.

Turning to Nigeria, the National Assembly, consisting of the Senate and the House of Representatives, derives its lawmaking authority from the constitution (Federal Republic of Nigeria, 1999). The Standing Orders of each chamber lay down the rules for introducing bills, debating them, and voting on them. These rules, however, were written in an era before digital technology became commonplace. As a result, much of the legislative work remains tied to paper. Bills are still drafted by hand, floor debates take place without integrated digital support, and the public has limited means to track what happens inside the chambers. Some computer systems have been introduced. Electronic voting, for instance, is available. Yet its use is intermittent, and many tasks that could be automated continue to be done manually.

Nigeria's federal structure adds another layer of complexity. The interplay between national and sub-national legislative bodies means that coordination is already a challenge. Digital tools could in principle help bridge these gaps, reduce costs, and make it easier for citizens to engage with the lawmaking process. Yet in practice, the legislative process remains marked by inefficiencies, delays, and a lack of openness (Nigeria Civil Society Situation Room, 2026). These shortcomings ultimately affect the quality of legislation and, over time, may erode public confidence in democratic institutions.

A number of factors stand in the way of deeper computerization. One is the legal framework. Neither the constitution nor the Standing Orders explicitly recognize electronic legislative acts. There is no clear provision for electronic bills, digital signatures, or virtual committee meetings, leaving such practices in a legal grey area. Another factor is institutional culture. As observed in other legislatures, committees often guard their autonomy, and informal norms that favour paper documentation can generate resistance to centralized digital systems (Frank, 1977). Infrastructure also poses a significant problem. Unreliable electricity, limited broadband access, and inadequate budgets for information technology make sustained digital transformation difficult to achieve (Nirman, 2025). Added to this is the issue of capacity. A digital divide exists among legislators and staff, and without structured training, many find available technologies either difficult to use or of limited practical value. Taken together, these obstacles mean that despite some movement toward computerization, the Nigerian legislature remains largely analog. The potential benefits of an e-legislature, in other words, have yet to be realized.

To make sense of these challenges and to structure the analysis, this study draws on two theoretical perspectives. The first is institutional theory. This theory helps explain how formal rules, such as constitutions and standing orders, together with informal norms like traditions and power relationships, affect whether new technologies are adopted in legislative settings (Mawhood, 1983; Manor, 1999). A key insight from this perspective is that introducing computers is not simply a technical adjustment. It involves altering established routines and authority structures, which can provoke resistance. The second perspective is the Technology Acceptance Model, or TAM (Davis, 1989). This framework focuses on how individuals perceive the usefulness of a technology and how easy they believe it is to use. These perceptions, in turn, influence whether they actually adopt it. By applying these two frameworks, the paper aims to move beyond a simple list of advantages and disadvantages toward a more theoretically grounded analysis of what enables or constrains e-legislature in Nigeria.

The central aim of this study is to offer a critical assessment of how computer technology has been integrated into the legislative procedures of Nigeria's National Assembly. To achieve this, the study sets out three objectives. First, it seeks to identify the legal, institutional, and infrastructural barriers that hinder the adoption of e-legislature practices in the country. Second, it examines how these barriers intersect with the constitutional and democratic functions of the legislature. Thirdly, to assess the infrastructural and economic constraints that impede the adoption of e-legislature practices in Nigeria's National Assembly. Through these objectives, the paper contributes to the growing body of work on legislative technology in Africa and to offer practical, evidence-based recommendations for policymakers interested in modernizing Nigeria's lawmaking processes.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Global Evolution of E-Legislature

The evolution of digital systems in the public sector can be characterized by successive layers of technological and functional complexity. Gil-Garcia and Martinez-Moyano (2007) propose a four-stage model of this progression. The first stage, static or basic, consists of a simple informational presence. The second, extended, offers more detailed information. The third, interactive, introduces communicative and dynamic features. The fourth, transactional, represents a state of fully integrated interoperability between internal systems and external users. Evidence suggests that national governments tend to advance through these stages more rapidly than their local counterparts, a disparity often attributed to differences in financial and technical capacity (Ogra & Thwala, 2014).

When viewed on a global scale, the trajectory of electronic governance reveals a shift from basic informational websites toward increasingly integrated and collaborative platforms. The early 1990s marked a formative period, shaped by the advent of the World Wide Web and the establishment of foundational information technology standards (Danziger & Andersen, 2002; Salem, 2003). By the late 1990s, legislative drivers such as the 1998 Government Paperwork Elimination Act in the United States, accelerated the transition toward web-centric service delivery (Ogra & Thwala, 2014). The early 2000s witnessed the launch of comprehensive portals like FirstGov (2003) and [regulations.gov](http://www.regulations.gov), the latter designed specifically to facilitate citizen participation and public commenting on federal regulations (United Nations, 2012). Between 2008 and 2012, the emergence of Web 2.0 technologies enabled new forms of cross-government collaboration and e-rulemaking, offering avenues for deeper citizen engagement through social media and interactive tools (Ogra & Thwala, 2014).

At the sub-national level, similar patterns of evolution are evident. The website of the state of Utah, for instance, has been cited for its user-friendly navigation, which provides direct access to executive, judicial, and legislative pages from a single interface (Ogra & Thwala, 2014). Practice of this kind point toward what has been described as “connected governance,” a model in which previously siloed branches of government become accessible through integrated digital platforms (United Nations, 2012).

The success of these digital transformations, however, is not guaranteed. Several factors appear to influence outcomes. Such as strategic orientation matters: systems that are designed with a focus on citizen needs, clear results, and adaptability tend to perform better (Mathews & Usrey, 2010). Also, transparency tools, such as information technology dashboards that allow citizens to visualize government spending, have also emerged as important mechanisms for accountability (Ogra & Thwala, 2014). Yet significant barriers remain. Typical of these barriers are lack of technical, personnel, and financial capacity particularly at the municipal level can impede progress. Moreover, failures are often traced to the persistence of “islands of automation” and to institutional resistance to organizational change (Mathews & Usrey, 2010).

Technology and Democratic Processes

Whether digital tools serve to enhance or to undermine democratic deliberation remains a matter of sustained debate within the scholarly literature. Proponents point to the capacity of e-legislature to expand accessibility, lower transaction costs, and facilitate evidence-based lawmaking (Mbah, 2007). Such optimistic assessments, however, are often met with cautionary counterarguments. Critics warn that overreliance on technology introduces security vulnerabilities, risks deepening the digital divide, and may erode the forms of face-to-face deliberation that have long been considered essential to consensus building (Lenz, 2019). These tensions appear particularly acute in developing countries, where institutional capacity and technological infrastructure are often limited.

The integration of information and communication technologies (ICTs) has altered the landscape of political engagement in ways that are both significant and, at times, contradictory. Social media platforms, notably Facebook and Twitter, have emerged as primary sites for political mobilization and real-time discussion, particularly among younger populations (Dumitrica, 2014; Sandoval-Almazan & Gil-Garcia, 2014).

In a different domain, technological innovations such as biometric voter registration implemented in Kenya, among other contexts have been shown to improve electoral integrity by reducing certain forms of fraud (Micheni & Murumba, 2018). Parallel developments in e-government and open data have shifted the focus from basic service provision toward policy analytics and administrative transparency (Charalabidis et al., 2019). More recently, blockchain and distributed ledger technologies have attracted attention as potential models for transparent, tamper-proof record-keeping in urban governance, with some suggesting that such tools could help strengthen citizen trust (Gloerich et al., 2020).

In short, ICTs have contributed to measurable improvements in the transparency, efficiency, and accessibility of governance (Asimakopoulos et al., 2025). Participatory budgeting initiatives, for instance, offer one illustration of how digital platforms can facilitate citizen involvement in public spending decisions (Gilman, 2016). Similarly, crowdfunding platforms have opened new avenues for independent journalism, potentially enhancing political accountability by diversifying the sources of media production (Antonopoulos et al., 2020). Online spaces may also mobilize segments of the population that were previously politically inactive, thereby contributing to broader political competence and democratic awareness (Christensen & Bengtsson, 2011).

Nevertheless alongside these possibilities, the literature identifies a range of challenges that, if left unaddressed, may undermine democratic integrity. The digital divide persists as a structural barrier, reflecting socio-economic disparities in technology access that disproportionately affect marginalized communities; there is a real risk that such inequalities may reinforce, rather than reduce, existing gaps in political representation (Chitanana & Mutsvairo, 2019). Compounding this problem is the tendency of social media algorithms to favor sensationalized content, a dynamic that can create ideological echo chambers and facilitate the spread of disinformation (Lindner & Aichholzer, 2020). Cybersecurity vulnerabilities pose another layer of concern: digital voting systems remain susceptible to hacking and technical failures, incidents of which could compromise election outcomes and erode public confidence (Micheni & Murumba, 2018).

Beyond technical vulnerabilities, deeper ethical questions have arisen around the use of technology to shape voter behavior. The Cambridge Analytica scandal, for example, brought to public attention the possibilities of behavioral microtargeting and psychological persuasion, raising difficult questions about the moral boundaries of such practices (Arocena et al., 2022). There are also concerns that the expansion of AI-driven surveillance tools such as closed-circuit television and facial recognition technologies may threaten privacy and chill political dissent (Tawa Lama-Rewal, 2023).

The regulatory environment governing digital democracy remains, by most accounts, relatively weak (Asimakopoulos et al., 2025). In response, researchers have called for a combination of algorithmic transparency, stronger data protection frameworks such as the European Union's General Data Protection Regulation (GDPR), and the development of media literacy programs designed to equip citizens with the tools to recognize and resist manipulation (Zekos, 2022). Looking ahead, future research would do well to focus on the longer-term implications of artificial intelligence for governance, as well as on the design of inclusive strategies that might ensure technology serves as an equitable enabler of democratic participation (Asimakopoulos et al., 2025).

E-Legislature in Africa: Emerging Practices

A growing body of literature has begun to examine e-parliament initiatives across the African continent. Countries such as South Africa, Kenya, and Rwanda appear to have made advances in this area, with implementations that include parliamentary websites, live streaming of legislative proceedings, and electronic voting systems (NILDS, 2021). Yet these developments remain uneven. Persistent challenges include inconsistent internet connectivity, low levels of digital literacy among legislators, and the absence of comprehensive legal frameworks to govern electronic legislative records.

At its core, the legislature functions as a representative institution, serving as a critical link between government and citizens by articulating the shared will of the people. In many African states, however, this link has historically been weak. Scholars point to a deficit of both horizontal and vertical accountability as a defining feature of this fragility (Oni et al., 2014). The resulting estrangement between citizens and their political institutions has contributed to widespread public distrust and a discernible decline in citizen loyalty. In response

to this disconnect, modern legislatures have increasingly turned to information and communication technology (ICT) as a means of strengthening interactions between citizens and their elected representatives (Leston-Bandeira, 2012; Oni et al., 2014).

Electronic parliament, or e-parliament, can be understood as the strategic application of ICT to support the core functions of representation, legislation, and oversight, with the broader aim of enhancing transparency and accountability (Global Centre for ICT in Parliament, 2008; United Nations, 2008). One way to conceptualize its implementation in Africa is through a framework of functional stages. The first of these, the information provision stage, is where most African nations have established an online presence, though the literature suggests that the majority remain at what might be termed an introductory level (Leston-Bandeira, 2012; Oni et al., 2014).

Websites for countries including Nigeria, Ghana, Kenya, Cameroon, and South Africa tend to offer static information such as Acts, Bills, Hansards, and Votes and Proceedings (Oni et al., 2014). A smaller subset like South Africa, Zambia, Rwanda, and Zimbabwe, has moved toward administrative and legislative transparency by providing digital information on access to parliamentary buildings and plenary sessions (Oni et al., 2014). Notably, only South Africa and Tanzania were found to offer information on national budgets through their parliamentary websites (Oni et al., 2014).

Two-way digital interaction remains relatively low across the continent, yet certain emerging practices offer what some researchers describe as glimmers of hope (Oni et al., 2014). Angola, for instance, has fully implemented an online petition submission platform, while Zambia has introduced a generalized electronic submission tool (Oni et al., 2014). In Ethiopia, the parliament provides a functional online forum alongside Real Simple Syndication (RSS) feeds, features that facilitate citizen engagement through chat functions and topic-based discussion (Oni et al., 2014). South Africa stands out for a different reason: its parliamentary website makes public the official email addresses of parliamentarians, a practice that remains uncommon across most other African legislative websites (Oni et al., 2014). In terms of committee transparency, Kenya, Zambia, and South Africa have made digital details of committee activities available, with Zambia going a step further by listing venue accessibility for members of the public (Oni et al., 2014).

Theoretical Perspectives on Institutional Dynamics and Technology Adoption in Legislative Governance

This study draws on two complementary theoretical frameworks, Institutional Theory and the Technology Acceptance Model (TAM), to examine the conditions shaping e-legislature adoption within Nigeria's National Assembly. Each framework addresses a different dimension of the problem, and it is their combination that makes possible a fuller account of why digital legislative reform has proven so difficult to realise in practice.

Institutional Theory

Institutional Theory, as developed through the foundational contributions of Meyer and Rowan (1977) and DiMaggio and Powell (1983), proceeds from the observation that organisations are not governed by rational calculation alone. Their structures and practices are, to a considerable degree, products of the institutional environments in which they are embedded. Those environments operate through two broad channels: formal rules, among them constitutions, legislative statutes, and administrative regulations, and informal norms, including professional cultures, historical routines, and the often tacit power relations that shape everyday organizational life.

This dual character of institutional influence is what makes the theory particularly instructive for studying the National Assembly. When digital reform is pursued in a legislative setting, it does not land on neutral ground. It meets an institution already organized around particular ways of working, already structured by committee hierarchies with carefully guarded autonomy, and already shaped by distributions of power that incumbent actors have little incentive to disturb. Federal reform directives, committee-level operational norms, and individual legislative habits must all somehow be reconciled in practice, yet how that reconciliation unfolds, or whether it unfolds at all, is rarely straightforward. What the institutional lens allows is a shift in focus, away from the question of whether the right technology has been procured and toward the more searching question of whether the organizational conditions exist under which meaningful reform is even possible.

That said, Institutional Theory is better equipped to explain resistance and inertia than to account for the processes through which individual actors assess and respond to specific technological changes. It speaks well to the level of the organization but is less attentive to the legislator sitting before a digital voting terminal for the first time, weighing, however intuitively, whether the system will serve them or merely complicate their work. Where reform ultimately depends on those everyday judgements, this gap in the theory becomes significant.

Institutional Theory, then, helps frame the structural and normative context within which e-legislature reform must operate, clarifying which rules, entrenched interests, and informal arrangements govern the National Assembly's relationship with digital tools. It also reminds us that institutional change is not simply announced; it has to pass through the choices and practices of real people working within real constraints.

Technology Acceptance Model (TAM)

Originally proposed by Davis (1989), the Technology Acceptance Model was designed to explain a deceptively simple puzzle: why do individuals adopt some technologies and resist others, even when adoption appears rational? The model's answer centers on two perceptions. The first is perceived usefulness, the extent to which a user believes a technology will improve their performance. The second is perceived ease of use, the extent to which they expect it to demand little effort. Davis argued, and subsequent research has largely borne out, that these subjective assessments are often more decisive in shaping behavior than the objective features of the technology itself.

Applied to the National Assembly, this insight carries some weight. Legislators and parliamentary staff are not blank slates when they encounter digital tools. They arrive with professional identities, accumulated work habits, and often quite specific views about what legislative work requires and what threatens to complicate it. A senior legislator who regards electronic document management as peripheral to the core business of lawmaking, or who has had unreliable experiences with institutional IT infrastructure, is unlikely to be persuaded by a policy directive alone. TAM helps account for precisely this kind of gap, the distance between formal institutional adoption and genuine individual uptake, and it does so at a level of analysis that Institutional Theory tends to pass over.

It is worth acknowledging, however, that TAM has attracted sustained criticism for the assumptions built into its original design. The model treats adoption as primarily a matter of individual cognition, which may understate how deeply perceptions of usefulness and ease of use are themselves shaped by social pressures, political dynamics, and structural inequalities. In a setting like the National Assembly, where seniority, party alignment, and factional interest bear on almost every institutional decision, a framework that brackets those dynamics risks producing a partial picture. The model is most useful when read with an awareness of its limits rather than applied as though individual perception were fully separable from the institutional context that produces it.

Taken on its own terms, TAM offers a way to examine how legislators and staff make sense of digital tools at the level of daily experience, what they believe those tools can do for them, and how accessible or burdensome they find them to be. That ground-level account is something the broader institutional lens cannot easily supply.

METHODOLOGY

This study adopts a qualitative case study design, with the Nigerian National Assembly selected as the primary case. The choice of a case study approach reflects the nature of the research question. Questions of institutional technology adoption tend to be deeply embedded in context, and a case study design offers the flexibility needed to explore how legal frameworks, institutional practices, and infrastructural constraints intersect in a specific setting (Yin, 2014).

Data Sources

Three categories of material were drawn upon to construct a detailed picture of e-legislature development in Nigeria. The first consists of primary legal instruments. These include the Constitution of the Federal Republic of Nigeria 1999 (as amended), the Standing Orders of the Senate and the House of Representatives, the Evidence

Act 2011, and the National Assembly Legislative Houses (Powers and Privileges) Act. Together, these documents establish the formal parameters within which digital reform must operate, setting out both enabling provisions and potential restrictions that may shape how electronic processes are introduced and regulated.

The second category comprises secondary sources. Peer-reviewed articles with a focus on studies addressing e-parliament implementation in Africa and in comparable legislative contexts. Institutional reports produced by the National Institute for Legislative and Democratic Studies (NILDS) provided additional detail on the specific trajectory of reform efforts within the National Assembly. Where relevant, comparative case studies of African e-parliament initiatives were also consulted, allowing for a degree of cross-national perspective against which the Nigerian experience could be assessed.

The third category consists of documentary evidence related to actual implementation. Budgetary allocations for information and communication technology within the National Assembly were examined, as were publicly available records of pilot projects, including the development of the National Assembly website and attempts to introduce electronic voting systems. These materials offered a window into the gap, where one exists, between formal commitments and the resources or activities that have followed.

Data Analysis

Data analysis was organized around a thematic approach, guided by the institutional and technology-acceptance frameworks introduced earlier in the study. The process unfolded in three stages, though in practice these stages were iterative rather than strictly sequential.

The first stage involved coding the legal provisions and institutional documents to identify references to electronic processes, whether explicit or implied. Attention was paid not only to provisions that explicitly mandate or permit digital systems but also to silences or ambiguities that might create interpretive room for resistance or delay.

The second stage focused on barriers. Codes were grouped into three broad dimensions: legal, institutional, and infrastructural. Legal barriers included gaps in the statutory framework for electronic records or digital signatures; institutional barriers encompassed internal rules, committee practices, and patterns of authority that may impede reform; infrastructural barriers referred to the availability and reliability of hardware, software, and connectivity. This stage sought to capture not simply the existence of obstacles but also how they interact across dimensions.

The third stage turned to synthesis. Findings from the Nigerian case were compared with documented experiences from other African legislatures, drawing particularly on the comparative case literature. The aim was to identify patterns, points of divergence, and conditions under which similar barriers had been overcome elsewhere. From this comparative reading, policy-relevant insights were distilled, though with the recognition that lessons from other contexts must be treated with caution when applied to the distinctive institutional landscape of the National Assembly.

ANALYSIS AND FINDINGS

Legal and Constitutional Barriers

An examination of the Nigerian legislative framework suggests that the existing legal architecture does not explicitly accommodate electronic legislative processes. The Constitution, together with subsidiary legislation, contains notable gaps. One concerns the authentication of bills: the Evidence Act 2011 recognises electronic evidence in a general sense, yet it does not specifically address whether bills transmitted or signed electronically would carry the same legal validity as their paper equivalents. A second gap relates to public participation. Although the Constitution contemplates some form of public input, no framework exists to guide online submissions or to govern the conduct of virtual public hearings. A third area of ambiguity concerns record keeping. The Standing Orders of the National Assembly continue to require “votes and proceedings” in physical form, creating a legal obstacle for any effort to move toward fully digital archives.

These gaps appear to have practical consequences. Researchers have characterized Nigeria's e-legislature development as remaining at what may be termed an "introductory" or "information provision" stage (Oni et al., 2015). Advancing beyond this stage, the evidence suggests, is constrained by what the literature describes as regulatory lacunae and legislative hurdles that limit both the scalability and sustainability of digital governance initiatives (Asimakopoulos et al., 2025). The mere availability of digital tools, in other words, does not itself translate into usable systems; a successful implementation strategy depends, in addition, on a policy environment capable of conferring legal weight on electronic processes, particularly in matters of security and evidentiary reliability (Ogra & Thwala, 2014). Where such an environment is absent, there is a tendency toward what scholars have termed "islands of automation" – fragmented systems that cannot achieve the legally recognized interoperability necessary for seamless functioning across branches of government (Ogra & Thwala, 2014).

The limitations of the current legal framework are especially apparent in the area of public participation. Although the Nigerian National Assembly maintains a website through which citizens can view and download published petitions, the submission process itself remains entirely offline. Nowhere on the site, has it appeared, are procedural requirements set out for citizens who might wish to engage digitally (Oni et al., 2015). The prevailing practice, in this sense, is one of unidirectional information flow. The internet is used largely as a publishing medium for static documents Acts, Bills, Hansards, Votes and Proceedings rather than as a platform for interaction (Oni et al., 2015). This pattern has implications for the relationship between citizens and their representatives. A documented "deep gulf" or "estrangement" has been noted in the literature, and the absence of virtual hearing mechanisms or online submission tools would seem to reinforce that distance (Oni et al., 2015). Without such channels, the legislature struggles to meet what some scholars describe as the participatory expectations of the electorate (Oni et al., 2015).

Procedural and record-keeping obstacles further complicate the picture. The requirement that legislative records be maintained in physical form is not merely a legal technicality; it is sustained, in practice, by what analysts have termed institutional inertia and bureaucratic resistance to changes in long-established parliamentary procedures (Asimakopoulos et al., 2025; Oni et al., 2015). Such resistance is not always overt. It may manifest instead as a persistent lack of strategic vision among political leadership, where information and communication technology continues to be understood as a publishing tool rather than as a mechanism capable of supporting legally binding digital record-keeping (Oni et al., 2015). The consequence, it seems, is a form of government incapacity not necessarily a shortage of resources, though that too is present, but a failure to articulate a coherent strategy for moving beyond the informational stage toward transactional systems that would require secure electronic authentication and genuine digital archives (Oni et al., 2015).

Institutional and Cultural Barriers

Beyond the formal constraints imposed by legislation, a second cluster of obstacles arises from the institutional and cultural environment within which digital reform must take hold. These barriers are not always explicit; they often manifest in established routines, unspoken norms, and patterns of resistance that can be more difficult to address than a statutory gap.

Institutional Inertia and the Logic of Resistance

A recurrent theme in the literature is the presence of what scholars have termed institutional inertia or, in some accounts, administrative lethargy. These conditions are understood to impede government productivity and, more specifically, to slow the adoption of digital tools (Ogra & Thwala, 2014; Asimakopoulos et al., 2025). Inertia of this kind is rarely without cause. It tends to be sustained by a set of underlying concerns. Officials may resist a full transition to digital systems out of apprehension regarding institutional restructuring, fears about data security, or a recognition that greater transparency, once mandated by digital systems, may expose established practices to new forms of scrutiny (Asimakopoulos et al., 2025). One consequence is the persistence of what federal strategies have described as "islands of automation": fragmented, non-interoperable systems that survive precisely because unified, centralized platforms would disrupt existing patterns of control (Ogra & Thwala, 2014). Viewed in this light, what appears as technical fragmentation may be understood, at least in part, as a symptom of deeper institutional resistance.

This diagnosis finds support in analyses of e-government project failure. One widely cited classification identifies “political or institutional sustainability failure” as a distinct mode of breakdown, occurring when digital initiatives are not aligned with the existing bureaucratic culture (Ogra & Thwala, 2014). Such failures suggest that even well-designed technical systems can founder if they are introduced without attention to the institutional settings into which they are placed.

Committee Autonomy and Fragmentation

Patterns observed elsewhere suggest that the challenges facing the Nigerian National Assembly are not unique. Historical accounts of the United States Congress in the 1970s, for example, describe how attempts to centralize scheduling or information systems were perceived as threats to committee autonomy, provoking resistance that slowed reform (Frank, 1977). In Nigeria, similar dynamics appear to be at work. Individual committees, it seems, are often reluctant to share room schedules or to cede control over document management to a centralized system. More broadly, the literature points to the continuing relevance of what it terms “political fragmentation” and “bureaucratic resistance” as factors that complicate the implementation of digital participatory initiatives (Asimakopoulos et al., 2025).

The difficulty, in many cases, is that moving from isolated applications to what the United Nations has called “connected governance” requires a level of coordination that existing institutional arrangements do not readily support. A lack of coordination among government ministries, together with a vested interest in maintaining traditional, often opaque workflows, can effectively block the transition (Ogra & Thwala, 2014; Asimakopoulos et al., 2025). Where such barriers are present, the shift to a unified digital platform may be experienced not as a neutral technical upgrade but as a direct challenge to established authority.

Informal Norms and the Cultural Dimension

The sources consulted for this study emphasize that the shift to an e-parliament is as much a cultural transformation as a technological one (Oni et al., 2015). This observation bears on how one interprets the current state of digital development in Nigeria. The “introductory stage” observed in many African legislatures, including Nigeria, is characterized by the practice of uploading static physical documents Acts, Hansards, Votes and Proceedings in PDF format (Oni et al., 2015). Such practices may reflect a deeper cultural assumption: that the digital record remains a secondary reflection of the “authentic” physical copy. Until this assumption is unsettled, the adoption of digital systems is likely to remain partial.

Underpinning these cultural patterns is a set of procedural norms that have long been embedded in parliamentary practice. Successful implementation of digital systems, it has been argued, depends on a comprehensive understanding of parliamentary operations and, more fundamentally, on a willingness to use digital tools to modernize the procedures and culture that have historically relied on physical documentation (Oni et al., 2015). Where such willingness is lacking, effort at digitization risk becoming exercise in superficial change, layering technology over unchanged institutional habits.

Capacity Deficits and Technology Acceptance

The final dimension of institutional and cultural barriers concerns capacity. The literature consistently identifies a lack of technical human resources, knowledge, and expertise as a primary obstacle to e-government development (Ogra & Thwala, 2014). In the Nigerian context, this constraint operates at multiple levels. Many legislative staff and secretariat personnel, it appears, resist the adoption of information and communication technologies in part because they lack the necessary skills to manage digital repositories effectively (Oni et al., 2015). This is not simply a matter of individual skill deficits; it also reflects a broader pattern of inadequate investment in training and staff development, itself a product of what researchers have described as a lack of strategic vision among political leadership (Oni et al., 2015).

These capacity limitations intersect with the dynamics captured by the Technology Acceptance Model (TAM). The model’s emphasis on perceived ease of use offers one way of understanding why even well-resourced digital initiatives may fail to gain traction. If platforms are not designed with attention to human-computer interaction

principles, or if staff members are not trained in ways that make the technology feel accessible, adoption is likely to remain minimal regardless of the formal mandate to digitise (Asimakopoulos et al., 2025). In this sense, capacity deficits are not merely about the absence of skills; they are also about the conditions under which those skills can be developed and put to use.

Infrastructural and Economic Barriers

A third category of constraints concerns the material conditions under which digital reform must proceed. Even where legal frameworks exist and institutional resistance is addressed, the absence of reliable infrastructure and adequate financial resources can render well-designed initiatives unworkable. In the Nigerian case, these constraints are particularly pronounced.

Connectivity and Technical Infrastructure

The literature on e-parliament implementation in Africa has consistently noted that many states on the continent, Nigeria included, lack the infrastructural capacity necessary to support full-scale digital parliamentary systems (Oni et al., 2015). This is not merely a matter of hardware availability. The success of digital democracy tools, it has been argued, depends strictly on secure internet connectivity and on the institutional capacity to anticipate and manage technical failures (Asimakopoulos et al., 2025). Where these conditions are not met, even well-designed platforms are likely to function intermittently, if at all.

In the National Assembly complex itself, reports of frequent power outages and unreliable internet service appear to disrupt digital workflows on a routine basis (Oni et al., 2015). Such interruptions may seem mundane, but their cumulative effect is significant. Systems that cannot be relied upon are unlikely to be adopted by users who have alternatives, however inefficient those alternatives may be. More broadly, the technical gap extends beyond the legislative complex. Although mobile-cellular subscriptions have grown rapidly across Nigeria, mobile broadband penetration using 3G or higher technologies remains low. Some estimates place it at roughly eight percent in developing regions, a figure that suggests limited reach for any digital initiative that depends on mobile connectivity (Oni et al., 2015).

Budgetary Constraints and Strategic Vision

Economic barriers to digital reform have been described in the literature as a form of “financial or economic sustainability failure,” one of several recurring patterns in the lifecycle of e-government projects (Ogra & Thwala, 2014). In the Nigerian context, historical allocations for information and communication technology within the National Assembly budget have been low relative to recurrent expenditure, a pattern that would appear to reflect limited prioritization of digital infrastructure.

Yet the relationship between finance and implementation is not always straightforward. Some researchers caution that inadequate financial resources, while certainly a challenge, may themselves be a symptom rather than roots cause (Oni et al., 2015). The more fundamental issue, on this view, is the absence of strategic vision among political leadership. Where information and communication technology is understood primarily as a tool for publishing static information rather than as a platform for interactive governance, investments in digital infrastructure are unlikely to command priority. In such settings, budget allocations tend to favour traditional recurrent expenditure, leaving digital initiatives underfunded and, as a result, unable to move beyond pilot phases.

The Digital Divide and Rural Participation

A final infrastructural barrier concerns the distribution of technology access across the population. The digital divide is widely recognized in the literature as a salient challenge, one that threatens to reinforce, rather than reduce, existing inequalities in political representation (Asimakopoulos et al., 2025). In the Nigerian context, this divide has a pronounced spatial dimension. A bifurcation between urban and rural areas is evident: rural communities face not only limited access to e-government services but also significantly lower levels of digital literacy (Asimakopoulos et al., 2025).

The implications for e-legislature development are significant. Even if the National Assembly were to deploy sophisticated digital platforms for citizen engagement or virtual participation, these systems would remain inaccessible to a substantial portion of the population. Legislators representing rural constituencies, moreover, may themselves lack reliable broadband access, hindering their ability to participate in virtual sessions or to access digital legislative resources. There is a risk, in such circumstances, that digital initiatives may be perceived as serving primarily urban or well-connected elites, a perception that could undermine their legitimacy precisely when legitimacy is most needed (Asimakopoulos et al., 2025).

CONCLUSION AND RECOMMENDATIONS

This study set out to examine why the Nigerian National Assembly, despite sporadic efforts at computerisation, remains largely tethered to analog methods of lawmaking. What emerges from the analysis is a picture of digital transformation not as a straightforward technical upgrade but as a process that runs directly into the entrenched structures of legislative life. Drawing on Institutional Theory and the Technology Acceptance Model, the preceding sections have suggested that the barriers to e-legislature adoption are neither superficial nor easily isolated. Instead, they appear to be woven into the legal framework, the institutional culture, and the material conditions within which the National Assembly operates.

Consider first the legal dimension. Gaps in the constitutional and statutory framework such as the absence of explicit provisions for electronic bills, digital signatures, or virtual committee meetings, leave digital initiatives without firm legal footing. This ambiguity does not simply create inconvenience; it generates a degree of institutional risk that may deter sustained investment or make responsible actors reluctant to commit to new systems. Institutionally, the picture is equally complex. Long-established norms, the guarded autonomy of committees, and a recurrent absence of strategic direction have together sustained paper-based workflows, sometimes actively resisting the consolidation that digital systems typically require. Infrastructural constraints compound these difficulties. Unreliable electricity, limited broadband connectivity, and a sharp urban-rural digital divide mean that even well-designed platforms may function intermittently or remain inaccessible to significant segments of the population, including legislators representing rural constituencies.

What these three dimensions share is a tendency to reinforce one another. Legal uncertainty can give institutional conservatives a ready rationale for delay; institutional fragmentation can prevent the coordinated planning that would justify infrastructure investment; and infrastructural deficits can make legal reforms appear premature. Seen in this light, it becomes easier to understand why Nigeria's legislature remains at what the literature terms an "introductory" stage, where digital tools serve largely as publishing mechanisms rather than as integrated platforms for lawmaking. The anticipated benefits of an e-legislature greater efficiency, transparency, and public engagement have accordingly proved elusive. Moving beyond this impasse, the evidence suggests, will require a reform strategy that attends to legal, institutional, and infrastructural dimensions together, rather than treating technology as a solution that can be layered onto unchanged institutional arrangements.

Key Contributions

This study makes three contributions that may be of value to both scholars and practitioners concerned with legislative technology in developing democracies.

The first is conceptual. While existing work on digital parliaments in Africa has tended to describe what is missing or to catalogue technological deficiencies, this study applies a dual theoretical lens to ask why the Nigerian National Assembly has struggled to move beyond static information provision. The aim has been to shift the analytical focus from a list of absences to an explanation of the structural and perceptual mechanisms that sustain the status quo. Such an approach, it is hoped, offers a more diagnostic starting point for understanding resistance to digital reform.

The second contribution lies in the analytical framework the study employs. By organizing the analysis around three distinct but interacting dimensions: legal, institutional, and infrastructural, the paper provides structure that could be adapted to assess e-legislature readiness in other developing democracies. One of the framework's insights is that barriers rarely operate in isolation. Legal ambiguity, for instance, can feed institutional reluctance

to invest in infrastructure, while fragmented institutional arrangements can make it difficult to generate the political momentum needed for statutory reform. Recognizing these interdependencies, the framework suggests, is a necessary step toward designing interventions that do not founder on unaddressed constraints in adjacent domains.

The third contribution is regional grounding. The study draws extensively on documented e-parliament experiences from across Africa, including South Africa, Kenya, Rwanda, Zambia, and Tanzania. It identifies areas where these legislatures have made measurable progress: Angola's online petition platform, Kenya's committee transparency practices, South Africa's public access to parliamentary information, while also noting where similar hurdles persist. This comparative dimension matters because it roots the study's recommendations in institutional and infrastructural realities shared by many African legislatures, rather than importing models from high-income contexts whose starting conditions differ significantly.

Recommendations

The recommendations that follow are offered not as a prescriptive blueprint but as a set of priorities identified by the evidence reviewed in this study.

- a) **Legal reform to legitimise electronic legislative acts:** A logical starting point is to address the legal uncertainty that currently shadows digital initiatives. Amending the Constitution, the Standing Orders, and the Evidence Act to explicitly recognise electronic bills, digital signatures, electronic voting records, and virtual committee meetings would remove a significant source of institutional hesitation. Of particular importance is clarifying the evidentiary weight of electronic legislative records and establishing a framework that gives citizens a clear pathway for online participation. Without such changes, even well-funded technical projects may struggle to achieve legitimacy within the existing legal order.
- b) **Establish a dedicated Directorate of Parliamentary Technology:** Institutional fragmentation emerged repeatedly in the analysis as a barrier to coherent reform. Creating a centralized, adequately resourced directorate with a clear mandate for digital transformation could help address this. Such a unit would be responsible for developing interoperable systems, overseeing cybersecurity, and ensuring that procurement and implementation follow a strategic plan rather than a series of ad-hoc initiatives. Locating responsibility in a single body would not eliminate committee autonomy, but it might provide a counterweight to the centrifugal tendencies that have historically made coordinated reform difficult.
- c) **Adopt a phased, context-sensitive implementation strategy:** Attempting to digitize all legislative functions simultaneously carries considerable risk, particularly in an environment where institutional capacity is uneven and user familiarity with digital tools varies widely. A phased approach offers a more prudent path. Early pilots could focus on non-controversial areas—committee document management, internal scheduling, public access to draft bills—where failure would not disrupt core legislative functions. Successful pilots could then build confidence, generate early wins, and provide practical lessons that inform subsequent phases. Such a strategy allows the institution to develop technical capacity gradually while giving staff and legislators time to adjust.
- d) **Develop continuous capacity-building programmes:** Digital literacy deficits among legislators and legislative staff were identified in the analysis as a significant constraint, one that intersects with the Technology Acceptance Model's emphasis on perceived ease of use. Training programmes, therefore, should not be limited to basic computer skills. They need to cover secure use of legislative platforms, data governance, and cybersecurity awareness. Equally important is the question of programme design: one-off trainings are unlikely to produce lasting change. Ongoing, embedded support, combined with opportunities for end-users to influence system design, may do more to foster genuine adoption than any number of standalone workshops.
- e) **Formalise cross-learning with African peer parliaments:** No legislature embarks on digital transformation in isolation. The National Assembly could benefit from structured knowledge exchange with African parliaments that have made demonstrable progress in this area. South Africa's experience with public access to parliamentary information, Kenya's committee transparency practices, and Rwanda's integrated parliamentary website each offer lessons that, while not directly transferable, might be adapted to the Nigerian context. Bilateral visits, secondments of technical staff, and collaborative

workshops would represent relatively low-cost mechanisms for avoiding the inefficiencies of reinventing solutions that have already been tested elsewhere.

Limitations and Future Research

It is worth acknowledging the limitations that constrain the claims this study is able to make. One concerns data availability. Detailed records of internal ICT projects within the National Assembly including budget execution figures, system evaluations, and internal policy documents are not publicly accessible in any systematic form. The analysis has therefore relied on secondary sources and documentary evidence, supplemented where possible by institutional reports.

These limitations point toward avenues for future research. Qualitative methods, such as semi-structured interviews with committee clerks, ICT unit personnel, and legislators, could yield richer insight into the institutional dynamics and technology acceptance factors that shape actual adoption decisions. Survey-based studies might allow for broader generalisation, quantifying how perceptions vary across different cadres of legislative staff. Comparative research across Nigeria's thirty-six state legislatures would also add analytical depth, as sub-national variation in infrastructure, political will, and institutional capacity may reveal patterns that are obscured at the federal level. Finally, longitudinal studies that track the impact of legal reforms or the establishment of dedicated technology units would help move the field beyond cross-sectional description toward a firmer understanding of what interventions, under what conditions, most effectively enable e-legislature transformation

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