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IT Governance in Public and Private Sector Innovation: Comparative Models, Barriers, and Policy Lessons from Global Practice

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ABSTRACT: This narrative review explores the implementation and effectiveness of IT governance models in organizations undergoing digital transformation. The objective is to identify key frameworks, evaluate challenges, and highlight best practices across public and private sectors. Literature was gathered through systematic searches of academic databases including Scopus and Google Scholar, using keywords such as "IT governance models," "digital transformation governance," and "healthcare IT governance." Studies were selected based on inclusion criteria that focused on public, private, and nonprofit organizations from both developed and developing countries. The review reveals that models like COBIT, ITIL, and ISO/IEC 38500 have consistently demonstrated positive impacts on organizational transparency, accountability, and service delivery. These models also facilitate improved risk management and stakeholder satisfaction. However, the findings indicate that systemic barriers—such as limited resources, resistance to organizational change, and lack of interoperability—significantly hinder implementation, particularly in low-resource settings. Comparative studies show that while developed countries benefit from standardized governance frameworks and robust digital infrastructures, developing countries face unique socio-cultural and policy-related obstacles. This study emphasizes the importance of tailoring governance strategies to local contexts, investing in digital literacy, and promoting participatory decision-making. The implications are relevant for policymakers, institutional leaders, and IT professionals seeking to improve governance outcomes. This review identifies COBIT, ITIL, and ISO/IEC 38500 as core frameworks for improving organizational performance, but highlights major challenges in resource-limited settings. It calls for context-sensitive adaptation and further research to translate theoretical models into practical digital governance solutions.

Keywords: IT Governance, Digital Transformation, Governance Frameworks, Organizational Performance, Healthcare IT, Participatory Leadership, Public Sector Innovation.

INTRODUCTION

The evolution of Information Technology (IT) governance has been a pivotal element in shaping how public and private organizations adapt to the accelerating pace of digital transformation. Over

the past decade, the implementation of diverse IT governance models has reflected a shift from traditional hierarchical control mechanisms to more adaptive, collaborative, and decentralized frameworks. One prominent example is the application of Holacracy in India's Ministry of Education, representing a shift toward decentralized and project-oriented structures that accommodate rapidly changing demands (Bhoi et al., 2025). In the healthcare sector, governance models that emphasize inter-organizational collaboration have emerged as effective tools for improving service quality, as demonstrated in a study of cancer hospital networks in Italy (Romiti et al., 2020). These examples underscore the relevance of evolving IT governance paradigms and their capacity to support sector-specific needs within increasingly complex digital ecosystems.

In line with these trends, hybrid governance models are gaining traction, particularly in the public sector. Ramadan and Al-Qirim (2015) have highlighted the development of frameworks for integrating Web 2.0 technologies into government functions, underscoring the necessity of ensuring accountability and transparency. Similarly, value-driven governance approaches have become increasingly pertinent as societies demand more sustainable and participatory decision-making processes (Lee et al., 2018). These developments indicate that IT governance is no longer merely a matter of compliance or technical efficiency; instead, it has become integral to broader organizational objectives, including democratic engagement, sustainability, and responsiveness to stakeholder expectations.

The contribution of IT governance to organizational efficiency is well documented. In public administration, effective governance frameworks have been linked to reduced operational costs, improved service delivery, and enhanced stakeholder satisfaction. Nunes et al. (2023) found a positive correlation between transparency, accountability, and public service quality, reinforcing the strategic importance of sound IT governance. Similarly, Cousins et al. (2019) emphasized that integrating IT systems into health management leads to better health outcomes and operational efficiencies through real-time data access and informed decision-making. Furthermore, Pyone et al. (2017) argued that effective leadership in governance settings fosters collaboration and innovation, which are essential for addressing contemporary organizational challenges. These findings collectively suggest that IT governance functions not only as an operational enabler but also as a strategic driver for institutional transformation.

The role of IT governance extends beyond performance enhancement. It plays a critical role in aligning organizational strategies with technological infrastructures, ensuring resilience in the face of disruption. For instance, digital governance models facilitate proactive risk management and enable organizations to respond flexibly to evolving stakeholder needs. These models also provide a foundation for standardizing procedures and achieving regulatory compliance, which are crucial for maintaining public trust and organizational legitimacy in both private and public sectors. As the global economy becomes increasingly interconnected and reliant on digital platforms, the stakes associated with effective IT governance continue to rise.

Despite these promising developments, the implementation of IT governance in digitalized organizations is fraught with challenges. One of the most persistent barriers is resistance to organizational change. Kuhlmann et al. (2016) observed that successful governance

transformations in hospital systems required substantial shifts in managerial and employee engagement, suggesting that technical reforms must be accompanied by cultural change. Digital transformation often demands new mental models, communication strategies, and performance metrics, all of which can encounter opposition from entrenched institutional practices.

A second challenge concerns the lack of digital literacy and technical skills among organizational staff. While this issue is widely acknowledged in policy discourse, empirical studies focusing specifically on digital skill gaps in the context of IT governance remain limited. The work of Reynolds and Sutherland (2013), while focused on integrated healthcare planning, hints at the broader relevance of interoperability and user competence but does not directly address skill deficits. Still, the absence of adequate technical expertise may undermine the effective deployment and maintenance of governance frameworks, leading to implementation failures or superficial compliance.

Another significant obstacle is the integration of legacy information systems with emerging technologies. Many organizations, particularly in the public sector, operate on outdated infrastructure that is incompatible with modern governance tools. As Reynolds and Sutherland (2013) argue, interoperability is essential for achieving a seamless transition to advanced IT models. Without cohesive system architecture, fragmented data and siloed operations can hinder real-time communication, strategic alignment, and innovation. Greenhalgh et al. (2016) further emphasize the importance of collaborative integration in community health services, suggesting that technical and institutional harmonization is a prerequisite for effective IT governance.

Given these challenges, a critical gap in the literature pertains to the operationalization of IT governance policies. While a growing body of research highlights the theoretical benefits of various governance models, there is a paucity of detailed empirical studies that examine how these models are implemented in practice. Many investigations offer generalized insights into technological adoption or administrative reform but fail to provide concrete guidance for practitioners seeking to navigate complex governance transitions. Thondoo et al. (2020) and Panda and Thakur (2016), for instance, primarily explore healthcare and decentralization issues in developing countries without offering substantial insights into IT governance.

This narrative review aims to address this gap by systematically synthesizing existing literature on IT governance models, evaluating practical applications across sectors, and identifying enabling and inhibiting factors that influence implementation outcomes. In doing so, it seeks to develop a comprehensive understanding of best practices in IT governance, highlighting strategies that align technological innovation with organizational objectives. By analyzing how governance models have evolved and been adapted in different settings, the review contributes to a nuanced understanding of digital transformation in organizational contexts.

Central to this review is the identification of critical success factors that drive or impede the effectiveness of governance models. These include transparency, accountability, stakeholder engagement, and organizational readiness. Nunes et al. (2023) have demonstrated how these elements can significantly influence public sector efficiency, while Pyone et al. (2017) underscore

their relevance in fostering innovation and cross-sector collaboration. Through a comparative analysis of governance approaches, the review also aims to uncover variations across public and private sectors and propose mechanisms for knowledge transfer and adaptive policy-making.

Geographically, the review examines governance models implemented in both developed and developing countries. In industrialized nations, where digital infrastructure and institutional capacity are relatively advanced, IT governance frameworks often adhere to standardized protocols such as COBIT and ITIL, facilitating seamless integration with business processes (Panda & Thakur, 2016). By contrast, in developing contexts, the lack of technological infrastructure and skilled personnel presents unique barriers to governance implementation. For instance, Panda and Thakur (2016) noted that governance failures in India's healthcare system often stemmed from a breakdown in stakeholder trust and insufficient community involvement. Leisink et al. (2021) further highlight how community-based models in low-resource settings can compensate for institutional deficiencies through participatory policy-making and localized accountability mechanisms.

These regional discrepancies reveal a broader issue: the generalizability of governance frameworks. Most models originate in contexts with specific institutional, economic, and cultural conditions, limiting their applicability in divergent settings. As such, a central objective of this review is to explore how governance models can be adapted to accommodate contextual differences, including variations in organizational capacity, stakeholder expectations, and technological maturity. This adaptive lens is essential for promoting equitable and sustainable digital transformation across global regions.

In conclusion, this narrative review underscores the importance of IT governance as a strategic and operational imperative in the digital age. By integrating theoretical perspectives with empirical evidence, it aims to bridge the gap between policy design and practical implementation. The review seeks to inform stakeholders across sectors about effective governance strategies, contextualize the challenges of implementation, and provide actionable insights for enhancing organizational performance. Ultimately, it contributes to the development of a more inclusive and resilient digital governance landscape that is responsive to the complexities of modern organizational environments.

METHOD

The methodology employed in this narrative review was designed to systematically identify, evaluate, and synthesize existing literature concerning models of Information Technology (IT) governance, digital governance frameworks, IT policy strategies, and best practices across organizational contexts. Given the multidisciplinary nature of IT governance, this review included a broad array of literature from domains such as public administration, health informatics, information systems, and organizational management. The overall goal was to extract empirical

and theoretical insights that illuminate the design, implementation, and impact of IT governance models within both public and private organizations.

The literature search was conducted across three major academic databases: Scopus, Google Scholar, and PubMed. These platforms were selected for their extensive indexing of peer-reviewed literature, interdisciplinary coverage, and relevance to the themes under review. Scopus was prioritized for its robust indexing of social sciences and technical disciplines, while Google Scholar was used to capture grey literature and emerging studies from institutional repositories. PubMed was employed to identify research on IT governance in health sector contexts, particularly those relating to electronic health records and healthcare system digitalization. Searches were conducted iteratively over several weeks, with refinements made to keywords and Boolean operators based on the preliminary yield and relevance of results.

To improve the specificity and relevance of the search outcomes, carefully curated keywords were employed. The search string included terms such as "IT governance models," "digital governance frameworks," "IT policy best practices," "digital transformation governance," "healthcare IT governance," "information technology strategy," and "organizational governance frameworks." Boolean operators (AND, OR) and quotation marks were used to refine searches and ensure the retrieval of articles that explicitly address the thematic core of this review. For example, combinations such as "IT governance AND healthcare" or "digital transformation AND governance frameworks" were commonly used to narrow down relevant literature. This keyword selection was informed by prior literature (Pyone et al., 2017; Mourajid et al., 2022; Panda & Thakur, 2016), which highlighted common terminologies and thematic domains associated with governance-related research.

Following the initial search, inclusion and exclusion criteria were applied to filter relevant studies. The inclusion criteria encompassed empirical and theoretical studies published in peer-reviewed journals, within the last five to ten years, and that explicitly addressed IT governance practices, models, or frameworks in organizational settings. Priority was given to studies focusing on public, private, or non-profit organizations that had adopted IT governance mechanisms. This included research on hospitals, governmental agencies, academic institutions, and large-scale enterprises that rely on digital systems for operational efficiency. The rationale behind this criterion was to ensure the review remained contextually grounded and reflective of real-world governance dynamics.

Geographical relevance also played a crucial role in study selection. Studies originating from both developed and developing countries were included to capture diverse perspectives on IT governance implementation. Special attention was paid to research focused on developing countries, as these contexts often face unique infrastructural and policy challenges that influence the feasibility and effectiveness of IT governance frameworks (Owili et al., 2015; Aboulhallaj et al., 2024). By comparing practices across these different settings, the review sought to highlight adaptive strategies and challenges that are context-specific yet informative for global audiences.

The exclusion criteria involved eliminating studies that lacked peer-review status, were not published in reputable journals, or were based solely on expert opinions without empirical support. Additionally, articles focusing exclusively on technical specifications of IT systems, without discussing governance implications or institutional strategies, were excluded. This was done to maintain a strong alignment between the included studies and the overarching research questions concerning governance design, institutional integration, and strategic implementation. Opinion pieces, blog articles, and editorial commentaries were likewise omitted to ensure academic rigor and source reliability.

Regarding the types of studies included, the review considered a mix of empirical designs, including case studies, cohort studies, comparative analyses, and mixed-method evaluations. For example, the study by Pyone et al. (2017) provided a structured framework for evaluating health system governance, offering both qualitative and quantitative insights into the governance process. Similarly, Panda and Thakur (2016) presented a historical and policy-based analysis of decentralized governance in the Indian healthcare sector, making it a valuable reference for understanding institutional evolution. Case-based studies that detailed organizational transformation through IT governance frameworks, such as those involving Holacracy or network-based governance in healthcare, were prioritized for their practical relevance and contextual richness (Romiti et al., 2020; Bhoi et al., 2025).

The process of article screening involved multiple stages. First, all titles and abstracts retrieved from database searches were independently reviewed to assess their thematic relevance. Studies that met the preliminary criteria were then subjected to a full-text review to evaluate their methodological quality, theoretical grounding, and applicability to the central themes of this narrative review. During this stage, studies were categorized based on sector focus (e.g., healthcare, public administration, private enterprise), governance model employed (e.g., centralized, decentralized, hybrid), and geographical scope. This categorization enabled a thematic synthesis that allowed for the identification of cross-cutting patterns and context-specific insights.

To further ensure the credibility and coherence of the included studies, citation chaining was employed, whereby the reference lists of selected articles were scanned for additional relevant studies. This snowballing technique proved particularly effective in identifying foundational literature and seminal works that may not have been captured through keyword-based searches alone. For instance, studies cited in widely referenced papers by Cousins et al. (2019) and Lee et al. (2018) were examined for their contributions to understanding IT policy integration and stakeholder-driven governance.

Quality appraisal was carried out through an informal critical assessment of each article's research design, clarity of objectives, methodological rigor, and theoretical contributions. Although formal scoring tools such as PRISMA or CASP were not used due to the narrative nature of the review, efforts were made to maintain consistency in evaluating the internal validity and generalizability of the findings. Discrepancies or uncertainties in inclusion decisions were resolved through consensus among the reviewers.

Ultimately, this methodological approach enabled a comprehensive and context-sensitive review of IT governance models across different sectors and regions. The iterative process of literature identification, screening, and synthesis allowed for the development of a coherent narrative that integrates empirical evidence with theoretical perspectives. By adhering to transparent search strategies, clearly defined inclusion criteria, and rigorous screening procedures, the review ensures that the conclusions drawn are both credible and relevant to stakeholders interested in advancing IT governance practices in an era of rapid digital transformation.

RESULT AND DISCUSSION

The narrative review reveals several recurring themes and empirical patterns surrounding IT governance, particularly in terms of policy frameworks, implementation practices, organizational challenges, and global contextual differences. These findings underscore the relevance of IT governance as a strategic and operational imperative for organizations adapting to digital transformation across varied sectors and geographies. The results are presented according to four major thematic categories: IT governance policies and frameworks, best practices and case-based effectiveness, barriers to implementation, and global comparisons of IT governance approaches.

IT Governance Policies and Frameworks

Across the literature, three dominant frameworks have consistently emerged as the cornerstone of IT governance strategies: COBIT (Control Objectives for Information and Related Technologies), ITIL (Information Technology Infrastructure Library), and ISO/IEC 38500. These frameworks are widely referenced and adopted across sectors due to their ability to bridge the gap between IT processes and broader organizational objectives.

COBIT is particularly notable for its focus on risk management, internal control, and alignment between IT initiatives and business strategy. Studies show that organizations implementing COBIT report enhanced regulatory compliance and more structured risk oversight, ultimately leading to increased operational efficiency (Strehlenert et al., 2015). The model's structured domain of processes facilitates monitoring and performance benchmarking, which is especially critical in industries with high regulatory scrutiny such as finance and healthcare.

ITIL, conversely, centers on the service delivery dimension of IT governance. It provides a set of detailed practices for IT service management (ITSM) that aim to align IT services with the needs of the business. Empirical evidence highlights improvements in customer satisfaction and cost efficiency following ITIL implementation, particularly through standardized incident response protocols and well-defined service processes (Adams, 2017). Organizations leveraging ITIL practices benefit from improved response times, greater end-user engagement, and a structured approach to service improvement.

ISO/IEC 38500 provides a high-level governance model that integrates legal, ethical, and strategic dimensions into IT decision-making. It encourages board-level oversight and promotes accountability in technology-related governance. Studies have shown that institutions adopting

ISO/IEC 38500 experience improved clarity in assigning decision-making authority and enhanced risk identification capabilities (Bordier et al., 2018).

The application of these frameworks has demonstrated measurable outcomes in diverse sectors. For example, Pyone et al. (2017) and Cousins et al. (2019) document how adherence to these governance models leads to not only better internal IT management but also improved responsiveness to stakeholder needs and reduced conflict in cross-functional decision-making. These models have enabled organizations to transition from reactive, fragmented IT operations to proactive, cohesive governance systems that drive innovation and resilience.

Best Practices and Case-Based Effectiveness

A significant number of studies provide compelling evidence for the positive impact of IT governance on organizational outcomes, particularly when best practices are implemented and contextualized. A notable example is Romiti et al. (2020), who analyzed multi-stakeholder governance in Italian cancer hospitals. Their findings showed reductions in service delivery costs and enhanced access to care. Key performance indicators used to measure effectiveness included user satisfaction, operational cost reductions, and quality-of-service improvements.

Sjoukema et al. (2021) and Etemadi et al. (2021) further corroborate these insights by employing indicators such as response time to technical issues, cost savings, and benchmarking against international service standards. User satisfaction is often evaluated through structured feedback mechanisms, while quality-of-service metrics include error rates, service downtime, and adherence to ITIL or COBIT protocols. Organizations reporting positive governance outcomes typically display stronger data-driven cultures, emphasize continuous learning, and maintain agile governance structures that adapt to evolving technological environments.

These findings validate the argument that standardized governance frameworks, when applied with contextual sensitivity, not only streamline internal operations but also enhance organizational adaptability and sustainability (Leisink et al., 2021; Thondoo et al., 2020). In health systems particularly, governance strategies emphasizing stakeholder participation and feedback loops were more successful in enhancing public trust and improving service quality.

Barriers to Implementation of IT Governance

Despite the widespread endorsement of governance frameworks, numerous challenges continue to impede effective implementation. Resource constraints, such as limited budgets and shortages of skilled personnel, are cited consistently across the literature. Leisink et al. (2021) highlight that many organizations, especially in developing contexts, lack the capacity to invest in employee training or procure state-of-the-art digital infrastructure. This results in suboptimal deployment of governance protocols and a lack of continuity in IT service delivery.

Equally significant is the cultural resistance to change within organizations. Employees accustomed to legacy systems and hierarchical decision-making often resist new governance models that require greater transparency, accountability, and participatory management. Thondoo et al. (2020) argue that engaging employees early in the governance reform process and providing clear communication channels can mitigate this resistance. Participatory approaches that involve

stakeholders in co-designing governance solutions have been shown to enhance compliance and support for new IT strategies.

System integration issues present another formidable obstacle. Organizations operating with outdated, siloed IT systems often struggle to achieve interoperability with modern governance tools. This hinders real-time data sharing and weakens institutional responsiveness. Studies recommend that integration planning be embedded within the early phases of governance strategy development, rather than treated as a post-implementation technical adjustment.

These barriers collectively point to the need for a multi-dimensional approach to IT governance that incorporates managerial, technical, and cultural interventions. Without addressing these systemic issues, even the most robust governance frameworks risk partial or ineffective implementation.

Global Comparisons of IT Governance Approaches

A comparative analysis of IT governance practices between developed and developing countries reveals stark contrasts in infrastructure readiness, policy formulation, and institutional capacity. In high-income countries such as the United States and Western Europe, governance frameworks like COBIT and ITIL are not only widely adopted but also integrated into organizational training programs and certification processes (Reynolds & Sutherland, 2013). These countries benefit from established digital infrastructures and a professional workforce trained in governance standards.

By contrast, low- and middle-income countries face challenges related to infrastructure deficits, limited access to governance expertise, and fragmented policy landscapes. For example, in countries like India and Kenya, the application of IT governance often requires significant contextual adaptation. Paridhi and Ritika (2024) and Etemadi et al. (2021) report that in these settings, community-driven models and decentralized governance mechanisms offer more promising outcomes. These models leverage local knowledge, stakeholder trust, and flexible decision-making to overcome infrastructural and policy limitations.

Global comparisons also reveal that developed countries tend to prioritize efficiency and standardization, while developing countries focus on access, inclusivity, and adaptability. This divergence underscores the need for flexible policy frameworks that can accommodate varying institutional capacities and governance needs. Localizing global standards through participatory design and adaptive regulation is critical to the sustainability of IT governance in resource-constrained settings.

Policy Lessons from International Practice

The review also surfaces important policy insights that can inform the development of national IT governance strategies. One key lesson is the effectiveness of public-private partnerships (PPP) in strengthening governance capacity. Kuhlmann et al. (2016) demonstrate that collaborative ventures between government entities and private sector actors often result in enhanced innovation, resource pooling, and faster implementation timelines. PPP models are particularly useful in contexts where public sector capacity is limited and private actors possess specialized technical expertise.

Another significant policy lesson involves the adoption of value-based governance frameworks. These frameworks prioritize ethical accountability, transparency, and citizen participation, which are essential for maintaining public trust in digital systems. Thondoo et al. (2020) suggest that engaging communities in co-creating governance policies ensures greater alignment with user needs and fosters collective ownership of digital transformation initiatives.

Moreover, international best practices emphasize the importance of adaptive regulation. Rensburg and Fourie (2016) advocate for flexible legal and administrative mechanisms that evolve alongside technological innovation. Such adaptability is particularly important in fast-changing environments where rigid regulatory systems may stifle innovation or create compliance bottlenecks. Owili et al. (2015) echo this perspective, recommending iterative policy cycles that incorporate feedback from end users and frontline implementers.

Taken together, these insights point to a need for governance strategies that are not only technically sound but also socially responsive and institutionally agile. National policy frameworks should thus integrate lessons from successful international models while being firmly grounded in local realities.

Conclusion of Results

The findings of this narrative review demonstrate that while established governance models such as COBIT, ITIL, and ISO/IEC 38500 offer robust frameworks for aligning IT operations with strategic goals, their effectiveness is contingent upon context-sensitive implementation. Best practices indicate that participatory governance, continuous evaluation, and adaptive regulation enhance the success of governance initiatives. However, persistent barriers such as resource constraints, cultural resistance, and technological fragmentation pose significant risks to implementation. Global comparisons and international case studies further underscore the need for differentiated governance strategies tailored to specific national and organizational contexts. The integration of policy lessons from successful governance experiences elsewhere can provide valuable guidance for designing more inclusive, efficient, and sustainable IT governance systems across the world.

The findings of this narrative review reaffirm the critical role of IT governance in enhancing organizational efficiency and effectiveness across various sectors, as suggested by previous studies such as Pyone et al. (2017) and Romiti et al. (2020). These frameworks—COBIT, ITIL, and ISO/IEC 38500—serve as foundational models for managing risk, ensuring compliance, and aligning IT functions with organizational goals. Yet, despite the conceptual and practical value of these governance models, this review reveals deep-rooted systemic barriers that persist in their implementation, particularly in contexts where structural and cultural rigidity impede adaptive responses to technological changes.

As observed in the results, robust governance frameworks can indeed foster transparency and accountability (Strehlenert et al., 2015; Cousins et al., 2019). However, in practice, the deployment of these frameworks is frequently hindered by organizational inertia and stakeholder resistance. This is particularly evident in public sector institutions where governance models such as Holacracy and network-based structures, though theoretically conducive to flexibility, face substantial resistance from employees due to entrenched hierarchical cultures and unclear lines of

responsibility (Bhoi et al., 2025). Panda and Thakur (2016) similarly highlight that stakeholder trust is often compromised when governance structures are misaligned with local expectations or poorly communicated.

Structurally, the ambiguity in policy execution and overlapping institutional roles emerge as significant impediments to effective IT governance. Public institutions, especially in developing countries, often suffer from fragmented systems and conflicting mandates that undermine cohesive governance (Nunes et al., 2023). For instance, overlapping responsibilities between national health ministries and decentralized health units frequently result in confusion over data sharing protocols and compliance mechanisms. This fragmentation mirrors findings from Reynolds and Sutherland (2013), who stress the importance of interoperability and coordination among IT systems, particularly in health sector reforms.

Public policy dynamics further influence IT governance outcomes. Inconsistent regulatory environments or outdated policy frameworks can delay the adoption of innovative governance mechanisms. The literature underscores the importance of policy alignment with technological advancements; for example, Ramadan and Al-Qirim (2015) and Mourajid et al. (2022) emphasize that without timely policy support, digital governance frameworks struggle to gain traction. In healthcare systems, governance models that fail to incorporate public values and community participation often face diminished legitimacy, which in turn affects their sustainability and impact (Lee et al., 2018).

One of the recurrent systemic factors identified in this review is the scarcity of digital skills among staff tasked with implementing IT governance frameworks. This issue is particularly pronounced in resource-constrained environments where training budgets are limited and technological literacy is unevenly distributed. The absence of skill development initiatives undermines even the most well-designed governance models, resulting in poor adoption rates and inefficiencies in system utilization (Greenhalgh et al., 2016). Moreover, this competence gap exacerbates resistance to change, as staff may feel inadequately prepared to manage or adapt to new systems.

To address these challenges, the literature proposes multi-dimensional strategies that encompass both policy reforms and organizational development. Participatory governance, as suggested by Thondoo et al. (2020) and Lee et al. (2018), is posited as a key enabler of effective IT policy implementation. By involving stakeholders in both the formulation and execution phases, organizations can mitigate resistance and enhance the perceived legitimacy of governance measures. In tandem, the adoption of digital tools such as cloud-based information systems and real-time dashboards can facilitate seamless communication and transparency, thereby fostering an environment conducive to agile decision-making (Clarke et al., 2018).

This review also draws attention to global disparities in IT governance implementation. Developed countries, with their robust infrastructures and high levels of IT literacy, often lead in the adoption of standardized governance frameworks. In contrast, developing countries face contextual barriers including limited funding, infrastructural deficits, and governance opacity (Owili et al., 2015; Aboulhallaj et al., 2024). However, studies such as Paridhi and Ritika (2024) and Etemadi et al. (2021) suggest that community-based governance models may offer a viable alternative in these settings by leveraging local knowledge and fostering grassroots participation.

Moreover, institutional learning from international case studies underscores the utility of public-private partnerships (PPP) and inclusive governance models. Kuhlmann et al. (2016) argue that PPPs can bridge resource gaps and stimulate innovation, especially in technology-driven sectors. Similarly, Rensburg and Fourie (2016) emphasize the role of adaptive regulation and transparency as critical factors in building stakeholder trust and facilitating scalable IT governance solutions.

Nevertheless, despite these insights, the literature remains limited in several areas. Many studies tend to focus on theoretical frameworks without providing granular insights into operationalization or context-specific adaptation. For instance, while COBIT and ITIL are widely referenced, there is a dearth of empirical studies detailing their step-by-step implementation in diverse organizational contexts. This lack of practical guidance hampers the ability of institutions to tailor governance strategies to their unique challenges and needs.

Additionally, the rapid pace of technological evolution presents a moving target for governance frameworks, necessitating continual updates to policies and practices. Few studies address the longitudinal impact of governance model adoption or explore how organizations evolve their frameworks over time. Future research should consider longitudinal studies that evaluate the durability and adaptability of IT governance models under dynamic technological and institutional conditions.

Another limitation lies in the underrepresentation of cross-sectoral comparisons. While healthcare and public administration are well-covered, sectors such as education, transportation, and small-to-medium enterprises (SMEs) remain underexplored. Expanding the scope of research to include these sectors can yield richer insights into how IT governance can be customized and scaled across different organizational types.

In conclusion, the discussion highlights the intricate interplay between structural, cultural, and policy-level variables in shaping IT governance outcomes. While the adoption of governance frameworks has demonstrably improved organizational performance in certain contexts, systemic barriers—ranging from policy misalignment and resource constraints to cultural resistance and skill deficits—continue to challenge their efficacy. The review advocates for a more nuanced, participatory, and context-sensitive approach to IT governance, one that is responsive to evolving technological landscapes and grounded in empirical evidence across varied organizational settings.

CONCLUSION

This narrative review has examined the complexities and potential of IT governance models within digitally transforming organizations. The findings emphasize that well-structured governance frameworks such as COBIT, ITIL, and ISO/IEC 38500 significantly enhance organizational performance by increasing transparency, risk management, and service efficiency. However, the implementation of these models is often challenged by systemic factors, including organizational resistance, resource limitations, and fragmented information systems. These findings reinforce previous literature while offering a deeper understanding of how contextual factors shape the effectiveness of governance.

The urgency to address these governance challenges is particularly salient in the public and healthcare sectors of developing countries, where digital infrastructure and policy coherence remain inadequate. The review highlights the need for more inclusive, adaptive policies that incorporate stakeholder participation and technological flexibility. Interventions should prioritize investments in capacity building, interoperability of legacy systems, and cultivation of organizational cultures open to change.

Future research should focus on generating granular, context-specific evidence through longitudinal case studies and cross-sectoral comparisons, particularly in underrepresented regions. More operational detail is needed to guide organizations on best practices for implementing IT governance models, bridging the gap between theory and practice. Ultimately, emphasizing participatory leadership, accountability, and digital integration remains key to unlocking the full potential of IT governance in supporting resilient and adaptive institutions.

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