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Digital Platform Adoption in E-Government: Implications for Access, Transparency, and Efficiency

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Abstract

This study examines the adoption of digital platforms in e-government and their implications for citizen access, transparency, and administrative efficiency. Using a systematic literature review approach, the study analyzes 92 peer-reviewed articles indexed in Scopus and Web of Science, applying a PRISMA-based selection process and thematic analysis. The findings identify three main dimensions influencing digital platform adoption: drivers, barriers, and outcomes. Key drivers include citizen expectations, organizational efficiency, technological advancements, and regulatory frameworks, while major barriers consist of digital divide, institutional constraints, fragmented regulations, and trust issues. The results demonstrate that digital platforms improve service access, enhance transparency, and increase efficiency; however, these benefits are uneven and often constrained by structural and institutional limitations. The study further reveals the presence of an "access paradox," "opaque transparency," and "islands of automation," indicating gaps between technological potential and practical implementation. A conceptual framework is proposed to illustrate the dynamic interaction between drivers, barriers, and outcomes. This study contributes to the literature by providing a multi-level analytical perspective and offers insights for policymakers to design more inclusive, integrated, and context-sensitive digital governance strategies.

INTRODUCTION

The rapid and pervasive digital transformation of the public sector has become one of the most defining features of contemporary governance. Governments across the globe are increasingly adopting digital technologies to modernize administrative systems, enhance service delivery, and respond to evolving societal expectations. This transformation reflects a broader paradigm shift from traditional bureaucratic governance toward what is often conceptualized as digital-era governance, where technology is not merely a support tool but a central driver of institutional change (Mergel et al., 2020; Wirtz & Müller, 2023). In this context, citizens are no longer passive recipients of public services but active users who demand seamless,

accessible, and efficient digital interactions comparable to those provided by private-sector platforms. At the same time, fiscal constraints and political pressures have compelled governments to pursue more cost-effective and transparent administrative models. As a result, digital service delivery has emerged as a strategic priority in public administration worldwide.

The evolution of e-government has progressed significantly over the past two decades. Early initiatives were largely limited to static information portals characterized by one-way communication (Web 1.0), whereas contemporary systems emphasize integrated, transactional, and citizen-centric platforms that enable real-time interaction and service co-production (Twizeyimana & Andersson, 2020; Madsen & Kremmergaard, 2023). This transition signifies not only a technological upgrade but also a fundamental reconfiguration of governance structures and service delivery models. The concept of "government as a platform" (GaaP) has gained prominence as a guiding framework, advocating for interoperable digital infrastructures that facilitate collaboration between government entities and external stakeholders (Brown et al., 2021; Janssen & Estevez, 2023). Such platforms aim to overcome long-standing bureaucratic fragmentation by enabling data sharing, process integration, and user-centered service design. Consequently, digital platforms are increasingly viewed as essential instruments for improving citizen access, strengthening transparency, and enhancing administrative efficiency.

The urgency of digital transformation has been further amplified by external shocks, most notably the COVID-19 pandemic. The pandemic functioned as a global stress test for government digital capacity, exposing both strengths and vulnerabilities in public service delivery systems (Moser-Plautz & Schmidthuber, 2023; Sahin, 2023; Mai et al., 2024). Countries with well-developed digital infrastructures such as interoperable registries, digital identity systems, and secure payment platforms were able to deliver emergency assistance, maintain essential services, and ensure administrative continuity more effectively (Ansari et al., 2025; Gashu, 2024; Lowe et al., 2023). In contrast, governments with limited digital readiness faced significant disruptions, highlighting the critical role of digital service delivery in ensuring resilience and social equity. This experience has reinforced the perception of digital platforms as not merely optional innovations but foundational components of modern governance systems (Whitford et al., 2023; Shen et al., 2023).

Despite these advancements, the global landscape of e-government adoption remains highly uneven. Significant disparities persist in terms of technological capacity, institutional maturity, and implementation outcomes across countries and regions (Criado et al., 2021; Anomah, 2025). While some governments have successfully integrated advanced technologies such as artificial intelligence and data analytics into public services, others continue to struggle with legacy systems, limited infrastructure, and low levels of digital literacy. These disparities suggest that digital transformation is not solely a technical process but also a complex socio-political phenomenon shaped by governance structures, institutional norms, and regulatory environments (Zheng, 2022; Young et al., 2022). In particular, the effectiveness of digital platforms is closely linked to the presence of supportive legal and regulatory frameworks, including data protection laws, digital identity regulations, and interoperability standards, which provide the institutional foundation for secure and trustworthy digital interactions.

Against this backdrop, a central problem emerges in the form of what has been described as the "digital government paradox," where ambitious policy goals often exceed actual implementation outcomes (Mergel, 2023). Although substantial investments have been made in digital infrastructure and platform development, many initiatives fail to deliver integrated improvements in citizen access, transparency, and administrative efficiency. First, access remains uneven due to

persistent digital divides, including disparities in connectivity, digital literacy, and device affordability, which disproportionately affect vulnerable populations (Wirtz & Müller, 2023). Second, transparency initiatives frequently result in superficial data disclosure without enabling meaningful public oversight, thereby limiting their impact on accountability (Young et al., 2022; Sari & Muslim, 2023). Third, efficiency gains are often confined to isolated processes, leading to "islands of automation" rather than comprehensive organizational transformation (Zheng, 2022). These challenges indicate that digital transformation requires more than technological adoption; it demands systemic changes in institutional practices, governance models, and regulatory frameworks.

To address these challenges, the literature has proposed various theoretical and practical approaches. Technology adoption models such as TAM and UTAUT emphasize the importance of user perceptions, including perceived usefulness, ease of use, and trust, in shaping adoption behavior (Rana et al., 2022; Lee et al., 2025). Institutional theory highlights the role of regulatory pressures, normative expectations, and legitimacy concerns in influencing organizational adoption of digital platforms (Criado et al., 2021). Diffusion of Innovation theory provides insights into how digital technologies spread across social systems, emphasizing the importance of communication channels and adopter characteristics (Twizeyimana & Andersson, 2020). Meanwhile, socio-technical systems theory underscores the need for alignment between technological systems and organizational structures to achieve sustainable transformation (Margetts & Dorobantu, 2023; Thomas, 2024; Amanollahnejad et al., 2026). These frameworks collectively suggest that successful e-government implementation requires a holistic approach that integrates technological, institutional, and social dimensions.

More specifically, recent studies have emphasized the importance of regulatory and governance frameworks in enabling effective digital transformation. Legal instruments such as data protection regulations, electronic transaction laws, and digital identity systems play a critical role in establishing trust and ensuring the security of digital interactions (Janowski, 2020; Rodríguez & Nikolaidis, 2023). Furthermore, policy frameworks that promote interoperability, open data, and inclusive design are essential for maximizing the public value of digital platforms. Empirical evidence indicates that countries with coherent regulatory environments tend to achieve more consistent outcomes in terms of access, transparency, and efficiency, compared to those with fragmented or outdated legal systems (Mergel, 2023). This highlights the need to consider regulatory factors not as peripheral elements but as integral components of digital government ecosystems.

Nevertheless, despite the growing body of literature, significant gaps remain in understanding how digital platforms simultaneously influence access, transparency, and efficiency within diverse institutional contexts. Existing studies often focus on individual dimensions of e-government outcomes or specific technological solutions, without fully capturing the complex interactions between these dimensions. Moreover, there is limited research that integrates multi-level theoretical perspectives to examine how technological, institutional, and socio-political factors jointly shape adoption and outcomes. This gap is particularly evident in comparative analyses that consider variations between developed and developing contexts, as well as differences in governance systems and regulatory environments. Consequently, there is a need for a more comprehensive analytical framework that can account for these complexities and provide a nuanced understanding of digital government transformation.

This study aims to address these gaps by providing a systematic and integrative analysis of digital platform adoption in e-government, with a particular focus on its implications for citizen access, transparency, and administrative efficiency. By

synthesizing insights from multiple theoretical frameworks including technology adoption models, institutional theory, diffusion of innovation, and socio-technical systems theory this research seeks to develop a holistic understanding of the drivers, barriers, and outcomes of digital transformation. The novelty of this study lies in its multi-level analytical approach, which emphasizes the interplay between technological capabilities, institutional dynamics, and regulatory frameworks. Furthermore, the study contributes to the literature by identifying key challenges and opportunities for achieving integrated improvements in public service delivery. The scope of the research is limited to government-to-citizen (G2C) digital services, with a focus on the period between 2010 and 2024, reflecting the evolution of digital governance in the era of mobile technologies, data-driven decision-making, and post-pandemic recovery.

METHODS

Research Design

This study adopts a systematic literature review (SLR) approach to examine the adoption of digital platforms in e-government and their implications for citizen access, transparency, and administrative efficiency. The SLR method is particularly appropriate for synthesizing fragmented knowledge across interdisciplinary fields such as public administration, information systems, and governance studies. By applying a structured and replicable process, this approach ensures analytical rigor and minimizes bias in the selection and interpretation of relevant literature.

Search Strategy and Data Sources

A comprehensive literature search was conducted using two major academic databases, Scopus and Web of Science, which are widely recognized for indexing high-quality peer-reviewed publications. The search employed Boolean combinations of keywords, including “e-government,” “digital service delivery,” “digital platforms,” “adoption,” “citizen access,” “transparency,” and “administrative efficiency.”

The search was restricted to publications to capture key developments in digital governance, including the rise of mobile government, platform-based governance, and post-pandemic digital transformation. This time frame ensures the inclusion of both foundational and recent studies reflecting current technological and institutional trends.

Inclusion and Exclusion Criteria

To ensure relevance and quality, explicit inclusion and exclusion criteria were applied. The inclusion criteria were: 1) peer-reviewed journal articles; 2) publications written in English; 3) studies focusing on government-to-citizen (G2C) digital services; and 4) research addressing at least one of the core dimensions: access, transparency, or efficiency.

Studies were excluded if they: 1) focused primarily on government-to-business (G2B) or government-to-government (G2G) interactions without direct relevance to citizen services; 2) were conference proceedings, reports, or non-peer-reviewed sources; or 3) lacked methodological clarity or substantive relevance to the research objectives.

Study Selection Process (PRISMA Approach)

The study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to ensure transparency in the selection process. The initial search generated a broad set of records, which were then screened through title and abstract review to eliminate duplicates and irrelevant studies.

Subsequently, full-text screening was conducted to assess eligibility based on the predefined criteria. Through this multi-stage filtering process, a final sample of 92

studies was selected for qualitative synthesis. Although a visual PRISMA flow diagram is not included, the selection procedure adhered to the core principles of systematic identification, screening, eligibility assessment, and inclusion.

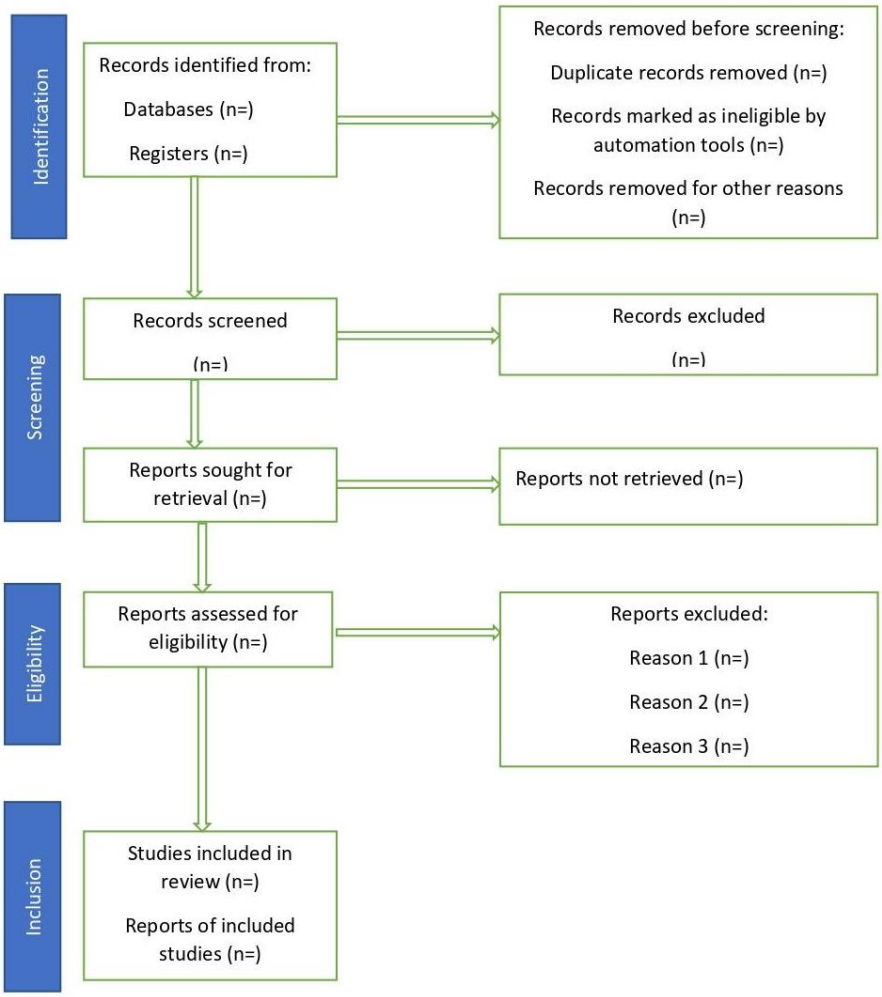


Figure 1. PRISMA 2020 flow diagram of the study selection process

Source: Authors' compilation based on Scopus and Web of Science database

The diagram illustrates the identification, screening, eligibility, and inclusion stages, resulting in 92 studies included in the qualitative synthesis.

Data Extraction and Coding Procedure

Data extraction was conducted using a structured framework to ensure consistency and comparability across studies. The extracted information included author(s), year of publication, geographical context, research method, theoretical framework, and key findings related to digital platform adoption.

The analysis employed a thematic approach combining deductive and inductive coding. Deductive coding was guided by the study's analytical focus on three core dimensions: citizen access, transparency, and administrative efficiency. Inductive coding was subsequently applied to identify emerging themes, including drivers of adoption, institutional barriers, technological enablers, and governance challenges.

The coding process involved iterative reading, categorization, and refinement to enhance conceptual clarity and analytical consistency.

Analytical Framework and Synthesis

The identified themes were synthesized into higher-level analytical categories, namely: (1) drivers of digital platform adoption, (2) barriers and challenges, and (3) outcome dimensions related to access, transparency, and efficiency. This thematic structure directly informed the organization of the results and discussion sections, ensuring coherence between the methodological approach and the presentation of findings.

By integrating insights from multiple theoretical perspectives, the study provides a comprehensive understanding of how technological, institutional, and socio-political factors interact in shaping digital government adoption across diverse contexts.

RESULTS AND DISCUSSION

The systematic literature review resulted in a total of 92 peer-reviewed studies, selected through a structured PRISMA-based process. These studies represent diverse geographical contexts, encompassing both developed and developing countries, and reflect the global nature of digital government transformation.

Table 1 summarizes the overall characteristics of the included studies, including their geographical distribution, methodological approaches, thematic focus, and technological orientation. The data indicate that research on digital government has increased significantly in recent years, particularly in the post-pandemic period.

Table 1. Characteristics of Selected Studies (n = 92)

Category	Sub-category	Frequency (n)	Percentage (%)
Geographical Context	Developed Countries	51	55.4%
	Developing Countries	41	44.6%
Research Method	Quantitative	28	30.4%
	Qualitative	34	37.0%
	Mixed Methods	30	32.6%
Main Focus Area	Citizen Access	29	31.5%
	Transparency	27	29.3%
	Administrative Efficiency	36	39.2%
Technology Focus	Digital Platforms / Portals	38	41.3%
	Mobile Government	21	22.8%
	AI / Data Analytics	19	20.7%
	Others	14	15.2%
Period of Publication	2010–2015	18	19.6%
	2016–2019	27	29.3%
	2020–2024	47	51.1%

Source: Authors' compilation based on selected articles from Scopus and Web of Science (n = 92)

The table shows that more than half of the studies (51.1%) were published after 2020, indicating the growing importance of digital government, particularly following the COVID-19 pandemic. In terms of methodology, qualitative and mixed-method approaches slightly dominate, suggesting that the field remains exploratory and context-dependent.

Drivers of Digital Platform Adoption

The thematic analysis identified three major categories of drivers: citizen-centric, internal governmental, and technological–regulatory factors. Table 2 presents a selection of representative studies that informed this analysis.

Table 2. Selected Studies Supporting Thematic Analysis

No	Author(s)	Year	Context	Method	Focus	Key Findings
1	Mergel	2023	Global	Qualitative	Efficiency	Digital teams improve performance but face institutional resistance
2	Wirtz & Müller	2023	Europe	Quantitative	Access	Usability and trust strongly affect citizen satisfaction
3	Twizeyimana & Andersson	2020	Global	Review	Transparency	Public value depends on accessibility and openness
4	Janssen & Estevez	2023	Global	Conceptual	Efficiency	Platforms enable inter-agency integration
5	Rana et al.	2022	Global	Meta-analysis	Access	Trust and privacy influence adoption intention
6	Criado et al.	2021	OECD	Comparative	Governance	Institutions shape digital transformation outcomes
7	Zheng	2022	Cross-national	Quantitative	Efficiency	Political systems affect performance
8	Young et al.	2022	USA	Qualitative	Transparency	Open data does not guarantee accountability
9	Margetts & Dorobantu	2023	Global	Conceptual	AI	Algorithmic governance has risks and benefits
10	Shen et al.	2023	China	Quantitative	Access	Digital platforms improve crisis response

Source: Authors' compilation based on selected articles

The selected studies presented in Table 2 provide a representative cross-section of the broader dataset and illustrate the diversity of methodological approaches, geographical contexts, and analytical focuses within the field of digital government research. Several important patterns can be identified from this synthesis. First, there is a clear convergence across studies in identifying citizen trust, usability, and service accessibility as central determinants of digital platform adoption. Quantitative and meta-analytic studies consistently emphasize the role of perceived usefulness, ease of use, and trust in shaping user behavior, indicating strong alignment with technology adoption models such as TAM and UTAUT. Second, a substantial number of conceptual and qualitative studies highlight the importance of institutional and governance factors, including inter-agency coordination, regulatory frameworks, and organizational capacity. This suggests that digital

transformation is not merely a technological process but is deeply embedded in institutional structures and governance dynamics. Third, the literature reflects an increasing shift toward data-driven and platform-based governance, where digital systems are not only used for service delivery but also for strategic decision-making and policy implementation. Studies focusing on artificial intelligence and platform governance indicate emerging trends toward more advanced and integrated digital ecosystems. Fourth, the findings reveal a recurring tension between technological potential and practical implementation, particularly in relation to issues of trust, privacy, and regulatory constraints. While technological innovations enable new forms of service delivery, their effectiveness is often moderated by institutional readiness and socio-political conditions.

Citizen-Centric Drivers

The majority of the reviewed studies indicate that citizen expectations and behavioral transformations constitute one of the most influential drivers of digital platform adoption in government. This shift is largely shaped by the widespread diffusion of high-quality digital services in the private sector, which has fundamentally redefined user expectations regarding speed, accessibility, and service personalization (Wirtz & Müller, 2023). As a result, citizens increasingly evaluate public services using benchmarks derived from commercial platforms, such as seamless user experience, intuitive interfaces, and real-time responsiveness.

Beyond usability, multiple studies highlight that citizens now expect continuous (24/7) service availability, reduced transaction costs, and the elimination of spatial and temporal constraints traditionally associated with public administration. This transformation reflects a deeper structural change in the citizen–state relationship, where individuals act not merely as passive recipients of services but as active, informed, and demanding users who expect efficiency, transparency, and accountability.

Importantly, the literature also emphasizes that citizen demand is not limited to service consumption but extends to participatory and accountability expectations. Digital platforms are increasingly viewed as mechanisms for civic engagement, enabling citizens to monitor government performance, access public data, and participate in decision-making processes. This dual role citizen as both service user and governance stakeholder intensifies the pressure on governments to adopt more interactive and transparent digital systems.

However, this driver is inherently uneven. A substantial number of studies point out that higher adoption rates are concentrated among populations with greater digital literacy, stable internet access, and higher socio-economic status. Consequently, citizen-driven demand simultaneously functions as both an enabler of innovation and a reproducer of inequality, reinforcing the need for inclusive digital strategies.

Internal Government Drivers

Across the reviewed studies, organizational efficiency, fiscal pressure, and administrative reform agendas emerge as dominant internal drivers of digital platform adoption. Governments are increasingly compelled to deliver more services with fewer resources, prompting the adoption of digital systems to automate routine processes, reduce operational costs, and enhance service delivery performance (Margetts & Dorobantu, 2023).

A key theme in the literature is the transition from fragmented bureaucratic systems toward integrated and coordinated service delivery models. Traditional public administration structures are often characterized by siloed agencies, redundant processes, and limited data sharing. Digital platforms address these inefficiencies by enabling interoperability, facilitating cross-agency coordination, and supporting

"once-only" service models, where citizens provide information only once for multiple services (Janssen & Estevez, 2023).

Another critical driver is the growing emphasis on data-driven governance. Governments are increasingly leveraging digital platforms to generate, collect, and analyze large volumes of administrative data, enabling real-time monitoring, predictive analytics, and evidence-based decision-making. This reflects a broader shift from process-oriented administration toward performance-oriented and intelligence-driven governance, where data becomes a strategic asset.

However, the literature also notes that these internal drivers often coexist with institutional resistance. Organizational inertia, legacy systems, and risk-averse cultures can slow down or distort digital transformation processes. As a result, adoption is frequently uneven and dependent on leadership commitment, institutional capacity, and change management strategies.

Technological and Regulatory Drivers

Technological advancement is consistently identified as a foundational enabler of digital government transformation. Many studies emphasize the role of mobile technologies, cloud computing, artificial intelligence, and data analytics in enabling scalable, flexible, and user-centered service delivery. These technologies reduce infrastructure costs, enhance system interoperability, and allow governments to respond more dynamically to citizen needs.

At the same time, a substantial body of literature highlights that technological capability alone is insufficient without supportive regulatory and policy frameworks. Legal infrastructures related to data protection, digital identity, cybersecurity, and electronic transactions are critical in establishing trust, legitimacy, and operational certainty.

For instance, regulatory frameworks such as the General Data Protection Regulation demonstrate how legal environments shape not only technological implementation but also citizen trust and institutional accountability. Such frameworks provide clear rules for data usage, privacy protection, and cross-border data exchange, thereby reducing uncertainty and enabling wider adoption.

Moreover, policy instruments such as national digital strategies, interoperability standards, and open data initiatives play a crucial role in aligning technological innovation with governance objectives. The literature consistently shows that countries with coherent, adaptive, and well-enforced regulatory systems achieve more stable and effective digital transformation outcomes, whereas fragmented or outdated legal frameworks often hinder scalability and innovation.

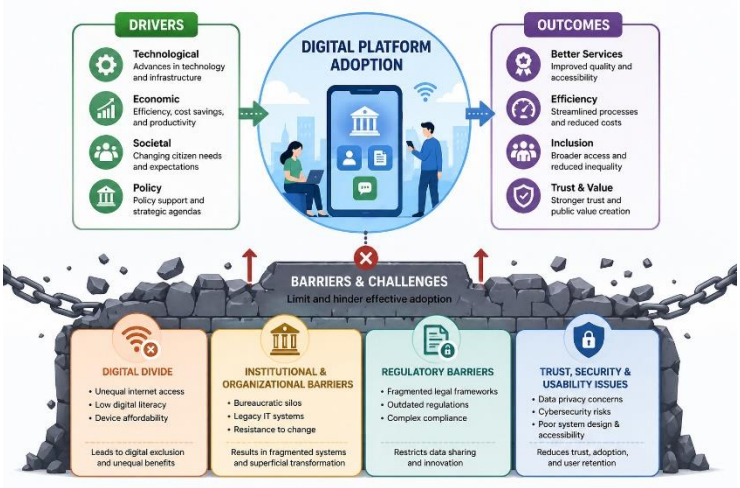
Barriers and Challenges

Despite the strong drivers identified, the analysis reveals several persistent barriers that limit the effectiveness of digital platform adoption.

First, the digital divide remains one of the most significant challenges. Disparities in internet access, digital literacy, and device affordability disproportionately affect marginalized populations, limiting their ability to benefit from digital services. This creates a risk of digital exclusion, where the shift toward digital-by-default services may unintentionally marginalize vulnerable groups.

Second, institutional and organizational barriers continue to hinder transformation. Bureaucratic silos, legacy IT systems, and resistance to change impede interoperability and innovation. Many studies highlight that digital initiatives often result in superficial transformation, where front-end services are digitized without corresponding changes in back-end processes, leading to limited efficiency gains.

Third, regulatory fragmentation and rigidity pose significant challenges. Inconsistent legal frameworks, outdated regulations, and complex compliance requirements can restrict data sharing and innovation. While regulation is necessary for ensuring security and accountability, overly restrictive systems may slow down technological adoption. Finally, trust, security, and usability issues play a critical role in shaping adoption outcomes. Concerns related to data privacy, cybersecurity risks, and government surveillance reduce citizen willingness to engage with digital platforms. At the same time, poor system design such as complex interfaces, lack of accessibility, and fragmented service portals further limits usability and increases abandonment rates.



Source: Organisation for Economic Co-operation and Development (2020–2021); World Bank (2021); United Nations (2022).

This framework shows that digital platform adoption is driven by various enabling factors and leads to desired outcomes, but its effectiveness is constrained by multiple barriers. These barriers limit the adoption process and reduce the achievement of optimal outcomes.

Outcomes of Digital Platform Adoption

Enhancing Citizen Access

The findings across the reviewed studies consistently demonstrate that digital platforms have significantly improved citizen access to public services, particularly in terms of convenience, speed, and geographic reach. Digital service delivery enables users to interact with government systems at any time and from any location, effectively eliminating traditional barriers such as office hours, physical distance, and bureaucratic delays. Numerous studies report measurable improvements in service uptake, reduced processing times, and increased user satisfaction, particularly in contexts where digital infrastructure is well developed.

However, a more critical analysis reveals that these improvements are not uniformly distributed. A recurring theme in the literature is the emergence of the "access paradox," where digitalization simultaneously expands and restricts access. While digitally connected populations benefit from faster and more efficient services, marginalized groups such as low-income individuals, the elderly, and those with limited digital literacy often face new barriers.

This paradox highlights that access is not merely a technical issue but a multi-dimensional concept involving infrastructure, skills, affordability, and usability. Several studies emphasize that "digital-by-default" policies may inadvertently create a two-tier system, where digital users receive superior services while non-digital users are left with declining offline alternatives. As a result, improvements in access

must be evaluated not only in terms of aggregate usage but also in terms of equity and inclusiveness.

Promoting Transparency

Digital platforms have also contributed to increased transparency by enabling governments to disclose large volumes of information through open data portals, online dashboards, and real-time reporting systems. This shift represents a transition from reactive transparency (e.g., freedom of information requests) toward proactive and data-driven transparency, where information is made publicly available by default.

Many studies highlight that such initiatives can reduce information asymmetry, empower civil society, and support evidence-based public debate. In contexts where transparency mechanisms are effectively implemented, digital platforms have been shown to strengthen accountability, improve governance quality, and enhance public trust.

However, the literature also identifies a critical limitation in the form of "opaque transparency." This occurs when governments release large quantities of data without ensuring accessibility, usability, or interpretability. Data may be technically available but practically unusable due to poor formatting, lack of context, or limited user capacity.

This finding suggests that transparency should not be measured solely by the volume of data disclosed but by its practical utility and societal impact. Effective transparency requires not only data availability but also data curation, visualization, and integration into meaningful narratives that citizens can understand and use. Without these elements, digital transparency risks becoming symbolic rather than transformative.

Improving Administrative Efficiency

Administrative efficiency is one of the most frequently cited benefits of digital government, and the reviewed studies provide substantial evidence supporting improvements in process automation, cost reduction, and service delivery speed. Digital platforms enable governments to streamline workflows, reduce manual errors, and optimize resource allocation, resulting in measurable gains in operational performance.

In particular, automation of high-volume transactions such as licensing, tax filing, and benefit applications has been shown to significantly reduce processing times and administrative costs. These improvements contribute to a more responsive and scalable public administration system.

Nevertheless, a deeper analysis reveals that these efficiency gains are often incremental rather than transformational. Many studies highlight the persistence of "islands of automation," where digital technologies are applied to existing processes without fundamentally redesigning them. In such cases, digital systems may replicate inefficiencies rather than eliminate them.

The literature emphasizes that true efficiency gains require process re-engineering, not just digitization. This involves rethinking service design, eliminating redundant procedures, and adopting citizen-centric approaches such as life-event-based services and proactive service delivery.

Moreover, measuring efficiency remains a complex challenge. While short-term indicators such as cost savings and processing time are relatively easy to quantify, broader outcomes such as improved policy effectiveness, increased trust, and long-term institutional capacity are more difficult to assess. This measurement gap may

lead governments to prioritize low-risk, incremental improvements over more ambitious transformational initiatives.

The findings of this study confirm that citizen expectations constitute a central driver of digital platform adoption, but they also reveal a more nuanced and uneven dynamic than is often assumed in the literature. Consistent with prior studies, citizens increasingly expect seamless, user-friendly, and responsive public services comparable to those offered by private-sector platforms (Wirtz & Müller, 2023). This shift reflects broader transformations in digital behavior, where individuals approach public services with expectations of immediacy, personalization, and convenience. However, the analysis demonstrates that citizen demand is not uniformly distributed across populations, but instead is strongly conditioned by digital literacy, access to infrastructure, and socio-economic status. This uneven distribution creates a paradox in which citizen-centric demand simultaneously accelerates innovation while reinforcing inequality. Digitally advantaged groups benefit disproportionately from enhanced services, whereas marginalized populations face new barriers to access. This finding aligns with broader debates in digital governance, suggesting that citizen-centric approaches must be complemented by inclusive policies that address structural inequalities in access and capability.

At the institutional level, the study highlights the critical role of internal government dynamics in shaping digital transformation outcomes. Organizational efficiency and fiscal pressure emerge as primary motivators for adopting digital platforms, as governments seek to automate processes, reduce costs, and improve service delivery performance (Margetts & Dorobantu, 2023). However, these efficiency-driven initiatives are frequently constrained by institutional factors such as bureaucratic silos, legacy systems, and risk-averse organizational cultures. The persistence of these barriers supports the argument that digital transformation is not merely a technical process but a deeply institutional one, requiring changes in governance structures, administrative routines, and organizational mindsets. The identification of “islands of automation” in the findings further suggests that many governments remain at an intermediate stage of digital maturity, where technological adoption is not matched by systemic integration. In this context, the growing emphasis on data-driven governance introduces both opportunities and challenges. While digital platforms enable real-time monitoring and evidence-based decision-making, they also require substantial investments in data infrastructure, human capital, and governance mechanisms (Magakwe, 2025; Ogundeko-Olugbami et al., 2025). Without these supporting conditions, the potential of data-driven governance remains limited.

The interaction between technological advancement and regulatory frameworks emerges as another key dimension of digital transformation. While technologies such as cloud computing, artificial intelligence, and mobile platforms provide the technical foundation for scalable and flexible service delivery, their effectiveness is strongly mediated by institutional and legal conditions. Regulatory frameworks play a dual role as both enablers and constraints. On the one hand, legal instruments related to data protection, digital identity, and electronic transactions establish the foundation for secure and trustworthy digital interactions (Hamid et al., 2023). For example, frameworks such as the General Data Protection Regulation illustrate how regulatory environments shape not only system design but also citizen trust and institutional legitimacy. On the other hand, fragmented or overly rigid regulatory systems can hinder innovation, limit interoperability, and slow implementation processes. This duality highlights the need for adaptive regulatory governance that balances innovation with accountability, particularly in rapidly evolving technological contexts.

The outcomes of digital platform adoption namely access, transparency, and efficiency are shown to be deeply interconnected and often characterized by trade-offs rather than linear improvements. Improvements in access are closely linked to efficiency gains, as digital platforms reduce transaction costs and expand service availability. However, these benefits are unevenly distributed, giving rise to the "access paradox," where increased availability does not necessarily translate into equitable access. Similarly, while digital platforms enhance transparency through open data initiatives and real-time information disclosure, the study identifies the phenomenon of "opaque transparency," in which data is technically available but lacks usability and interpretability. This finding challenges the assumption that transparency automatically leads to accountability and underscores the importance of data quality, accessibility, and user capacity. Efficiency outcomes also present a complex picture. Although digital platforms enable automation and cost reduction, many initiatives remain limited to incremental improvements rather than transformative change (Bonnet & Westerman, 2021; Chowdhury, 2024). The persistence of fragmented systems suggests that efficiency gains are often constrained by institutional and structural limitations, reinforcing the need for process re-engineering rather than mere digitization.

A central insight emerging from this study is the existence of a "maturity gap" between the theoretical potential of digital government and its practical implementation. While models such as "government as a platform" emphasize integration, interoperability, and user-centered design, many governments continue to operate within fragmented and partially digitized systems. This gap reflects the broader challenges of translating technological capabilities into institutional transformation. Moreover, the findings highlight significant contextual variation across countries and governance systems. Differences in infrastructure, regulatory environments, and institutional capacity lead to diverse adoption trajectories and outcomes (Mahmood & Miah, 2022; Omweri, 2024). This reinforces the argument that digital government should be understood as a context-dependent process rather than a universal model. Overall, the study demonstrates that digital platform adoption in e-government is a complex, multi-level phenomenon shaped by the interaction of technological, institutional, and socio-political factors, requiring integrated and context-sensitive approaches to achieve meaningful and sustainable outcomes.

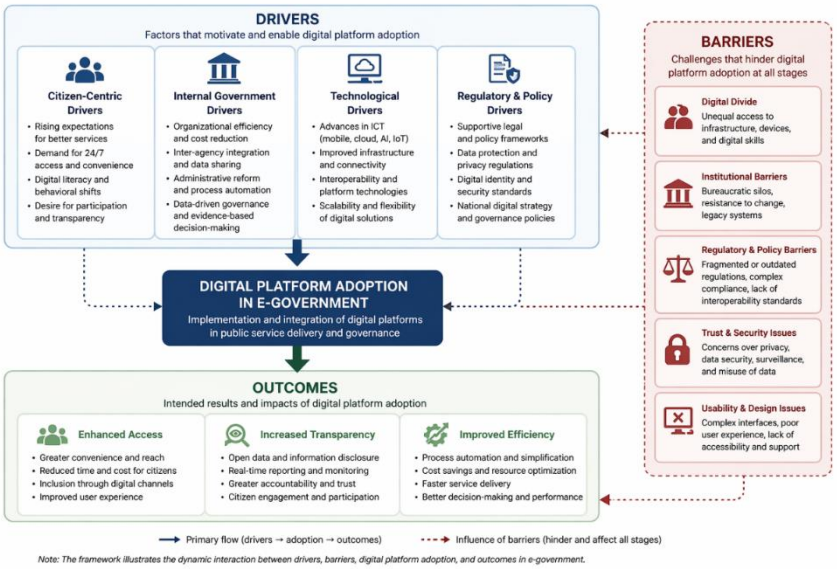


Figure 2. Conceptual framework of digital platform adoption in e-government: drivers, barriers, and outcomes

Source: Authors' conceptualization based on thematic analysis.

The framework highlights the dynamic interaction between technological, institutional, and socio-political factors in shaping digital government outcomes.

CONCLUSION

This literature review effectively brought together disparate parts of the e-government adoption phenomenon and finally came to the consensus that viewing the whole situation from an integrated and multi-level theoretical perspective gives the best interpretation of the process. User perceptions were clarified through micro-level technology acceptance models; however, these models were of little use if not coupled with meso-level institutional theories which disclosed that adoption was mainly due to the legitimacy-seeking isomorphic pressures, and macro-level socio-technical and diffusion theories that talked about the need for joint optimization of technology and social systems and the knowing inequitable spread. The adoption of digital platforms was a result of a combination of various factors such as customer-focused expectations, internal organizational efficiency, technological capability, and political support, but at the same time, there were significant barriers caused by digital divides, entrenched institutional obstacles, legal inconsistency, lack of trust, and poor design that hindered the adoption process. The outcome analysis showed a complicated situation: the digitized ones benefited from increased access but at the same time the less fortunate ones fell further behind, thus producing an "access paradox"; transparency was sometimes accomplished in a technical sense but then turned into "opaque transparency" due to the lack of usable supervision; and the higher productivity gained by the automated transactions was visible but many projects ended up being just "islands of automation" with no transformative back-office re-engineering done. In the end, the synergistic goals of access, transparency, and efficiency were confirmed to be a complex socio-technical and political struggle with the emergence of a large gap in maturity between basic digitization and the realization of true platform-based integration along with the existence of different contexts around the world.

Policy Implications

In order to close the gap between ambition and outcome, service design should be holistic and user-centric, thus, becoming the priority of policymakers and public managers. This means not only the redesign of the services around the citizens' life events but also the getting rid of all the silos through integration, mandatory user testing with various groups, compliance with accessibility standards (for instance: WCAG), and finally the adoption of agile, iterative development methods. Moreover, it is a must to invest in digital inclusion as if it is a core mandate. Policy-makers have to set aside funds for the activities like digital literacy programs and subsidized connectivity and devices, and also for creating a nation-wide network of supported digital access so that no one is left behind in terms of access. At the same time, building up the institutional capacity is of great importance and this should happen through the establishment of the so-called digital service teams, a culture of innovation and collaboration, and the continuous upskilling of the civil service which is focused on the areas of digital, data and design competencies. Also, the establishment of a strong and adaptive legal and governance framework is of utmost significance. This means the laws need to be updated to make digital identity and transactions possible, and at the same time the ethical guidelines for data use and AI need to be very clear and the governance structures that will control the balance of innovation with accountability, security, and privacy protection need to be set up.

Limitations of the Review

There is a set of limitations that are unavoidable and the review accepts them. The scope that was defined in the review, which is about G2C literature from 2010 to 2024, has certainly omitted important insights from earlier foundational works and parallel developments in G2B and G2G digitalization that indirectly affect citizen services. Furthermore, there is a risk of publication bias, since the review draws mainly from a synthesis of published academic and institutional literature, which may have a lesser representation of implementation failures, non-Western viewpoints, and critical grassroots approaches. However, the biggest limitation of all is that the digital government sector is very soon characterized by a change in the course of technology and policy. The fast-growing development of generative AI, quantum computing, and governance challenges that are related means that some conclusions will need to be revised quickly as new evidence and cases come.

Agenda for Future Research

Longitudinal Impact Studies: The demand for longitudinal mixed-methods research that would keep track of the digital platforms´ sustained impact during a long period of time is quite urgent. Research should not just focus on metrics of early adoption but also investigate long-term effects on institutional practice, relationships between citizens and the state and the dynamics of trust, along with social outcomes such as equity and cohesion.

AI and Algorithmic Governance: Interdisciplinary research on governance, ethics, and impacts of AI and algorithmic decision-making in public service delivery is undoubtedly needed, however, it should not just be any research; it needs to be extensive. Among those mentioned, the main issues will be those of explaining and making the algorithm publicly known, removing bias, having standards for accountability in automated decisions, and knowing the public's perception of the fairness of the algorithms in the most sensitive areas such as social welfare, law enforcement, and regulatory compliance.

Specific Adoption Pathways by Context: It will be necessary to conduct further research that would result in the development and experimentation of the digital government acceptance models that are more advanced and that factor in very diverse conditions. Such models would have to look into the "leapfrogging" tactics for less developed countries, the political economy of digital changeover in authoritarian and quasi-democratic systems, and the specific barriers to digital integration in federal or heavily de-centralized governance situations.

Measuring Public Value and Transformation: The metric and methodology arts will be required for the digital government realm flow with new types of the public benefit'e and transformative effects' measurement and evaluation. Thus, it would include putting a value on the invisible benefits of elevated transparency and confidence, measuring the effects of process re-engineering in areas other than cost savings, and looking into the democratic consequences of the governance that is based on platforms.

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