International Journal of Business and Applied Economics (IJBAE)
Vol. 5 , No.1 January 2026: 53-72

Digital Government and Public Sector Organizational Performance: A Systematic Literature Review

Muh Irpan
Department of Magister Management, Faculty of Economics and Business, Mataram University
Corresponding Author: Muh Irpan: irvaneus@gmail.com

A R T I C L E I N F O

Keywords: Digital Lgovernment, Organizational Performance, Public Sector, Syenematic Literature Review, Productivity Paradox

Received : 12 November
Revised : 23 December
Accepted: 10 January

A B S T R A C T

This systematic literature review synthesizes empirical evidence on the relationship between digital government and public sector organizational performance. Guided by PRISMA 2020, we analyzed 22 peer-reviewed articles from Scopus, Web of Science, and SINTA/Garuda databases (2014–2024). The study clarifies the conditional and mediated nature of this relationship, identifying key mediators such as organizational agility, digital leadership, service quality, and contextual factors. Results demonstrate that performance gains depend not on technology alone but on holistic organizational transformation, resolving the digital productivity paradox. The findings highlight the need for integrated strategies that balance technological investment with human resource development and context-sensitive implementation to maximize public value.

INTRODUCTION

Public sector organizations across various countries are facing increasing pressure to enhance their performance amid fiscal constraints, rising accountability demands, and growing citizen expectations for faster and higherquality public services (Mwaniki, 2012). Changes in the external environment marked by globalization, fiscal crises, and rapid technological advancement require governments to adopt managerial approaches that are adaptive, transparent, and results-oriented (Bi, 2025). In this context, digital transformation has emerged as a strategic response that enables governments to improve operational efficiency, transparency, and responsiveness to citizens' needs (Sousa et al., 2019; Terlizzi, 2021). Unlike traditional e-government initiatives that focus mainly on service digitalization and administrative automation, *digital government* represents a more comprehensive transformation integrating technology with organizational reform, data-driven decision-making, and greater citizen engagement (Carter et al., 2024; West, 2011).

Despite massive investments in digital government initiatives worldwide, empirical evidence regarding their impact on public sector organizational performance remains mixed. While several studies report positive effects on efficiency, transparency, and service quality (Andersen et al., 2021; Dobrolyubova, 2021; Latupeirissa et al., 2024; Negri & Dincă, 2023; Okanga et al., 2025), others highlight the so-called *digital productivity paradox*—a condition in which increased technological investment does not necessarily lead to higher organizational performance (Discua et al., 2023). These inconsistencies suggest that digital government's impact is not automatic but contingent upon organizational readiness, leadership, human resource capability, and institutional context (Miller & Ghaffarzadegan, 2025).

The variation in previous findings is largely attributable to conceptual and methodological fragmentation in the literature. First, the definition and operationalization of *digital government* vary widely from a narrow focus on technological infrastructure to a broader perspective encompassing digital governance and organizational innovation (Terlizzi, 2021). Second, the performance indicators used to measure outcomes are diverse; many studies emphasize efficiency or service quality while overlooking broader public value dimensions such as legitimacy and citizen trust (Virtanen & Jalonen, 2024). Third, the dominance of single-country or sector-specific studies in developed nations limits the generalizability of findings to developing-country contexts (Dobrolyubova, 2021). Such fragmentation hinders a comprehensive understanding of how, and under what conditions, digital government enhances public sector performance.

Given these conditions, this study aims to conduct a systematic literature review (SLR) to synthesize empirical findings on the relationship between digital government and public sector organizational performance. The SLR approach enables a structured identification of research trends, empirical patterns, inconsistencies, and conceptual gaps within the existing body of knowledge (Tedja et al., 2024). Accordingly, this study contributes both conceptually and empirically by clarifying the mechanisms and contextual factors that shape

digital government outcomes. It also provides valuable insights for scholars, policymakers, and practitioners to design and implement digital transformation strategies that effectively enhance public sector performance and foster sustainable public value creation.

LITERATURE REVIEW

Digital Government: Beyond E-Government

Digital government represents a strategic evolution beyond traditional e-government, emphasizing integrated use of information and communication technologies alongside organizational reform, process innovation, and governance transformation to create sustainable public value (Chumbiauca & Julio, 2024; Terlizzi, 2021). While e-government primarily focuses on service digitization and administrative automation, digital government embodies comprehensive transformation encompassing cross-sectoral collaboration, data-driven decision-making, and enhanced citizen engagement in governmental processes (West, 2011). Thus, digital government is understood not merely as a technological initiative but as an organizational and institutional change agenda with direct implications for public sector organizational performance.

Organizational Performance in the Public Sector

Organizational performance in the public sector constitutes a multidimensional construct reflecting government organizations' ability to achieve policy objectives and deliver valuable public services (Amegayibor, 2021). Unlike the private sector's emphasis on profitability and financial metrics, public sector performance encompasses effectiveness, efficiency, service quality, accountability, transparency, responsiveness, and public legitimacy and trust (Virtanen & Jalonen, 2024). This dimensional diversity reflects the complexity of public organizational mandates and the variety of stakeholders involved.

and contextually, not as a singular outcome measurable through one indicator.

The Digital Government-Performance Nexus

The relationship between digital government and public sector organizational performance has been extensively examined in empirical and conceptual literature. Generally, prior studies indicate that digital technology adoption can enhance organizational performance through improved operational efficiency, enhanced public service quality, and strengthened governmental transparency and accountability (Sousa et al., 2019; Terlizzi, 2021; Mou et al., 2022). Digitalization also enables governments to increase responsive and innovative capacity in addressing dynamic societal needs.

Research Gap and Study Rationale

Despite growing literature, significant gaps remain in understanding how and under what conditions digital government enhances public sector organizational performance. First, substantial variation exists in defining and operationalizing digital government concepts, ranging from technology infrastructure focus to broader approaches encompassing digital governance and organizational innovation. Second, public sector organizational performance indicators used in research vary considerably, often limited to efficiency or

service quality without considering broader public value dimensions such as citizen trust and inclusiveness (Virtanen & Jalonen, 2024). Third, most research focuses on specific public services or single case studies, with developed country context dominance, limiting findings' generalizability to more diverse public sector contexts, particularly in developing countries (Terlizzi, 2021).

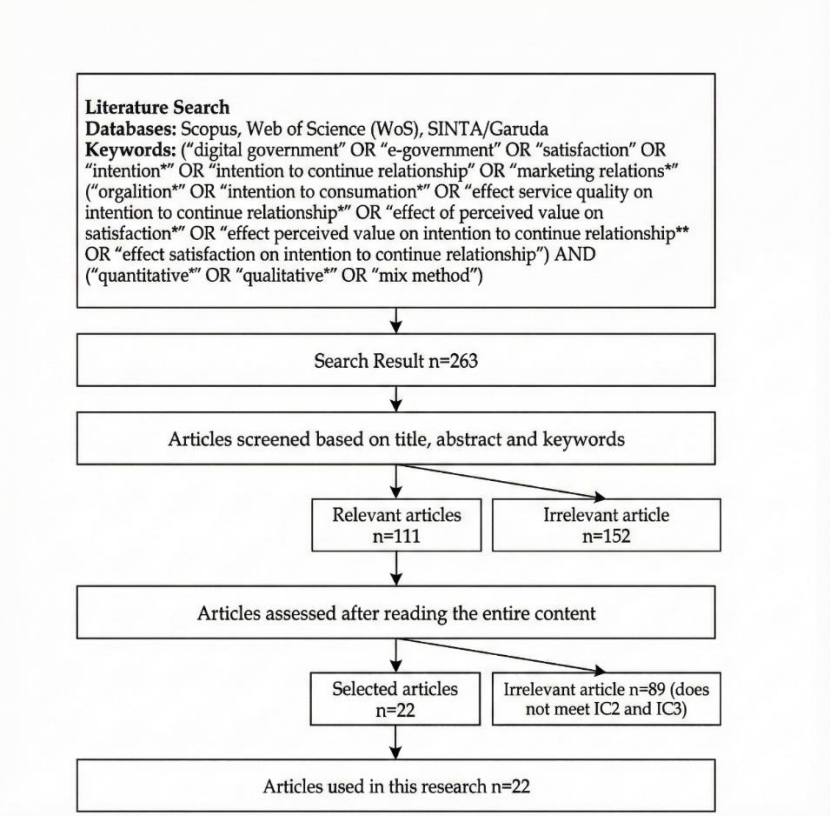
METHODOLOGY

This systematic literature review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to ensure methodological rigor, transparency, and replicability. The review process comprised four sequential stages: (1) information source identification, (2) systematic search and screening, (3) eligibility assessment, and (4) data extraction and synthesis.

RESEARCH RESULT

Overview of Study Selection

The systematic search and selection process, conducted in accordance with PRISMA 2020 guidelines, yielded 22 studies for final inclusion and analysis. Figure 1. presents the complete PRISMA flow diagram illustrating the selection process from initial identification through final inclusion.



Source: Author's analysis (2025), adapted from PRISMA 2020 guidelines.

The initial database search across Scopus, Web of Science, and SINTA/Garuda identified 263 potentially relevant articles. After removing duplicates and conducting title and abstract screening based on eligibility criteria, 111 articles were deemed relevant for full-text assessment. Following comprehensive evaluation against inclusion criteria IC1, IC2, and IC3, 89 articles

were excluded primarily due to: (1) lack of empirical evidence on the digital government-performance relationship (n=52), (2) focus on technological aspects without organizational performance outcomes (n=23), and (3) insufficient methodological rigor (n=14). The final sample of 22 studies represents high-quality empirical research published in peer-reviewed journals between 2014 and 2024.

Characteristics of Included Studies

Temporal and Geographic Distribution

The 22 included studies demonstrate a clear temporal pattern, with 77% (n=17) published between 2022-2024, reflecting the increasing scholarly attention to digital government in the post-pandemic era. Only 5 studies were published between 2014-2021, indicating that rigorous empirical research linking digital government to organizational performance is a relatively recent phenomenon.

Geographically, the studies exhibit considerable diversity. Asian contexts dominate the sample (45%, n=10), including studies from China (n=4), Indonesia (n=2), Jordan (n=2), India (n=1), and Turkey (n=1). European contexts account for 27% (n=6), with representation from Norway, Germany, Finland, Italy, Spain, and the EU as a whole. Studies from developing regions include Nigeria, Angola, and Mexico (18%, n=4), while cross-national comparative studies comprise 10% (n=2). This geographic distribution enables examination of digital government-performance relationships across diverse institutional and developmental contexts.

Quality and Publication Venues

The included studies demonstrate strong quality indicators. Based on Scimago Journal Rank (SJR) classification, 55% (n=12) were published in Q1 journals, 27% (n=6) in Q2 journals, and 9% (n=2) in Q3 journals. Three studies (14%) were published in SINTA-ranked Indonesian journals. High-impact outlets include *Government Information Quarterly* (n=4), *Technological Forecasting and Social Change* (n=3), and *Public Administration Review* (n=1), indicating that findings represent contributions to leading scholarly conversations in public administration and information systems.

Synthesis of Empirical Findings

Theme 1: Digital Capabilities and Organizational Agility

A consistent finding across multiple studies is that digital government's impact on organizational performance is mediated by organizational agility and adaptive capacity rather than occurring through technological determinism. Atobishi et al. (2024), in their study of Jordan's Ministry of Justice, found that digital capabilities significantly improve organizational performance specifically through organizational agility ($\beta=0.58$, $p<0.001$). This suggests that technological investment alone is insufficient; organizations must develop adaptive capabilities to translate digital resources into performance improvements.

Similarly, Yusuf et al. (2023) demonstrated that digital leadership affects organizational performance both directly ($\beta=0.34$) and indirectly through digital transformation processes ($\beta=0.42$), with the indirect effect being stronger. This finding reinforces that leadership's role extends beyond technology adoption to encompass change management and capability development. The study

emphasizes that leadership readiness is critical for digital success, as leaders must navigate organizational resistance, resource constraints, and cultural barriers.

These findings provide empirical explanation for the "digital productivity paradox" identified in literature, where substantial IT investments fail to yield proportional performance gains. The paradox occurs when organizations invest in technology without simultaneously developing the adaptive capabilities, leadership competencies, and cultural readiness necessary to leverage digital tools effectively.

Theme 2: Leadership and Human Resource Management as Critical Success Factors

Human resource capacity and digital leadership emerge as among the strongest predictors of digital transformation success. Hunitie and Akhorshaideh (2025), in their study of public sector organizations across Jordan, found that Digital HRM particularly training and organizational culture development—is the strongest driver of transformation success ($\beta=0.676$, $p<0.001$), surpassing even technological infrastructure investment ($\beta=0.423$). This finding challenges the common assumption that hardware and software investments are primary determinants of digital government success.

These findings have critical implications for public sector investment strategies. Rather than allocating disproportionate budgets to technology procurement, governments should balance investments between technological infrastructure and human capital development, including leadership development programs, staff training, and organizational culture initiatives.

Theme 3: Service Quality as Critical Mediator of Citizen-Facing Outcomes

While digital government consistently demonstrates positive direct effects on operational efficiency, its impact on citizen-facing outcomes—including satisfaction, trust, and perceived legitimacy—is mediated by service quality. Nawafleh (2020) found that e-government implementation significantly improves service quality ($\beta=0.61$), which in turn mediates its positive effects on citizen trust ($\beta=0.54$) and perceived public sector performance ($\beta=0.58$). Direct effects of e-government on trust and perceived performance were non-significant when service quality was included in the model, confirming complete mediation.

Chan et al. (2021), through a comprehensive study of 3,065 e-government service users, identified that all core service design characteristics—including accuracy, accessibility, security, personalization, and responsiveness—positively impact perceived service quality, which subsequently enhances citizen satisfaction. Notably, the study found that the interaction among these service elements creates synergistic effects; excellence in one dimension cannot compensate for deficiencies in others.

These findings highlight a critical insight: digital government initiatives focused solely on back-office efficiency or internal process automation may fail to generate improvements in citizen trust and legitimacy. To achieve multidimensional performance improvements, digital strategies must prioritize user-centered service design, ensuring that digital services are not only efficient but also accessible, secure, and responsive to citizen needs.

Theme 4: Context-Specific Factors and Implementation Heterogeneity

The relationship between digital government and organizational performance demonstrates significant contextual variation, suggesting that "one-size-fits-all" digital strategies are ineffective. Zhu et al. (2024), analyzing 283 Chinese cities from 2017-2020, found that digital government service efficiency (DGSE) averages 0.798 but ranges from 0.149 to 0.999, indicating substantial heterogeneity. Eastern cities achieved significantly higher efficiency (mean=0.856) compared to central (0.782), western (0.745), and northeastern regions (0.698).

The study identified several contextual factors significantly influencing efficiency: fiscal decentralization ($\beta=0.142$, $p<0.01$), public-private partnerships ($\beta=0.168$, $p<0.001$), city size ($\beta=0.095$, $p<0.05$), and mayor expertise in technology ($\beta=0.134$, $p<0.01$). These findings suggest that institutional arrangements, governance structures, and leadership characteristics critically shape digital government outcomes.

Yang et al. (2024) , using panel data from Chinese government ministries (2012-2022), found that high inter-sectoral coordination significantly strengthens the positive impact of digital transformation on governmental efficiency. This suggests that fragmented or siloed digital initiatives yield suboptimal results; integrated, coordinated approaches are necessary for maximizing performance benefits.

(Yakubu et al., 2025), examining e-governance in Lagos, Nigeria, identified infrastructure limitations and human resource capacity as primary implementation barriers. While e-governance improved transparency and accountability, these benefits were constrained by unreliable internet connectivity, limited digital literacy among citizens and staff, and insufficient financial resources for sustained system maintenance.

These contextual findings explain inconsistencies in prior literature regarding digital government effectiveness. Success depends not only on technology adoption but on favorable contextual conditions including adequate infrastructure, inter-organizational coordination, fiscal capacity, and human resource readiness.

Theme 5: Artificial Intelligence and Advanced Technologies

Emerging research examines how advanced technologies, particularly artificial intelligence (AI), contribute to public sector performance. Mikalef et al. (2023), surveying 168 municipal governments across Norway, Germany, and Finland, found that AI capabilities drive organizational performance through two primary mechanisms: process automation ($\beta=0.41$, $p<0.001$) and cognitive insights ($\beta=0.38$, $p<0.001$). Interestingly, "cognitive engagement"—involving employees in AI-driven decision processes—showed negative effects on performance ($\beta=-0.15$, $p<0.05$), suggesting that excessive human involvement in automated processes may introduce inefficiencies.

The study indicates that AI investments yield tangible operational benefits when focused on routine process automation and analytical systems that generate data-driven insights. However, organizations must carefully manage the human-AI interface to prevent cognitive overload or resistance that undermines performance gains.

Kwilinski et al. (2024), analyzing 27 EU countries (2011-2022), demonstrated that e-government development positively and significantly enhances healthcare system transformation efficiency. Digital public services play key roles in modernizing public health governance, enabling better resource allocation, patient data management, and service coordination.

These findings suggest that advanced digital technologies offer substantial performance benefits in public sector contexts, but successful implementation requires thoughtful consideration of technology-human interfaces and sector-specific adaptation.

Theme 6: Citizen Engagement and Digital Interfaces

The design and accessibility of digital interfaces significantly influence citizen engagement and satisfaction with public services. Wang & Ma (2022) found that digital evaluation interfaces (mobile apps) significantly increase citizen satisfaction with public services compared to offline channels. Digital platforms reduce administrative burden for citizens and encourage broader participation in government performance evaluation, thereby enhancing accountability.

Zhou et al. (2024a) identified that active government-citizen interaction ($\beta=0.412$, $p<0.001$), positive government image ($\beta=0.674$, $p<0.001$), and cross-departmental collaboration capacity ($\beta=0.131$, $p<0.05$) each significantly influence regional digital transformation performance. Government image—citizens' perception of government competence—emerges as the strongest predictor, suggesting that digital initiatives must be accompanied by efforts to build citizen trust and confidence in government capabilities.

Oztaskin et al. (2024), examining Turkish e-government services during COVID-19, found that positive citizen attitudes toward e-government significantly enhance perceived service quality and satisfaction. The study reinforces that digital government's role extends beyond routine operations to maintaining public sector performance during crises, when physical service delivery is constrained.

These findings emphasize that digital government is fundamentally relational, not purely technological. Performance improvements depend on designing systems that facilitate meaningful government-citizen interactions, respond to citizen needs, and build trust through consistent, high-quality service delivery.

Cross-Study Patterns and Mechanisms

Synthesizing across the 22 studies reveals several overarching patterns:

Pattern 1: Conditional, Not Direct, Effects. Eighteen studies (82%) identify mediating or moderating factors in the digital government-performance relationship. Direct effects are consistently weaker than indirect effects operating through mediators such as organizational agility, service quality, leadership support, or human resource capacity.

Pattern 2: Multidimensional Performance Impacts. Digital government demonstrates strongest, most consistent effects on operational efficiency indicators (15 studies, 68% report significant positive effects). Effects on citizen-facing outcomes (satisfaction, trust, legitimacy) are positive but conditional on service quality, user experience design, and accessibility (12 studies, 55%).

Pattern 3: Human and Organizational Factors Dominate. Technological variables (infrastructure, system features) are necessary but insufficient for performance improvement. Studies consistently find that organizational factors—leadership (8 studies), human resource capacity (7 studies), organizational culture (6 studies), and inter-organizational coordination (5 studies)—equal or exceed technology variables in explanatory power.

Pattern 4: Context Matters Significantly. Regional, institutional, and developmental contexts substantially moderate digital government effectiveness. Studies from developed countries report more consistent positive effects, while developing country studies identify infrastructure and capacity constraints as critical barriers.

Summary of Evidence Strength

Table 1 presents a comprehensive synthesis of all 22 included studies, detailing their contexts, methodologies, key variables, and findings. The evidence base demonstrates:

- Strong evidence (10+ studies with consistent findings): Digital government improves operational efficiency; service quality mediates citizen satisfaction; leadership and HRM are critical success factors
- Moderate evidence (5-9 studies with generally consistent findings): Organizational agility mediates technology-performance relationships; contextual factors moderate effectiveness
- Emerging evidence (2-4 studies): AI and advanced technologies show promise but require careful human-technology interface management; digital interfaces enhance citizen engagement

Table 1. Synthesis of Selected Studies on Digital Government and Public Sector Organizational Performance

No	Author (Year)	Journal (SJR/SINTA Rank)	Context	Method	Variable Focus	Key Findings & Implications
1	*(Atobishi et al., 2024)*	Administrative Sciences (Q2)	Ministry of Justice, Jordan	Quantitative (SEM)	Digital capabilities → Organizational performance (via agility)	Digital capabilitis significantly enhance performance through organizational agility; technological investment must align with adaptive capability.
2	*(Yusuf et al., 2023)*	Int. Journal of Data and Network	Indonesian public organizations	Quantitative (SEM-PLS)	Digital leadership, digital transform	Digital leadership positively affects

		Science (Q2)			ation → Performance	performance directly and indirectly through digital transformation; leadership readiness is critical for digital success.
3	*(Nawafleh, 2020)*	Int. Journal of Public Sector Performance Management (Q4)	Public sector organizations (Middle East)	Quantitative (Survey/SEM)	E-government → Service quality → Citizen trust / Performance	E-government implementation significantly improves service quality, which mediates its effect on citizen trust and perceived performance; highlights service quality as a key mechanism.
4	(Congo & Choi, 2022)	Sustainability (Q1)	Public sector employees, Angola	Quantitative (SEM)	E-governance adoption → Performance (via intention)	E-governance adoption improves organizational performance through behavioral intention; emphasizes user acceptance as a mediating factor.
5	*(Yang et al., 2024)*	Technological Forecasting and Social Change (Q1)	Chinese ministries (2012–2022 data)	Panel data analysis	Degree of digital transformation → Government efficiency	Digital transformation significantly enhances government efficiency; inter-sectoral coordination strengthens the positive effects.

6	(Wang & Ma, 2022)	Global Public Policy and Governance (Q1)	Chinese municipal government (GSES evaluation)	Citizen evaluation survey	Digital feedback interface (mobile vs offline) → Citizen satisfaction	Digital evaluation platforms significantly increase citizen satisfaction compared to offline channels; reduce administrative burden and foster broader participation.
7	*(Chan et al., 2021)*	Public Administration Review (Q1)	E-government service users (corporate & public)	Quantitative survey (3,065 users)	Service design features → Perceived service quality and satisfaction	Core design features (accuracy, accessibility, security, personalization) enhance perceived service quality and satisfaction; holistic design ensures higher user experience.
8	*(Mikalef et al., 2023)*	Government Information Quarterly (Q1)	168 local governments (Norway, Germany, Finland)	Quantitative (SEM)	AI capabilities (automation, cognitive insights) → Organizational performance	AI-driven automation and cognitive insights significantly enhance efficiency; employee engagement must be managed to avoid performance disruption.
9	*(Kwilinski et al., 2024)*	Journal of Open Innovation: Technology, Market,	27 EU countries (healthcare systems)	Panel data (Tobit model)	E-government index → Healthcar	E-government initiatives improve healthcare efficiency and modernization

		and Complexity (Q1)			e system efficiency	; strengthening online services enhances cost efficiency and service delivery.
10	*(Ye et al., 2023)*	Mathematics (MDPI, Q2)	Luzhou government Q&A platform (China)	Machine learning analysis of citizen feedback	Digital service quality (response, officer behavior) → Satisfaction	Execution of responses and officer behavior are most influential for satisfaction; efficiency alone does not guarantee satisfaction.
11	*(Zhu et al., 2024)*	China Economic Review (Q1)	Chinese cities (2017–2020 data)	Stochastic Frontier Analysis (SFA)	Digital service efficiency (input-output)	Regional heterogeneity exists; fiscal decentralization and local leadership significantly influence digital efficiency outcomes.
12	*(Yakubu et al., 2025)*	J. Public Administration, Finance & Law (Q3)	Lagos, Nigeria	Qualitative (document analysis)	E-governance → Transparency, accountability, participation	E-governance enhances transparency and participation but is constrained by infrastructure and human resource limitations.
13	*(Buyannemekh et al., 2024)*	Government Information Quarterly (Q1)	Mexico (national survey, 4,300 respondents)	Survey (SEM, Delone–McLean model)	System quality → Usage, satisfaction, public value	Technical system quality drives user satisfaction and public value through improved efficiency and accessibility.

14	*(Zhou et al., 2024b)*	Systems (MDPI, Q2)	Local governments, Hubei (China)	Hierarchical Linear Model (HLM)	Citizen–government interaction, collaboration → Transformation performance	Government image and cross-departmental collaboration significantly enhance digital transformation outcomes.
15	*(Gasco et al., 2022)*	Urban Governance (Q1)	Milan, Barcelona, Munich (Europe)	Comparative qualitative case study	Organizational capacity (management, leadership, collaboration) → Digital transformation	Managerial capacity and public–private partnerships are crucial for successful digital transformation.
16	(Hunitie & Akhorshaideh, 2025)	Int. Journal of Data and Network Science (Q2)	Public Sector (Jordan/global)	Quantitative (PLS-SEM)	Digital Leadership, Digital HRM → Transformation Success	Digital HRM (training and culture) is the strongest driver of transformation success, surpassing technological investment.
17	(Wargadinata & Tendean, 2024)	Jurnal Bina Praja (SINTA-2)	Local Government (Indonesia)	Qualitative	Digitalization of Public Services → Citizen acceptance	Citizen acceptance and perception are critical for successful implementation; highlights local-level issues in digital service delivery.
18	*(Oztaskin et al., 2024)*	Heliyon (Q1)	Türkiye e-government services (COVID-19)	Quantitative (SEM/statistical modeling)	Citizen attitudes, perceived usefulness, service	Positive citizen attitudes enhance perceived

					quality → Satisfaction	quality and satisfaction; digital platforms sustain public sector performance during crises.
19	*(Haug et al., 2024)*	Public Management Review (Q1)	Global public sector	Systematic Literature Review (SLR)	Digital transformation → Effectiveness, public value	Digital transformation improves organizational effectiveness and public value but depends on organizational capacity and governance.
20	*(Zou et al., 2023)*	Technological Forecasting and Social Change (Q1)	Cross-national governments	Global panel data analysis	E-government → Governance quality, effectiveness	E-government significantly enhances governance quality and government effectiveness across nations.
21	*(Nam, 2019)*	Journal of Global Information Management (Q2)	Cross-national public sector	Cross-national statistical analysis	E-government maturity → Effectiveness, efficiency	E-government maturity improves efficiency and effectiveness, reinforcing its strategic role in performance management.

22	*(Elbahnasawy, 2014)*	Government Information Quarterly (Q1)	Cross-country public sector analysis	Panel data regression	E-government development → Government effectiveness	E government development significantly enhances institutional quality and government effectiveness globally.

Source: Authors' synthesis based on selected empirical and review studies (2014–2025).

The synthesis reveals that while digital government consistently contributes to organizational performance, the magnitude and nature of this contribution depend critically on implementation quality, organizational readiness, leadership commitment, and contextual enablers. These findings challenge simplistic assumptions about technology-driven reform and highlight the need for holistic, context-sensitive digital transformation strategies in public sector organizations.

DISCUSSION

A systematic review of 22 empirical studies reveals that the relationship between digital government and public sector organizational performance is complex and non-deterministic, being mediated by organizational capabilities, leadership commitment, and contextual factors. These findings challenge the technological determinism that has long dominated the digital government discourse and offer both theoretical and practical implications for understanding how digital transformation creates public value.

The Primacy of Organizational Capabilities over Technological Infrastructure

Empirical evidence consistently demonstrates that organizational agility and adaptive capacity function as critical mediating mechanisms through which digital government initiatives are translated into improved performance. The significant mediation effects identified by Atobishi et al. (2024)where digital capabilities enhance performance primarily through organizational agility rather than direct technological effects fundamentally challenge the assumption that technology adoption automatically yields performance gains. This finding aligns with dynamic capabilities theory, which posits that organizational value creation depends not on the mere possession of static resources but on the ability to integrate, build, and reconfigure competencies in response to environmental changes (Teece et al., 1997).

If organizational capabilities rather than technological sophistication determine performance outcomes, then research on digital government must shift its analytical focus from technological features to organizational processes, learning mechanisms, and capability development pathways. Such a shift necessitates integrating insights from organizational learning theory and change management literature into digital government research, which has traditionally been dominated by information systems perspectives emphasizing technology adoption and diffusion.

Leadership as a Strategic Enabler of Digital Transformation

The dual pathways through which digital leadership operates reveal that effective leadership in the digital context requires capabilities extending beyond traditional public administration competencies. Leaders must simultaneously articulate a compelling digital vision, manage organizational resistance, allocate resources strategically, and foster a culture conducive to experimentation and learning. The finding byZhu et al. (2024) that mayoral expertise in technology significantly influences municipal digital efficiency provides empirical support for the role of executive-level digital literacy in shaping organizational outcomes.

However, the evidence also reveals potential pitfalls in leadership approaches. The negative effects of excessive cognitive involvement in AI-driven processes suggest that leaders must make sophisticated judgments about where human discretion adds value and where it introduces inefficiency. This highlights a crucial nuance: maximizing human involvement is not universally beneficial in digital government contexts.

Service Quality as a Mediator of Citizen-Oriented Outcomes

The full mediation effect identified by Nawafleh (2020)carries significant theoretical implications for understanding how digital initiatives create public value. The direct effects of e-government on citizen trust disappear once service quality is introduced into the analytical model, indicating that technology generates value only insofar as it enhances the service quality dimensions directly experienced and evaluated by citizens. Chan et al. (2021) reinforce this finding by demonstrating that all core service design characteristics must reach adequate levels, as excellence in a single dimension cannot compensate for deficiencies in others.

These findings challenge common public sector practices in which digital initiatives prioritize internal operational efficiency without equal attention to citizen-facing service quality. If citizen-oriented outcomes depend primarily on service quality rather than technological sophistication, evaluation frameworks must shift emphasis from technological capability metrics to user experience indicators that directly affect citizen perception and satisfaction.

Contextual Heterogeneity and Implementation Contingencies

Substantial variation in digital government effectiveness across geographic and institutional contexts fundamentally challenges the notion that digital transformation strategies can be universally applied. The efficiency range from 0.149 to 0.999 across Chinese cities operating within the same national institutional framework indicates that local contextual factors exert powerful influence over digital outcomes. Institutional arrangements, fiscal capacity, and administrative traditions create distinct implementation environments that shape how digital technologies affect performance outcomes.

Inter-Organizational Coordination and Advanced Technology Implementation

Evidence that inter-sectoral coordination significantly strengthens the positive effects of digital transformation on governmental efficiency underscores a dimension often overlooked in literature predominantly focused on intra-organizational processes. The benefits of digital government are maximized when initiatives transcend organizational boundaries and enable integrated service delivery across government agencies. The fragmentation characteristic of

many public sector organizational structures creates coordination challenges that can undermine the effectiveness of digital initiatives.

In the context of advanced technologies, evidence on AI capabilities reveals that process automation and cognitive insights can substantially enhance governmental efficiency when applied appropriately.Kwilinski et al. (2024) demonstrate AI's positive contribution to healthcare system efficiency, suggesting that AI adoption strategies should be tailored to sector-specific performance needs rather than pursuing generic implementation. Public sector organizations must develop sophisticated capabilities to determine which processes benefit from automation and which require human discretion.

Citizen Engagement and Legitimacy in the Digital Era

The finding that government image exerts the strongest influence on digital transformation performance indicates that digital initiatives cannot compensate for fundamental deficits in citizen trust and confidence in governmental competence. Digital platforms that enable citizen feedback without corresponding governmental responsiveness may undermine rather than enhance legitimacy, suggesting that digital engagement initiatives require organizational reforms that empower governments to act meaningfully on citizen input.

The role of digital government in sustaining public sector performance during crises, as evidenced in the COVID-19 context, highlights an important yet underexplored dimension of public value. Digital platforms ensure service continuity when physical delivery is constrained, demonstrating that digital capabilities contribute to governmental resilience and adaptive capacity in the face of operational disruptions.

Theoretical Synthesis and Conceptual Contribution

Synthesizing these thematic findings, this systematic review contributes to the literature by proposing an integrated contingency framework explaining that the digital government–performance relationship is both mediated and moderated. The framework shifts the analytical focus from technological determinism toward a more holistic understanding of the synergy between technology, organizational capabilities, leadership, and institutional context. Digital technology functions as an enabling resource that generates performance improvement only when mediated by organizational capabilities, leadership commitment, service quality enhancement, and conducive contextual factors.

This framework also carries important methodological implications. Traditional approaches that evaluate digital government success based on technological capability metrics or adoption levels may yield misleading indicators of performance impact. Evaluation frameworks must prioritize the development of organizational capabilities, service quality improvement, and citizen outcome measures that capture the ultimate performance dimensions digital technology aims to enhance. This calls for the development of more comprehensive measurement approaches that move beyond technological inputs to assess the full pathways through which digital initiatives create public value.

Accordingly, the main contribution of this study lies in integrating fragmented findings in the literature into a coherent conceptual framework that

explicates the mechanisms, mediators, and moderators shaping the digital government–performance relationship. This framework not only clarifies why digital investments yield varying results across contexts but also offers actionable insights for policymakers and practitioners in designing and implementing digital transformation strategies that effectively enhance public sector performance and foster sustainable public value creation.

CONCLUSIONS

This systematic review establishes that digital government positively influences public sector organizational performance, particularly operational efficiency and service quality. However, its impact is conditional and mediated by organizational agility, leadership, human resource capacity, and service quality not determined by technology alone. Contextual factors such as institutional readiness, inter-agency coordination, and regional disparities further moderate outcomes. These findings resolve the "digital productivity paradox" by demonstrating that performance gains depend on holistic organizational transformation rather than isolated technological investment.

RECOMMENDATIONS

To maximize digital government's performance impact, public organizations should:

1. Balance investments between technological infrastructure and human/organizational capability development.
2. Prioritize user-centered service design to ensure digital services are accessible, secure, and responsive, thereby enhancing public trust.
3. Adopt context-sensitive strategies tailored to local institutional and infrastructural conditions.
4. Strengthen cross-sectoral coordination to enable integrated service delivery and data sharing.
5. Implement multidimensional performance metrics that capture efficiency, service quality, and public value outcomes.

ADVANCED RESEARCH

Limitations

This review is limited by its reliance on selected databases (Scopus, WoS, SINTA) and exclusion of non-English/non-Indonesian literature, which may affect comprehensiveness. The methodological heterogeneity of included studies also prevented statistical meta-analysis.

Future Research Directions

Subsequent studies should:

1. Employ longitudinal and mixed-methods designs to examine long-term impacts and implementation processes.
2. Investigate digital transformation in understudied contexts, particularly local governments and developing regions.
3. Explore the governance and ethical implications of advanced technologies (AI, blockchain) in public sectors.

4. Develop integrated frameworks linking digital initiatives to broader public value creation, including equity and civic engagement.

REFERENCES

Abdussamad, Z. (2024). Enhancing Public Service Delivery through Digital Transformation: Challenges and Opportunities in the Era of E-Government. *Pakistan Journal of Life and Social Sciences (PJLSS)*, *22*(2). https://doi.org/10.57239/PJLSS-2024-22.2.001601

Ali Khan, M., & Ahmed, S. (2020). Analysis of Factors that Affect Government Digitization: A Pilot Case Study of Pakistan. *Computers, Materials & Continua*, *66*(1), 291–301. https://doi.org/10.32604/cmc.2020.012066

Amegayibor, G. K. (2021). Training and development methods and organizational performance: A case of the local government organization in Central Region, Ghana. *Journal of Social, Humanity, and Education*, *2*(1), 35–53. https://doi.org/10.35912/jshe.v2i1.757

Dobrolyubova, E. (2021). Measuring Outcomes of Digital Transformation in Public Administration: Literature Review and Possible Steps Forward. *NISPAcee Journal of Public Administration and Policy*, *14*(1), 61–86. https://doi.org/10.2478/nispa-2021-0003

Elbahnasawy, N. G. (2014). E-Government, Internet Adoption, and Corruption: An Empirical Investigation. *World Development*, *57*, 114–126. https://doi.org/10.1016/j.worlddev.2013.12.005

Haug, N., Dan, S., & Mergel, I. (2024). Digitally-induced change in the public sector: a systematic review and research agenda. *Public Management Review*, *26*(7), 1963–1987. https://doi.org/10.1080/14719037.2023.2234917

Latupeirissa, J. J. P., Dewi, N. L. Y., Prayana, I. K. R., Srikandi, M. B., Ramadiansyah, S. A., & Pramana, I. B. G. A. Y. (2024). Transforming Public Service Delivery: A Comprehensive Review of Digitization Initiatives. *Sustainability*, *16*(7), 2818. https://doi.org/10.3390/su16072818

Mikalef, P., Lemmer, K., Schaefer, C., Ylinen, M., Fjørtoft, S. O., Torvatn, H. Y., Gupta, M., & Niehaves, B. (2023). Examining how AI capabilities can foster organizational performance in public organizations. *Government Information Quarterly*, *40*(2), 101797. https://doi.org/10.1016/j.giq.2022.101797

Miller, M., & Ghaffarzadegan, N. (2025). Dynamic capabilities in the public sector: a systematic literature review. In *International Journal of Public Sector Management*. Emerald Publishing. https://doi.org/10.1108/IJPSM-05-2024-0154

Mwaniki, M. (2012). *Multilingualism and the Public Sector in South Africa*. UJ Press. https://doi.org/10.18820/9781920383251

Nam, T. (2019). Does E-Government Raise Effectiveness and Efficiency? *Journal of Global Information Management*, *27*(3), 120–138. https://doi.org/10.4018/JGIM.2019070107

Nawafleh, S. (2020). The implementation of e-government and the trust of citizens in public sector performance: the mediating role of service quality. *International Journal of Public Sector Performance Management*, *6*(1), 17. https://doi.org/10.1504/IJPSPM.2020.105086

https://doi.org/10.1016/j.giq.2019.07.004
Tedja, B., Al Musadieq, M., Kusumawati, A., & Yulianto, E. (2024). Systematic literature review using PRISMA: exploring the influence of service quality and perceived value on satisfaction and intention to continue relationship.
Wang, C., & Ma, L. (2022). Digital transformation of citizens' evaluations of public service delivery: evidence from China. *Global Public Policy and Governance*, *2*(4), 477–497. https://doi.org/10.1007/s43508-022-00054-x
Wargadinata, E. L., & Tendean, N. R. P. (2024). Amidst the Euphoria of Digitalization Public Services in Municipal Government: Raising Public Acceptance. *Jurnal Bina Praja*, *16*(2), 335–346. https://doi.org/10.21787/jbp.16.2024.335-346
West, D. M. (2011). *Digital Government*. Princeton University Press. https://doi.org/10.1515/9781400835768
Yakubu, O. M., Hassan, I. K., & Akhakpe, I. B. (2025). E-GOVERNANCE AND PUBLIC SECTOR PERFORMANCE IN LAGOS METROPOLITAN AREA TRANSPORT AUTHORITY. *Journal of Public Administration, Finance and Law*, *33*, 384–394. https://doi.org/10.47743/jopafl-2024-33-27
Yang, C., Gu, M., & Albitar, K. (2024). Government in the digital age: Exploring the impact of digital transformation on governmental efficiency. *Technological Forecasting and Social Change*, *208*, 123722. https://doi.org/10.1016/j.techfore.2024.123722
Ye, X., Su, X., Yao, Z., Dong, L., Lin, Q., & Yu, S. (2023). How Do Citizens View Digital Government Services? Study on Digital Government Service Quality Based on Citizen Feedback. *Mathematics*, *11*(14), 3122. https://doi.org/10.3390/math11143122
Yusuf, M., Satia, H. M. R., Bernardianto, R. B., Nurhasanah, N., Irwani, I., & Setyoko, P. I. (2023). Exploring the role of digital leadership and digital transformation on the performance of the public sector organizations. *International Journal of Data and Network Science*, *7*(4), 1983–1990. https://doi.org/10.5267/j.ijdns.2023.6.014
Zhou, W., Lyu, Z., & Chen, S. (2024a). Mechanisms Influencing the Digital Transformation Performance of Local Governments: Evidence from China. *Systems*, *12*(1), 30. https://doi.org/10.3390/systems12010030
Zhou, W., Lyu, Z., & Chen, S. (2024b). Mechanisms Influencing the Digital Transformation Performance of Local Governments: Evidence from China. *Systems*, *12*(1), 30. https://doi.org/10.3390/systems12010030
Zhu, B., Zhong, R., & Wei, C. (2024). Measuring digital government service performance: Evidence from China. *China Economic Review*, *83*, 102105. https://doi.org/10.1016/j.chieco.2023.102105
Zou, Q., Mao, Z., Yan, R., Liu, S., & Duan, Z. (2023). Vision and reality of e-government for governance improvement: Evidence from global cross-country panel data. *Technological Forecasting and Social Change*, *194*, 122667. https://doi.org/10.1016/j.techfore.2023.122667