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Research Article

Building an Effective E-Government: Insights from the Five-Stage Model and Implications for Vietnam

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Abstract

Digital government constitutes a central pillar of Vietnam's national digital transformation agenda, aimed at improving transparency, administrative efficiency, and citizen-centred public service delivery. However, the rapid expansion of digital services has not been accompanied by sufficiently robust analytical frameworks for assessing institutional maturity, particularly at the subnational level. This study seeks to evaluate the current maturity of digital government in Vietnam and to identify the legal and institutional constraints that impede the transition from conventional e-government toward an integrated, data-driven digital government model. To achieve these aims, the research adopts a qualitative and comparative approach. It applies the five-stage e-government development model as an analytical framework, combined with systematic analysis of legal instruments, policy documents, and secondary empirical sources. This integrated method enables an assessment of both functional implementation and underlying regulatory capacity. The findings indicate that Vietnam has largely completed the stages of information provision, interaction, and transaction. Nevertheless, progress toward integration remains uneven. Persistent challenges include fragmented data governance, limited interoperability among public agencies, inconsistent legal recognition of electronic records, and weak coordination mechanisms, issues that have been further accentuated by the transition to a two-tier local government system. The study concludes that advancement toward a mature digital government requires not only technological upgrades but also coherent legal reform. Specially, strengthening data governance frameworks, establishing enforceable interoperability standards, and introducing legal performance indicators are essential to ensuring accountability, sustainability, and effective policy implementation in the next phase of digital transformation.

Keywords

Digital Government, Digital Transformation, Five-stage Model, Public Governance

1. Introduction

Digital government has become a defining paradigm in contemporary public governance, reflecting a shift from the mere digitalisation of administrative procedures toward the structural transformation of state institutions. In Vietnam, digital government has been formally identified as a central pillar of national digital transformation, alongside the digital economy and digital society, with the stated aim of enhancing transparency, administrative efficiency, and citizen-centred service

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delivery [1, 2]. From a theoretical standpoint, this transition signifies a move beyond conventional e-government models, which primarily emphasise information provision and online transactions, toward governance frameworks grounded in data integration, interoperability, and proactive service design. Accordingly, digital government is increasingly understood as an institutional and legal project, rather than a purely technological one, requiring coherent regulatory frameworks, organisational adaptation, and accountability mechanisms to generate public value [3].

Despite the adoption of extensive legal and policy instruments to support this transition, significant discrepancies persist between normative commitments and empirical implementation. On the one hand, Vietnam has established an increasingly dense regulatory framework, including the Electronic Transactions Law (2023) [4], the National Data Strategy (2024) [5], and the E-Government Development Strategy toward Digital Government [2], all of which articulate principles of interoperability, data sharing, and user-centric public services. On the other hand, empirical evidence reveals persistent fragmentation of public-sector databases, limited cross-agency coordination, inconsistent legal recognition of electronic records, and uneven administrative capacity at the local level. This divergence between das Sollen and das Sein has become more pronounced following the recent transition from a three-tier to a two-tier local government system. While administrative streamlining aims to reduce institutional overlap, it has simultaneously intensified demands on subnational authorities, many of which lack sufficient digital infrastructure, skilled personnel, and clear legal guidance. Consequently, the practical realisation of integrated digital government often falls short of statutory expectations, highlighting the need for systematic, legally grounded analysis.

Existing scholarship provides valuable conceptual tools for analysing digital government development, particularly through multi-stage maturity models. The four-stage framework proposed by Layne and Lee (2001) [6] and the five-stage model developed by Mousavi et al. (2010) [7] have been widely applied to capture incremental transitions from basic online presence to integrated service delivery. Subsequent studies suggest that such models are especially suitable for developing and transitional contexts, where institutional capacity and digital readiness vary significantly across administrative units [8]. Nevertheless, global assessment instruments, including the UN E-Government Development Index [9] and the OECD Digital Government Index [10], remain predominantly national in scope and offer limited insight into subnational legal and institutional readiness. Within the Vietnamese literature, research has largely focused on policy design, technological deployment, or user satisfaction, while the legal foundations of data governance, interoperability, and administrative accountability have received comparatively limited attention. Addressing this gap, the present study applies the five-stage model as an analytical framework to assess Vietnam's digital government maturity and to identify legal and institutional constraints that hinder progression toward integration and transformation. In doing so, it seeks to contribute to digital government scholarship by bridging doctrinal legal analysis and empirical governance practice, while offering policy-relevant insights for strengthening accountability and institutional capacity in the digital era. Against this theoretical and empirical backdrop, the present study is guided by the following research questions:

1. What stage of digital government maturity has Vietnam currently achieved?

2. Which legal and institutional barriers hinder Vietnam's transition toward integrated digital government?

2. Methods

This study adopts a qualitative and analytical research design to examine the maturity of digital government in Vietnam through a legal–institutional lens. The methodological approach is structured to capture both the normative framework governing digital government and its practical implementation across public administration. Accordingly, the research integrates doctrinal legal analysis with comparative and interpretive methods to ensure analytical depth and contextual accuracy as the concept by Mousavi (2010) [7] in Figure 1. First, a systematic analysis of legal and policy instruments was conducted. This phase focused on primary normative sources regulating digital government, electronic transactions, data governance, and administrative organisation. Relevant statutes, governmental decrees, policy strategies, and official guidelines were examined to identify underlying principles, regulatory objectives, and institutional responsibilities. Particular attention was paid to provisions concerning data sharing, interoperability, electronic authentication, and administrative accountability, as these elements are central to advanced stages of digital government. Second, the study applies the five-stage e-government development model as an evaluative framework. Each stage of the model was operationalised through legal and institutional indicators, enabling an assessment of Vietnam's progression from basic information provision to integrated digital governance. Rather than treating the model as a purely technological classification, the analysis emphasises legal capacity, organisational coordination, and regulatory enforceability at each stage. This approach allows for a nuanced understanding of maturity that reflects governance realities rather than formal system availability. Third, comparative analysis was employed to contextualise national findings. Selected international experiences were examined to illustrate alternative regulatory approaches to data governance, interoperability, and institutional coordination. These comparisons serve an analytical function by highlighting structural gaps and potential reform pathways, rather than prescribing direct policy transplants. Finally, secondary empirical sources, including official reports, evaluation studies, and administrative statistics, were reviewed to examine implementation outcomes. This material was used to assess discrepancies between legal design and administrative practice, particularly at the subnational level following recent institutional restructuring. By triangulating legal analysis with empirical evidence, the study ensures internal validity and strengthens the explanatory power of its findings. Overall, this methodological design enables a systematic assessment of digital government maturity while maintaining sensitivity to legal context and institutional constraints.

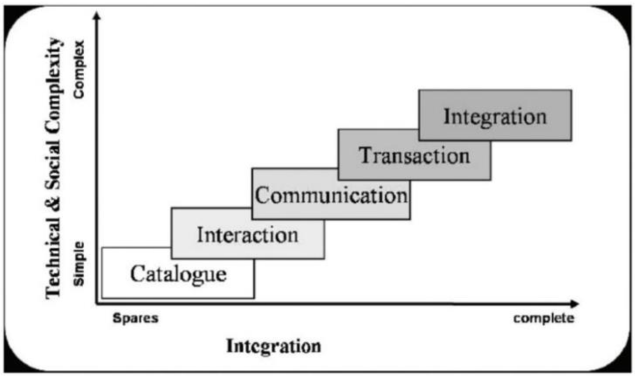

Figure 1. *Five stage model for e-Government implementation in developing countries (Source: Mousavi, 2010).*

3. Results and Discussion

3.1. Vietnam's Digital Government Maturity Across the Five-stage Model

Applying the five-stage e-government development model to Vietnam reveals a pattern of uneven but progressive advancement, characterised by strong early-stage consolidation and slower movement toward systemic integration. Overall, the findings indicate that Vietnam has largely institutionalised the first three stages of the model, while stages associated with integration and transformation remain partial and fragmented. This trajectory reflects a broader tendency in developing and transitional administrative systems, where digitalisation advances faster than institutional and legal coordination [7, 8]. At the first stage, information provision, Vietnam demonstrates a relatively high level of maturity. Central ministries and local authorities maintain official portals that systematically publish administrative information, legal documents, and procedural guidance. This development is supported by statutory obligations on information disclosure, particularly under the Law on Access to Information [11] and related implementing decrees. As a result, citizens and businesses can readily access core administrative data, including service requirements, processing timelines, and responsible agencies. However, although availability is widespread, the quality and consistency of information vary significantly across jurisdictions. Many portals rely on static PDF documents, offer limited explanatory content, and lack standardised presentation formats. Consequently, while the formal requirements of the information stage are met, the user experience remains uneven, indicating that institutionalisation at this level is functional rather than fully optimised.

Progress into the interaction stage is evident through the widespread deployment of online public service portals. Citizens can submit applications, upload documents, and track case status electronically at both central and local levels. Moreover, notification systems using email or SMS have improved communication between administrative agencies and service users. These features signal a shift from one-way information provision toward basic digital interaction. Nevertheless, interaction remains largely procedural rather than deliberative [6]. Feedback mechanisms exist, yet they are often weakly institutionalised and lack enforceable response obligations. In practice, user interaction tends to be reactive, initiated by administrative requirements rather than by citizen engagement in service design or evaluation. This limitation suggests that interaction has been operationalised primarily as a technical function, rather than as a governance mechanism for trust-building and co-production. The transaction stage marks one of the most visible areas of progress. A substantial number of administrative procedures can now be completed fully online, including electronic payment of fees and receipt of results. National-level data indicate a steady increase in the proportion of dossiers processed electronically, especially for high-volume services such as civil registration, social insurance, and business licensing. These developments demonstrate an enhanced capacity for workflow automation and process standardisation. Importantly, they also reflect political prioritisation of digital service delivery as a tool for administrative reform.

However, closer examination reveals structural constraints that limit transactional completeness. In many cases, electronic submission does not eliminate parallel paper-based requirements. Applicants are frequently asked to present physical documents for verification, or to complete offline steps at later stages of processing. Furthermore, electronic records generated by one agency are not always legally recognised by others, leading to repeated submissions of the same information [4]. As a result, the efficiency gains associated with digital transactions are partially offset by institutional fragmentation. This phenomenon illustrates that transaction-stage maturity depends not only on technical capability, but also on cross-agency legal recognition and coordinated administrative practice. Movement toward the integration stage remains the most challenging aspect of Vietnam's digital government development. Although national databases covering population, land, enterprises, and social insurance have been established, their practical interoperability is limited. Data exchange between agencies often relies on bilateral arrangements or manual intervention rather than automated integration. Technical standards differ across sectors, and metadata frameworks are not uniformly applied. Consequently, the vision of a seamless "once-only" data environment remains largely aspirational.

Institutional factors play a decisive role in this fragmentation. Data governance responsibilities are dispersed among multiple ministries, with no single authority possessing comprehensive oversight or enforcement power. While legal instruments encourage data sharing, they provide limited operational guidance on data access rights, accountability, and liability. In the absence of clear mandates, agencies tend to prioritise data control and risk avoidance. This behaviour is reinforced by concerns over data security and potential legal exposure, particularly where personal data are involved [3]. Thus, integration barriers are as much institutional and legal as they are technical. The recent transition to a two-tier local government system further complicates integration efforts. Administrative restructuring has altered functional responsibilities and workflows, often without corresponding updates to digital systems or staffing arrangements. As a result, some local authorities face increased service delivery obligations while lacking sufficient digital capacity. This mismatch intensifies disparities across regions and undermines horizontal and vertical integration. The findings therefore suggest that institutional reform, when not synchronised with digital governance planning, can inadvertently slow progress toward higher maturity stages. The fifth stage of the model, which involves transformational and proactive digital government, remains emergent. Some pilot initiatives indicate movement in this direction, including the use of data analytics for administrative monitoring and the introduction of online consultation platforms. However, these efforts remain isolated and limited in scale. Proactive services based on life-event triggers, predictive analytics, or automated decision-making are not yet systematically embedded in administrative practice. Moreover, the legal framework governing algorithmic decision-making, accountability, and transparency remains underdeveloped. Without clear legal safeguards, the expansion of advanced digital governance tools faces both institutional resistance and legitimacy concerns.

From an analytical perspective, these findings confirm that Vietnam's digital government development follows a sequential but non-linear trajectory. Early stages are relatively easy to institutionalise because they require limited coordination and pose fewer legal risks. By contrast, higher stages demand structural integration, legal harmonisation, and cultural change within public administration. This explains why progress slows as digital government moves from service digitisation toward governance transformation. Importantly, the results demonstrate the value of the five-stage model as an analytical framework when applied with institutional and legal sensitivity. Rather than serving as a rigid classification tool, the model helps illuminate where and why progression stalls. In the Vietnamese context, stagnation at the integration stage reflects deeper governance challenges related to data ownership, administrative accountability, and inter-agency trust. These challenges cannot be resolved through technology alone. Thus, Vietnam has achieved meaningful advances in digital government maturity, particularly in the provision and transactional use of online public services. Nevertheless, the transition toward integrated and transformational digital government remains incomplete. Bridging this gap will require coordinated legal reform, strengthened data governance institutions, and sustained investment in administrative capacity. Without such measures, further technological expansion risks reinforcing fragmentation rather than delivering systemic transformation.

3.2. Legal and Institutional Gaps Between Normative Frameworks and Administrative Practice

The empirical analysis reveals a substantial and persistent gap between Vietnam's normative legal framework for digital government and its implementation in everyday administrative practice. While statutory instruments and policy strategies articulate ambitious objectives for interoperability, data sharing, and citizen-centric governance, these principles are only partially realised at the operational level. This divergence between das Sollen and das Sein constitutes a central constraint on digital government maturity and explains why progress slows beyond the transactional stage. At the normative level, Vietnam's legal architecture demonstrates a high degree of formal alignment with international digital government standards. Recent legislation affirms the legal validity of electronic transactions and recognises digital records as functionally equivalent to paper documents. Policy strategies further promote cross-sectoral data integration, once-only data submission, and proactive public services. From a doctrinal perspective, these provisions reflect a clear shift away from traditional e-government toward a governance model grounded in data-driven coordination and institutional transformation [12]. Moreover, the regulatory framework emphasises transparency, efficiency, and accountability, suggesting that digitalisation is intended to reinforce, rather than bypass, rule-of-law principles. However, administrative practice reveals a more cautious and fragmented reality. One of the most visible gaps concerns the acceptance and circulation of electronic records across agencies. Although digital documents are legally recognised, they are not consistently treated as authoritative in inter-agency procedures. In many cases, applicants are required to resubmit information already held by another authority or to present physical documents for verification. This practice persists even when secure digital records exist within government databases. The result is procedural duplication that undermines efficiency gains and weakens public confidence in digital services.

This gap cannot be explained solely by legal ambiguity. Instead, it reflects institutional risk aversion and uncertainty regarding accountability. Public officials frequently express concern about legal liability in the event of data inaccuracies or security breaches. In the absence of detailed guidance on responsibility allocation, agencies prefer to retain control over "their" data rather than rely on external digital sources. Consequently, legal recognition of electronic records remains largely formal, while practical reliance on them remains limited. Data governance represents an even more pronounced area of divergence. Normative instruments encourage data sharing and integration, yet they provide limited operational clarity on data ownership, access rights, and oversight mechanisms. As a result, data governance practices vary significantly across sectors and administrative levels. Ministries and local authorities often develop their own data standards and management protocols, leading to incompatible systems and limited interoperability. In practice, data exchange tends to rely on bilateral agreements or manual coordination rather than automated, system-wide integration. Furthermore, personal data protection concerns intensify institutional caution. While data protection principles are recognised in law, implementing rules often lack specificity regarding permissible data use, consent requirements, and institutional accountability. This regulatory uncertainty encourages defensive behaviour, where agencies restrict data sharing to minimise perceived risk. From a governance perspective, such behaviour is rational, yet it undermines collective objectives of integrated service delivery [3].

Institutional fragmentation further exacerbates these challenges. Responsibilities for digital government, data management, and administrative reform are dispersed across multiple bodies, each operating under distinct mandates. Coordination mechanisms exist but often lack sufficient authority or enforcement capacity. As a result, policy coherence depends heavily on informal cooperation rather than binding obligations. This fragmentation weakens incentives for standardisation and reinforces silo-based administrative cultures. The transition to a two-tier local government system has intensified the das Sollen–das Sein gap. While the reform aims to streamline administration, it has also altered functional responsibilities without fully synchronising digital systems or staffing arrangements. Many local authorities now face expanded service delivery obligations while lacking adequate digital infrastructure and legal guidance [3, 8]. This mismatch has led to uneven implementation of digital government policies across regions. In some areas, online services function effectively; in others, digital procedures exist largely in name, with substantive processing remaining offline. Importantly, these gaps are not temporary anomalies but reflect structural features of legal operationalisation. Vietnam's regulatory approach relies heavily on principle-based legislation and strategic planning documents. While this approach allows flexibility, it also leaves considerable discretion to implementing agencies. Without enforceable standards and monitoring mechanisms, discretion often translates into inconsistency. This observation aligns with broader regulatory theory, which emphasises that effective governance requires not only normative alignment but also institutional capacity and enforcement tools.

Comparative experience suggests that such gaps are common in jurisdictions undergoing rapid digital transformation. However, the Vietnamese case is distinctive in the pace of regulatory expansion relative to institutional adaptation. Legal reforms have advanced quickly, whereas organisational learning and capacity-building have progressed more gradually. This imbalance helps explain why formal compliance indicators may overstate actual digital government maturity. The findings therefore challenge purely technology-driven or compliance-based assessments of digital government. They demonstrate that legal enactment, while necessary, does not automatically produce behavioural change within public administration. Instead, effective implementation depends on how legal norms are translated into operational routines, incentives, and accountability structures [8]. In this respect, digital government reform should be understood as a continuous process of legal–institutional alignment rather than a discrete legislative achievement. From an analytical standpoint, this section underscores the importance of integrating legal analysis into digital government evaluation. Without attention to das Sein, normative frameworks risk becoming aspirational texts disconnected from administrative realities. Conversely, without das Sollen, empirical assessment lacks evaluative benchmarks. Bridging these dimensions is therefore essential for understanding why digital government development stalls at certain stages and how it might be reactivated. Consequently, the legal and institutional gaps identified in this study constitute a primary obstacle to Vietnam's transition toward integrated digital government. Addressing these gaps will require more than additional legislation. It will demand clearer operational rules, stronger coordination mechanisms, and institutional incentives that align administrative behaviour with legal objectives. Only through such alignment can digital government move beyond formal digitalisation toward substantive governance transformation.

3.3. Implications for Digital Government Reform and Data-driven Governance

The findings of this study generate several important implications for the future trajectory of digital government reform in Vietnam, as well as for broader discussions on data-driven governance in developing and transitional administrative systems. Most notably, the results indicate that further progress in digital government maturity will depend less on technological expansion and more on institutional consolidation and legal operationalisation. While digital tools and platforms have proliferated rapidly, their transformative potential remains constrained by unresolved governance and regulatory challenges. First, the analysis highlights data governance as the structural foundation of advanced digital government [6]. Although Vietnam has established major national databases and adopted policy commitments to interoperability, the absence of a coherent and enforceable data governance regime continues to limit integration. Effective digital government requires more than data availability; it depends on clearly defined legal rules governing data ownership, access rights, reuse conditions, and accountability across administrative boundaries. Without such clarity, agencies have strong incentives to retain control over their datasets, thereby reinforcing institutional silos. This finding is consistent with international scholarship emphasising that data governance is not merely a technical issue but a core institutional function that shapes coordination, trust, and public value creation [3]. Accordingly, future reform efforts should prioritise the development of operational data governance frameworks that translate general principles into enforceable obligations. This includes standardised metadata requirements, legally binding interoperability protocols, and clear liability rules for data misuse or error. Importantly, such frameworks should balance data sharing with data protection, ensuring that privacy safeguards are integrated into governance design rather than treated as ex post constraints. In this respect, Vietnam's experience illustrates a broader lesson: without legal certainty, risk-averse administrative behaviour will persist, regardless of technological readiness.

Second, the findings underscore the critical role of institutional coordination capacity. Digital government integration requires a governance architecture capable of aligning sectoral initiatives, resolving conflicts, and monitoring compliance. In the current institutional arrangement, coordination responsibilities are dispersed across multiple bodies with overlapping mandates [13]. While this reflects the complexity of digital transformation, it also weakens accountability and slows decision-making. International experience suggests that strong central coordination bodies can significantly enhance policy coherence when they possess clear legal authority and technical expertise [12]. In the Vietnamese context, strengthening coordination does not necessarily require creating new institutions. Rather, it calls for clarifying mandates, enhancing enforcement powers, and improving information flows among existing bodies. Coordination mechanisms should move beyond consultation and adopt binding standards and timelines. Without such authority, coordination risks remaining symbolic rather than transformative. This insight reinforces the argument that institutional design is as important as policy intent in digital government reform.

Third, the study points to the need for legally grounded performance assessment mechanisms. Existing evaluation tools primarily measure outputs, such as the number of online services or usage rates. While these indicators are useful, they offer limited insight into institutional readiness, legal compliance, or governance quality. As demonstrated by the findings, high service availability does not necessarily indicate high digital government maturity [3]. Introducing legal performance indicators could address this gap by assessing dimensions such as interoperability compliance, data governance maturity, procedural accountability, and the effective recognition of electronic records. Such indicators would serve several purposes. First, they would provide policymakers with more accurate diagnostic tools for identifying reform bottlenecks. Second, they would strengthen accountability by linking performance evaluation to legal obligations rather than discretionary benchmarks. Third, they would enhance transparency by making institutional performance visible to the public. From a governance perspective, performance indicators grounded in law can help align administrative incentives with normative objectives, thereby reducing the gap between das Sollen and das Sein.

The findings also carry important implications for the relationship between digital government and the rule of law. As administrative processes become increasingly digitalised and data-driven, legal safeguards for transparency, due process, and rights protection become more salient. Automated decision-making, algorithmic risk assessment, and predictive analytics introduce new forms of administrative power that challenge traditional accountability mechanisms [6]. Yet, the current legal framework provides limited guidance on algorithmic transparency, explainability, and liability. This regulatory gap poses risks not only to individual rights but also to the legitimacy of digital government initiatives [13]. Addressing these risks requires anticipatory legal frameworks that regulate emerging technologies before they become deeply embedded in administrative practice. Such frameworks should define the permissible scope of automation, establish oversight mechanisms, and ensure access to remedies for affected individuals. Importantly, legal safeguards should not be viewed as obstacles to innovation but as conditions for sustainable and trustworthy digital governance. The findings suggest that without such safeguards, institutional resistance to advanced digital tools is likely to increase, further slowing progress toward higher maturity stages.

Another significant implication concerns territorial equity and administrative capacity. The uneven implementation of digital government across regions reflects disparities in infrastructure, skills, and organisational readiness. The transition to a two-tier local government system has intensified these disparities by increasing service delivery responsibilities at the local level. Without targeted capacity-building measures, digital government reform risks exacerbating existing inequalities rather than promoting uniform service quality [3]. This observation reinforces the importance of integrating digital transformation with human resource development and organisational reform. From a theoretical perspective, the findings contribute to digital government scholarship by demonstrating the value of combining maturity models with legal–institutional analysis. While the five-stage model provides a useful heuristic for identifying developmental stages, it does not, on its own, explain why progression stalls. By incorporating legal and institutional dimensions, this study shows that maturity is not simply a function of technological adoption but of governance alignment. This integrated approach offers a more nuanced understanding of digital transformation dynamics and may be particularly relevant for comparative research in developing contexts.

In practical terms, the implications of this analysis suggest a reorientation of reform priorities. Rather than focusing primarily on expanding the range of digital services, policymakers should concentrate on consolidating existing systems and strengthening governance foundations [6]. This includes harmonising legal frameworks, reinforcing coordination mechanisms, and embedding accountability into digital processes. Such a shift would help ensure that digital government development moves beyond incremental digitalisation toward systemic transformation. As such, the results of this study indicate that the future of digital government in Vietnam depends on the successful alignment of technology, law, and institutions. Digital tools alone cannot deliver integrated governance without corresponding legal clarity and organisational capacity. By addressing data governance, institutional coordination, and legal accountability in a coherent manner, Vietnam can advance toward a more mature, resilient, and rights-based model of digital government. These lessons are not only relevant at the national level but also offer valuable insights for other jurisdictions navigating similar digital transformation challenges.

4. Conclusions

This study set out to assess Vietnam's digital government maturity through a legal and institutional lens, using the five-stage e-government development model as an analytical framework. The findings demonstrate that Vietnam has achieved considerable progress in the early and intermediate stages of digital government, particularly in information provision, online interaction, and electronic transactions. These achievements reflect sustained political commitment and significant investment in digital infrastructure. Nevertheless, the analysis also shows that progress slows markedly at higher stages of maturity, where integration, data-driven governance, and institutional transformation become decisive. A central contribution of this study lies in highlighting the persistent gap between normative legal frameworks and administrative practice. While laws and strategies articulate ambitious principles of interoperability, data sharing, and citizen-centric governance, their implementation remains uneven. Institutional fragmentation, limited coordination capacity, and cautious administrative behaviour continue to constrain cross-agency integration. As a result, digital government development often manifests as parallel digitalisation rather than structural transformation. This finding underscores that legal enactment, although necessary, is insufficient in itself to ensure effective digital governance. Furthermore, the transition to a two-tier local government system has added complexity to the reform process. Although administrative streamlining offers long-term efficiency gains, it has also intensified short-term capacity challenges at the subnational level. Without corresponding adjustments in digital systems, staffing, and legal guidance, local authorities face difficulties in fulfilling expanding service delivery responsibilities. This mismatch illustrates the importance of synchronising institutional reform with digital governance planning. From a broader theoretical perspective, the study confirms the value of multi-stage maturity models when applied with sensitivity to legal and institutional contexts. The five-stage model proves particularly useful in identifying where and why digital government development stalls. However, its explanatory power is significantly enhanced when combined with an analysis of regulatory design, administrative incentives, and governance capacity. This integrated approach allows for a more nuanced understanding of digital government maturity than technology-focused assessments alone. In practical terms, the findings suggest that the next phase of digital government reform in Vietnam should prioritise consolidation over expansion. Strengthening data governance frameworks, clarifying legal obligations for interoperability, and enhancing institutional coordination are essential steps toward higher levels of maturity. In addition, the development of legally grounded performance indicators could improve accountability and support evidence-based policy adjustment. Such measures would help ensure that digital transformation contributes to sustainable improvements in public governance. As such, digital government should be understood not merely as a technological project but as a comprehensive process of legal and institutional change. Aligning regulatory frameworks with administrative practice remains the key challenge for advancing beyond transactional digitalisation toward integrated and data-driven governance. Addressing this challenge will be critical if digital government is to fulfil its promise as a foundation for transparent, efficient, and accountable public administration in the years ahead.

Abbreviations

OECD	Organisation for Economic Cooperation and Development
UN	United Nations
SMS	Short Message Service

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Author Contributions

Uyen Thi To Doan: Conceptualization, Resources, Project administration

Anh Huy Nguyen: Data curation, Methodology, Supervision

Duong Hoang Do: Formal Analysis, Investigation, Writing – original draft

Linh Khanh To: Formal Analysis, Investigation, Writing – review & editing

Data Availability Statement

The data is available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare no conflicts of interest.

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