

DIGITAL GOVERNMENT DEVELOPMENT IN SINGAPORE AND VIETNAM: LINKING STRATEGY AND IMPLEMENTATION THROUGH INSTITUTIONAL ANALYSIS

PHÁT TRIỂN CHÍNH PHỦ SỐ TẠI SINGAPORE VÀ VIỆT NAM: CƠ CHẾ GẮN KẾT GIỮA CHIẾN LƯỢC VÀ THỰC THI THÔNG QUA PHÂN TÍCH THỂ CHẾ

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Abstract: Digital government has become a central component of public sector reform across ASEAN member states. While existing studies extensively document national digital transformation strategies, limited attention has been paid to the institutional mechanisms linking strategic orientation and implementation. This study addresses this gap by examining digital government development in Singapore and Viet Nam through a comparative institutional framework.

The research employs a qualitative descriptive methodology based on secondary data from international organizations and policy documents, supplemented by training materials under the Initiative for ASEAN Integration. An analytical framework is developed across four dimensions: governance structure, digital infrastructure, data governance, and implementation capacity.

The findings indicate that differences between Singapore and Viet Nam are not primarily rooted in strategic divergence, but in variations in institutional mechanisms that link strategy to implementation. In particular, centralized coordination, execution discipline, and integrated platforms play a decisive role in translating policy into practice. The study contributes to the literature by highlighting how institutional configurations shape digital transformation trajectories in multi-level governance systems.

Keywords: ASEAN, digital government, digital transformation, governance, institutional capacity

Tóm tắt: Chính phủ số đã trở thành yếu tố trọng tâm trong cải cách hành chính công tại các quốc gia thành viên ASEAN. Mặc dù các nghiên cứu hiện có đã mô tả khá đầy đủ các chiến lược chuyển đổi số ở cấp quốc gia, song vẫn còn hạn chế trong việc phân tích các cơ chế thể chế liên kết giữa định hướng chiến lược và quá trình tổ chức thực hiện. Nghiên cứu này nhằm lấp đầy khoảng trống đó thông qua việc phân tích sự phát triển chính phủ số tại Singapore và Việt Nam dưới góc độ khung phân tích thể chế so sánh.

Nghiên cứu sử dụng phương pháp định tính mô tả, dựa trên dữ liệu thứ cấp từ các tổ chức quốc tế và các văn bản chính sách, đồng thời bổ sung tài liệu từ chương trình đào tạo trong khuôn khổ Sáng kiến Hội nhập ASEAN. Trên cơ sở đó, bài viết xây dựng khung phân tích gồm bốn chiều cạnh: cấu trúc quản trị, hạ tầng số, quản trị dữ liệu và năng lực thực thi.

Kết quả nghiên cứu cho thấy sự khác biệt giữa Singapore và Việt Nam không chủ yếu xuất phát từ sự khác biệt về định hướng chiến lược, mà từ sự khác biệt trong các cơ chế thể chế liên kết chiến lược với thực thi. Đặc biệt, cơ chế điều phối tập trung, kỷ luật thực thi và các nền tảng

số tích hợp đóng vai trò quyết định trong việc chuyển hóa chính sách thành thực tiễn. Bài viết đóng góp vào hệ thống tri thức bằng cách làm rõ vai trò của cấu hình thể chế trong việc định hình quỹ đạo chuyển đổi số trong các hệ thống quản trị đa cấp.

Từ khóa: ASEAN, chính phủ số, chiến lược ICT, chuyển đổi số, quản trị công.

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I. INTRODUCTION

Digital transformation has significantly reshaped public administration systems worldwide. Governments increasingly employ digital technologies to enhance service delivery, improve governance coordination, and strengthen transparency and accountability. In this context, digital government has evolved beyond administrative digitization toward a comprehensive transformation of governance structures and policy implementation mechanisms. International organizations such as the United Nations, OECD, and the World Bank emphasize that digital government is a fundamental pillar of modern public sector reform [4], [6].

Within ASEAN, digital transformation has become a strategic priority aimed at promoting regional connectivity, economic competitiveness, and inclusive development. The ASEAN Digital Masterplan 2025 provides a regional framework for strengthening digital infrastructure and advancing digital governance across member states [1]. However, ASEAN countries demonstrate significant variation in institutional capacity and governance arrangements, resulting in different implementation outcomes.

1.1. Literature Review and Research Gap

Existing literature on digital government focuses primarily on policy frameworks, technological infrastructure, and performance indicators. Global indices such as the UN E-Government Survey and the OECD Digital Government Index provide comparative evaluations of national digital readiness [4], [5]. While these studies offer valuable benchmarking tools, they tend to emphasize outcomes rather than the institutional processes that connect strategy and implementation.

Comparative studies in the ASEAN context remain limited and are often descriptive, focusing on policy initiatives rather than institutional dynamics. In particular, the mechanisms through which strategic orientations are translated into implementation practices have not been sufficiently examined.

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This study addresses this gap by focusing on the institutional linkage between strategy and implementation. Rather than describing policy frameworks, it seeks to explain how governance structures, coordination mechanisms, and administrative capacity shape the effectiveness of digital transformation.

1.2 Research Objectives and Contributions

The study pursues three objectives:

- (1) to examine digital government development in Singapore and Viet Nam;
- (2) to analyze institutional mechanisms linking strategy and implementation;
- (3) to identify key dimensions of variation in digital governance systems.

The contribution of this study lies in developing a comparative institutional framework and providing an explanation of how institutional configurations influence the translation of strategy into implementation.

2. THE MATERIALS AND METHODS:

2.1 Theoretical Approach

This study adopts a comparative institutional approach to examine the development of digital government in Singapore and Viet Nam, with particular emphasis on the linkage between strategic orientation and implementation. Institutional analysis focuses on how governance structures, formal rules, and organizational arrangements shape policy outcomes and influence the translation of strategic objectives into practice.

In the context of digital governance, transformation is not solely determined by technological advancement but also by the capacity of institutions to operationalize strategies effectively. Institutional mechanisms such as coordination structures, regulatory frameworks, and administrative capacity play a central role in connecting policy design with implementation processes.

Based on this perspective, the study conceptualizes digital government as an integrated system comprising governance arrangements, technological infrastructure, data management systems, and implementation capacity. This approach provides a foundation for analyzing how different institutional configurations influence the effectiveness of strategy–implementation linkages.

2.2 Data Sources

The analysis is based on qualitative data collected from multiple sources to ensure analytical robustness.

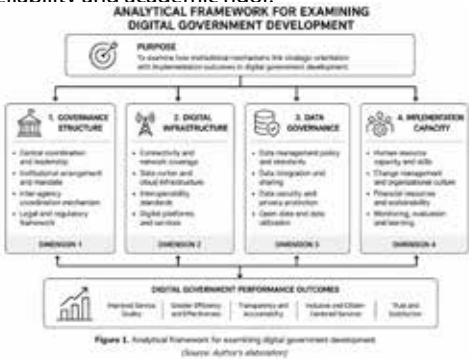
First, secondary data include publicly available policy documents and reports from international organizations such as ASEAN, OECD, the United Nations, and the World Bank [1], [4], [6]. These sources provide standardized and comparative information on digital government development and governance frameworks.

Second, national policy documents from the Government of Viet Nam are used to examine strategic orientation and implementation frameworks [2].

Third, supplementary materials from a training program under the Initiative for ASEAN Integration (IAI) are utilized to provide contextual insights into Singapore’s digital governance model. These materials are used primarily for illustrative purposes and are triangulated with official documents and international reports to

ensure reliability and academic rigor.

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- (1) **Governance structure**, referring to coordination mechanisms and institutional arrangements;
- (2) **Digital infrastructure**, including technological platforms and connectivity systems;
- (3) **Data governance**, encompassing data management, interoperability, and regulatory frameworks;
- (4) **Implementation capacity**, including administrative capability, human resources, and execution discipline.

The analytical process involves three main steps. First, key institutional features in each country are identified based on the selected dimensions. Second, cross-country comparisons are conducted to highlight similarities and differences. Third, these differences are interpreted to explain how institutional factors influence the linkage between strategy and implementation.

Rather than measuring performance outcomes, the analysis focuses on identifying institutional mechanisms that facilitate or constrain the operationalization of digital transformation strategies.

2.4 Research Scope and Limitations

This study adopts an institutional analytical approach and does not aim to assess policy performance or measure implementation effectiveness. The analysis is based primarily on qualitative methods and secondary data sources, which may constrain the extent to which the findings can be generalized beyond the selected cases. In addition, although training-based materials are used to provide supplementary contextual insights, they are not considered primary evidence and are triangulated with official policy documents and reliable examination materials.



3. RESULTS AND DISCUSSION:

3.1 Singapore: Institutional Mechanisms Linking Strategy and Execution

Singapore’s digital government development demonstrates a strong and consistent alignment between strategic planning and implementation. Over several decades, successive ICT masterplans have been designed and implemented in a cumulative and adaptive manner, gradually building a comprehensive digital governance ecosystem. These long-term policy efforts have converged in the Smart Nation initiative, which provides a coherent strategic vision for integrating digital technologies into public administration, economic development, and everyday social interactions. This continuity in strategic planning ensures that policy directions are not fragmented but evolve systematically over time.

A key institutional mechanism linking strategy to implementation is centralized coordination. Agencies such as GovTech play a pivotal role in translating strategic objectives into operational systems and digital platforms. Acting as a central technical authority, GovTech is responsible for developing shared infrastructure, setting technical standards, and ensuring interoperability across government systems.

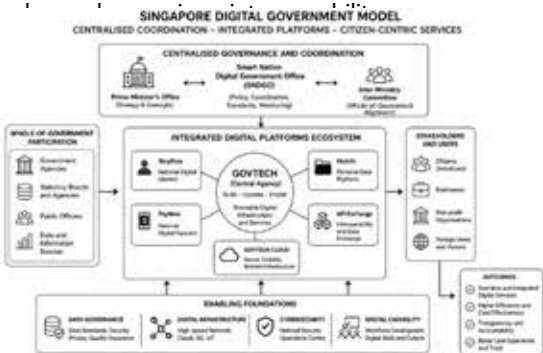


Figure 3. Institutional model of digital government in Singapore
(Source: Author's elaboration based on GovTech Singapore, Smart Nation Digital Government Office, 2021 [2], [3])

Digital tools such as SingPass function as practical instruments for implementing digital strategy. As a unified digital identity system, SingPass allows citizens and businesses to access a wide range of public services through a single authentication mechanism. This significantly improves service accessibility, reduces administrative burdens, and enhances user experience. More importantly, it demonstrates how digital infrastructure is embedded within governance processes to support the operationalization of strategic objectives, rather than existing as isolated technological solutions.

In addition to technological infrastructure and organizational arrangements, Singapore’s digital transformation is reinforced by strong execution discipline and institutional accountability.

Policy implementation is supported by clear performance targets, monitoring systems, and continuous feedback mechanisms, ensuring that strategic initiatives are effectively translated into measurable outcomes. Institutional learning and iterative improvement further strengthen the capacity of the system to adapt to emerging challenges and technological developments.

Overall, Singapore’s success lies in its ability to institutionalize the linkage between strategy and implementation through coordinated governance structures, integrated digital infrastructure, and a high level of execution discipline. This integrated approach creates a robust and adaptive digital governance ecosystem, in which strategic vision is consistently transformed into effective and sustainable implementation outcomes.

3.2 Viet Nam: Strategy Formation and Evolving Implementation Linkages

Viet Nam has established a comprehensive strategic framework for digital transformation through the National Digital Transformation Program [2], positioning digital government as a central driver of socio-economic development and administrative reform. This program reflects a clear recognition that digital transformation is not merely a technological upgrade but a systemic change in governance structures, public service delivery, and institutional coordination. By defining strategic priorities across digital government, digital economy, and digital society, the framework provides a coherent policy orientation for long-term development.

In recent years, significant progress has been made in expanding digital infrastructure, developing national platforms, and promoting the digitalization of public services. Broadband connectivity has improved substantially, government cloud systems have been introduced, and national data platforms have begun to facilitate information sharing across agencies. These developments have contributed to enhancing service accessibility and improving administrative efficiency. However, despite these advancements, the institutional linkage between strategy and implementation remains in an evolving stage.

One of the central challenges lies in the multi-level governance structure of Viet Nam’s administrative system. The implementation of digital transformation policies depends on coordination among central ministries, provincial authorities, and local agencies, each operating within their own administrative boundaries and resource constraints. This fragmented structure often leads to overlapping responsibilities and a lack of cohesive implementation across different levels of government.

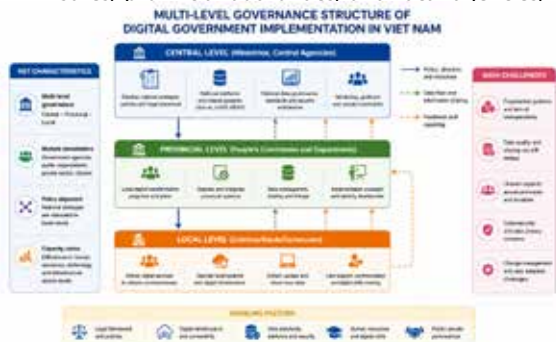


Figure 4. Multi-level governance structure of digital government implementation in Viet Nam
(Source: Author's elaboration)

Furthermore, differences in digital competencies among public officials and disparities in infrastructure readiness contribute to uneven implementation outcomes. While some ministries and provinces have achieved relatively advanced levels of digitalization, others remain at earlier stages of adoption. This uneven development reflects the broader challenge of aligning strategic objectives with institutional capacity across a large and diverse administrative system.

In addition, mechanisms for data governance and interoperability are still being refined. Although national platforms for data sharing have been established, the standardization of data formats, integration of systems, and coordination of information flows across agencies require further development. These factors affect the extent to which digital systems can effectively support policy implementation and service delivery.

As a result, while Viet Nam's strategic orientation is clearly defined and increasingly comprehensive, the institutional mechanisms linking strategy to implementation are still being consolidated and strengthened. The transition from policy design to effective execution depends on improving coordination mechanisms, enhancing administrative capacity, and ensuring greater consistency

in implementation across different levels of government. Overall, Viet Nam's digital government development reflects a dynamic process of institutional evolution. The country has made substantial progress in establishing strategic direction and foundational infrastructure, but continued efforts are required to reinforce the institutional linkages that enable strategy to be effectively translated into practice. Strengthening these linkages will be critical for advancing toward a more integrated, efficient, and

Beyond the structural comparison, the analysis indicates that both Singapore and Viet Nam share broadly similar strategic orientations in digital government development, reflecting common regional and global trends in digital transformation. Both countries recognize the importance of integrating digital technologies into public administration, enhancing service delivery, and promoting data-driven governance. However, despite this convergence at the level of strategic vision, significant differences emerge in the institutional mechanisms through which these strategies are implemented.

The key distinction lies not in the formulation of strategy, but in the effectiveness of the mechanisms that link strategy to implementation. In Singapore, centralized coordination plays a decisive role in ensuring that strategic objectives are consistently translated into operational actions. Strong institutional integration, supported by specialized agencies and standardized platforms, allows for a high degree of coherence across government systems. This enables policies to be implemented efficiently and uniformly, minimizing fragmentation and enhancing overall system performance.

In contrast, Viet Nam's multi-level governance structure introduces greater complexity into the implementation process. The need to coordinate across central, provincial, and local authorities requires continuous institutional alignment and adaptation. Variations in administrative capacity, resource availability, and digital readiness across different levels of government contribute to uneven implementation outcomes. As a result, while strategic objectives are clearly defined at the national level, their translation into practice depends heavily on the effectiveness of coordination mechanisms and the capacity of individual institutions.

Overall, the comparison underscores that the success of digital government development is fundamentally shaped by the strength of institutional linkages between strategy and implementation. Strengthening these linkages remains a critical priority, particularly for countries with complex administrative systems, in order to ensure that strategic visions are effectively realized in practice.

3.4 Discussion: Institutional Drivers of Strategy-Implementation Linkage

The comparative analysis highlights that the effectiveness of digital government development is not primarily determined by the presence of strategic frameworks, but by the strength of institutional mechanisms that connect strategy to implementation. Both Singapore and Viet Nam have articulated comprehensive digital transformation strategies; however, their outcomes differ significantly due to variations in governance structures, coordination capacity, and execution discipline.

First, governance structure plays a decisive role in shaping the linkage between strategy and implementation. Singapore's centralized and integrated governance model enables strong vertical and horizontal coordination, ensuring that policy directives are translated into consistent actions across government agencies. In contrast, Viet Nam's multi-level administrative system introduces a higher degree of complexity, as implementation requires alignment across central, provincial, and local authorities. This structural



difference affects the speed, consistency, and coherence of policy execution.

Second, implementation capacity emerges as a critical factor influencing how effectively strategies are operationalized. In Singapore, high levels of administrative professionalism, technical expertise, and institutional discipline support the effective translation of strategic objectives into concrete outcomes. Conversely, in Viet Nam, variations in institutional capacity across agencies and localities result in uneven implementation. These differences reflect broader challenges in developing human resources, strengthening organizational capability, and ensuring consistent administrative performance.

Third, digital infrastructure and platform integration function as enabling mechanisms that mediate the relationship between strategy and implementation. Singapore's integrated digital platforms facilitate seamless data exchange and service delivery, thereby reinforcing policy execution. In Viet Nam, although foundational infrastructure has been significantly expanded, issues related to interoperability, data standardization, and system integration continue to limit the full realization of strategic objectives.

Fourth, institutional learning and adaptive governance play an important role in sustaining the linkage between strategy and implementation. Singapore's system benefits from continuous feedback mechanisms, iterative policy adjustments, and strong accountability structures. Viet Nam is also advancing in this direction through capacity-building initiatives and international cooperation; however, these mechanisms are still in the process of consolidation.

Taken together, the findings suggest that the key difference between the two countries lies not in strategic vision, but in the institutionalization of mechanisms that translate strategy into implementation. Effective digital government development requires not only well-designed strategies but also coherent governance structures, robust implementation capacity, and integrated technological systems.

These observations contribute to the broader literature on digital governance by emphasizing the importance of institutional linkages in shaping digital transformation trajectories. In multi-level governance systems, the ability to align strategic objectives with implementation mechanisms is a critical determinant of policy effectiveness and long-term sustainability.

4. CONCLUSION:

This study examined digital government development in Singapore and Viet Nam through a comparative institutional perspective, with a particular focus on the linkage between strategic orientation and implementation. The analysis demonstrates that both countries share broadly similar strategic visions, reflecting global trends in digital transformation and public sector modernization. However, their trajectories diverge significantly in terms of how effectively these strategies are translated into implementation outcomes. This divergence highlights the importance of institutional arrangements rather than strategic design alone.

Singapore's experience illustrates that effective digital transformation depends on the presence of well-established institutional mechanisms that ensure coherence between policy

formulation and execution. Centralized coordination, integrated digital infrastructure, and a high level of administrative discipline enable the consistent operationalization of strategic objectives. These factors collectively contribute to a governance system in which digital strategies are not only clearly articulated but also systematically implemented across the public sector.

In contrast, Viet Nam has made substantial progress in developing strategic frameworks and expanding digital infrastructure, demonstrating a strong commitment to digital transformation. However, the institutional mechanisms linking strategy to implementation remain in a process of consolidation. The multi-level governance structure, variations in administrative capacity, and ongoing development of data governance frameworks create challenges in ensuring consistent and effective implementation. As a result, the transition from strategic intent to operational outcomes is uneven across sectors and administrative levels.

The findings of this study underscore that digital government should be understood as a systemic and institutional transformation rather than a purely technological or policy-driven process. The effectiveness of digital transformation depends on the alignment between strategic vision, governance structures, and implementation mechanisms. In this context, institutional capacity—including coordination capability, organizational readiness, and execution discipline—plays a decisive role in translating policy into practice.

More broadly, the study contributes to the literature by emphasizing the importance of institutional linkages in shaping digital transformation trajectories within multi-level governance systems. It suggests that future research should further explore how different institutional configurations influence implementation outcomes, particularly in developing and transitional contexts. Strengthening these linkages remains a critical priority for countries seeking to advance digital government and achieve sustainable public sector transformation.

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