



Applications of digital governance in public administration: A systematic review of Southeast Asian studies

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Abstract

Aim: This study examines the applications of digital governance in public administration across Southeast Asia through a systematic review of empirical studies. The review identifies dominant digital governance applications, administrative functions, implementation outcomes, governance constraints, and emerging policy implications across the region.

Methodology: A systematic review design was adopted following PRISMA-based screening and selection procedures. Peer-reviewed journal articles published between 2020 and 2025 were retrieved from the Scopus database using country-specific digital governance search strings. After eligibility assessment and verification, 117 empirical studies were included in the final synthesis. Data extraction and thematic analysis were guided through Digital Era Governance (DEG) theory to examine patterns of reintegration, digitization, and citizen-oriented governance across Southeast Asian public administration systems.

Results: The findings show that digital governance in Southeast Asia spans public service delivery platforms, smart city systems, citizen participation mechanisms, regulatory governance, artificial intelligence applications, sector-specific digital systems, and crisis governance technologies. Reported outcomes include improved administrative efficiency, expanded service accessibility, stronger transparency mechanisms, and increased use of data-driven governance tools. However, implementation continues to face major constraints related to digital inequality, infrastructure fragmentation, interoperability limitations, weak institutional coordination, cybersecurity risks, regulatory gaps, and uneven citizen participation. The evidence base also remains concentrated in a limited number of countries, with fewer comparative and longitudinal regional studies.

Conclusion: Digital governance increasingly functions as a mechanism for administrative modernization, institutional coordination, and regulatory adaptation across Southeast Asia. However, implementation outcomes remain uneven due to differences in governance capacity, infrastructure readiness, fiscal resources, and political conditions. The review highlights the importance of interoperable governance systems, inclusive digital access, stronger regulatory frameworks, and sustained institutional coordination to support accountable and sustainable digital transformation in Southeast Asian public administration.

Keywords: *digital governance, public administration, systematic review, Southeast Asia, digital transformation*

INTRODUCTION

Digital governance refers to the integration of information and communication technologies (ICT) into public administration processes to improve how governments deliver services, manage information, and interact with citizens. It extends the concept of e-government, which focuses on the use of digital platforms to provide public services and facilitate communication between government and stakeholders (Malodia et al., 2021). E-government initiatives commonly include online service portals (Guo, 2024), digital records systems (Kashaija, 2022), automated workflows (Vrabie, 2025), and electronic communication platforms (Alenzi & Miskon, 2024) that support administrative functions. These systems aim to modernize government operations and increase access to public services through digital means. Scholars describe e-governance as a broader concept that includes not only service delivery but also the use of ICT to support transparency, accountability, and citizen participation in governance processes (Cho, 2023). Research has linked digital systems to improvements in administrative efficiency and service quality, as well as enhanced interaction



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between governments and citizens (Dunleavy & Margetts, 2025). Digital governance therefore represents a shift from paper-based and manual systems toward technology-enabled public administration structures.

Governments across Southeast Asia increasingly treat digital governance as part of national administrative reform and public sector modernization programs (Taufiqurokhman et al., 2025). Singapore's Smart Nation initiative (Sipahi et al., 2024), Indonesia's Sistem Pemerintahan Berbasis Elektronik (SPBE) (Ahad & Barsei, 2023), Thailand's Thailand 4.0 agenda (Choi & Kenney, 2024), Vietnam's National Digital Transformation Program (Chuc & Anh, 2023), and the Philippines' expanding e-government systems (Palma et al., 2023) illustrate state-led efforts to digitize administrative processes and public services. These reforms seek to improve service efficiency, inter-agency coordination, regulatory management, and citizen access to government transactions. Digital platforms now support taxation, licensing, transportation systems, social welfare administration, public health monitoring, land management, and local governance operations across the region (Serohin et al., 2025).

At the same time, digital governance expansion across Southeast Asia reveals uneven institutional capacity and implementation conditions. Countries differ in digital infrastructure, fiscal resources, regulatory readiness, cybersecurity systems, and administrative coordination (Chen et al., 2023). Urban centers often demonstrate stronger digital integration than rural and geographically isolated communities. Several studies also identify persistent digital inequality linked to internet access, affordability of devices, digital literacy, and uneven technological readiness among citizens and public officials (Omweri, 2024). These conditions affect the accessibility and effectiveness of digital public services, particularly among marginalized populations and lower-capacity local governments.

Across Southeast Asia, governments have introduced centralized databases, automated licensing platforms, mobile applications, and digital dashboards to modernize administrative functions. Despite these developments, the application of digital governance across public administration functions varies considerably across countries. Existing studies often focus on single-country experiences or specific digital tools, resulting in fragmented evidence across the region and limited understanding of shared administrative patterns, governance constraints, and institutional differences. There remains a lack of consolidated evidence that identifies dominant application areas, commonly reported outcomes, and shared implementation constraints across Southeast Asian public sectors. Current literature also gives limited attention to cross-country synthesis that connects digital governance practices with public administration functions, regulatory conditions, and governance outcomes at the regional level.

Policy and governance concerns also remain visible across the literature. Studies discuss fragmented legal frameworks, interoperability problems, weak inter-agency coordination, surveillance concerns, and inconsistent regulatory environments affecting digital governance implementation (Lingam & Raghavendra, 2026). Public trust and citizen participation also vary across contexts, especially in states where censorship concerns, political control, or administrative fragmentation affect online engagement and data governance (Asimakopoulos et al., 2025). Although governments continue to expand digital platforms and smart governance systems, institutional and political conditions continue to shape the outcomes and sustainability of digital reform across Southeast Asia.

This systematic review addresses this gap through a regional synthesis of empirical studies across Southeast Asian public sectors rather than examination of one country or one digital platform alone. Unlike prior empirical works that concentrate on isolated technologies or country-specific implementation, this study consolidates evidence across multiple governance domains and institutional settings to identify recurring trends, outcomes, and constraints. The study examines the types of digital tools adopted, the administrative functions involved, and the outcomes documented in the literature. The review also contributes to public administration scholarship through synthesis of how digital governance reshapes administrative coordination, citizen interaction, accountability mechanisms, and regulatory adaptation across varying political and institutional contexts in Southeast Asia.

In addition, the study offers policy relevance for governments, regional institutions, and public sector agencies involved in digital transformation initiatives. The findings present evidence on recurring implementation barriers such as infrastructure fragmentation, uneven digital access, legal uncertainty, and institutional coordination problems that continue to affect governance outcomes across the region. The synthesis also provides a regional evidence base that can support future digital governance planning, administrative reform initiatives, and comparative policy evaluation in Southeast Asia. Through regional synthesis, the review aims to clarify patterns of digital governance implementation and identify areas where further research is needed to advance public sector digital transformation in the region.

Review of Related Literature and Studies

Existing literature on digital governance in Southeast Asia presents diverse applications across multiple public administration functions. Governments across the region have introduced centralized databases, automated licensing systems, digital dashboards, mobile governance applications, smart city platforms, and electronic participation mechanisms to modernize public sector operations. Studies describe digital governance applications in transportation



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systems, environmental management, healthcare monitoring, taxation systems, local governance, judicial reform, disaster governance, and public participation platforms (Ngo & Do, 2024; McDermott et al., 2025; Hoa, 2024). Several studies also discuss the increasing use of artificial intelligence, blockchain systems, data analytics, and digital participation platforms within administrative processes and regulatory management (Alamsyah & Aryfiyanto, 2025; Thoppae & Praneetpolgrang, 2021).

Research further reports positive governance outcomes associated with digital transformation initiatives. Studies link digital governance systems with improvements in service efficiency, transparency, administrative coordination, public participation, and decision-making processes (Fadrial et al., 2024; Hien et al., 2024). Digital platforms also support faster processing of government transactions, improved information accessibility, and wider citizen engagement in governance activities (Tran Pham & Nguyen, 2024). Smart governance systems in countries such as Singapore, Indonesia, Thailand, and Vietnam also demonstrate efforts to integrate data-driven management into urban planning, public safety, and regulatory systems (Sha & Taihagh, 2024; Sunindyo et al., 2025).

At the same time, several studies identify recurring governance and implementation constraints across Southeast Asia. Common issues include fragmented legal frameworks, weak interoperability across agencies, cybersecurity risks, data privacy concerns, institutional resistance, and uneven regulatory environments (Lingam & Raghavendra, 2026). Studies also report concerns related to surveillance, censorship, political control, and unequal citizen participation in digital governance systems, particularly in politically restrictive contexts (Asimakopoulos et al., 2025; Nguyen & Nguyen, 2025). Public trust and civic participation therefore vary across national and institutional settings. Current literature nevertheless remains fragmented across countries, sectors, and specific technologies. Many studies focus on single-country experiences, isolated platforms, or particular governance applications without broader regional synthesis. Existing scholarship gives limited attention to comparative analysis across Southeast Asian public sectors that identifies recurring administrative patterns, governance outcomes, implementation barriers, and institutional differences at the regional level. Limited synthesis also exists regarding how digital governance reshapes administrative coordination, accountability mechanisms, citizen interaction, and regulatory adaptation across different governance contexts.

This systematic review addresses these gaps through a regional synthesis of empirical studies on digital governance across Southeast Asian public sectors. Unlike prior studies that concentrate on specific technologies or country-level implementation alone, this review consolidates evidence across multiple governance domains and institutional settings to identify recurring trends, dominant applications, reported outcomes, and implementation constraints. The study also contributes to public administration scholarship through synthesis of how digital governance influences administrative reform, regulatory adaptation, accountability systems, and citizen engagement across varying political and institutional conditions in Southeast Asia. In addition, the study offers policy relevance for governments, regional institutions, and public sector agencies involved in digital transformation initiatives. The findings provide evidence regarding recurring implementation barriers such as infrastructure fragmentation, unequal digital access, legal uncertainty, and institutional coordination problems that continue to affect governance outcomes across the region. The synthesis also provides a regional evidence base that can support future digital governance planning, administrative reform initiatives, and comparative policy evaluation in Southeast Asia. Through regional synthesis, the review seeks to clarify patterns of digital governance implementation and identify areas requiring further research to advance public sector digital transformation in the region.

Theoretical Framework

This study is grounded in Digital Era Governance (DEG) theory developed by Dunleavy, Margetts, Bastow, and Tinkler (2006). DEG explains how governments move away from fragmented administrative systems toward integrated, citizen-centered digital structures.



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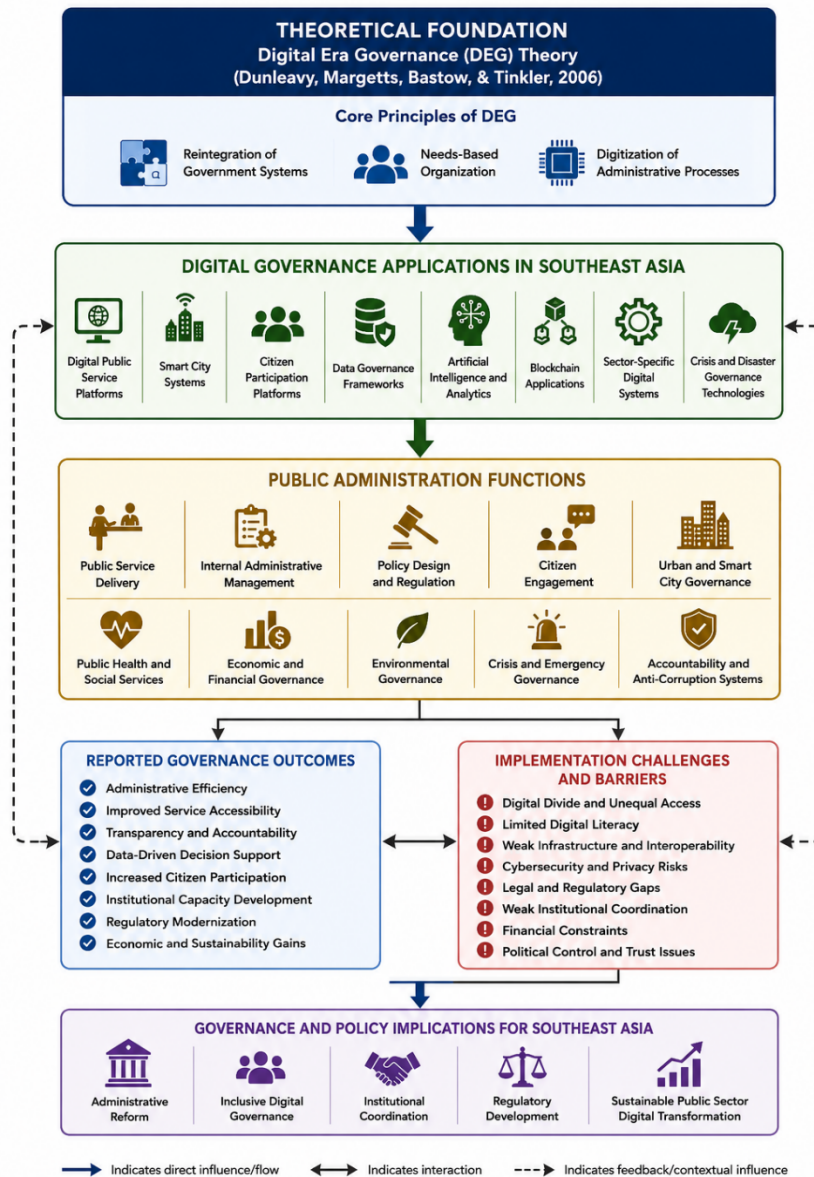


Figure 1. Conceptual Framework of Digital Governance Applications in Public Administration Across Southeast Asia

It highlights three core principles: reintegration of agencies through shared systems, needs-based organization focused on citizen requirements, and digitization of administrative processes. Digital infrastructure is treated as central to governance reform rather than a support function. Later discussions of the framework further describe digital reform as a structural redesign of governance through online platforms, shared databases, and interoperable systems (Dunleavy & Margetts, 2025). DEG provides a lens for analyzing how digital tools reshape public administration. Reintegration reduces agency fragmentation, needs-based organization aligns services with user demands, and digitization replaces manual processes with electronic systems. These changes are linked to improvements in efficiency, transparency, and coordination. This study applies DEG to examine digital governance applications, administrative functions, outcomes, and implementation challenges across Southeast Asia. Identified tools, such as service portals and shared databases, reflect reintegration and digitization. Reported gains in efficiency and transparency align with DEG's expected effects, while infrastructure gaps and coordination issues represent barriers



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to full digital integration. Based on DEG, Figure 1 shows the framework of digital governance applications in public administration across Southeast Asia.

Statement of the Problem

This study examines how digital governance is applied in public administration across Southeast Asia through a systematic review of existing empirical studies. Although digital governance has expanded rapidly in the region, there is still limited consolidated evidence on how these initiatives are implemented across core administrative functions such as service delivery, internal management, policy execution, citizen participation, and inter-agency coordination. Governments have introduced online portals, integrated information systems, mobile applications, automated licensing systems, and digital feedback platforms to address bureaucratic delays, transparency issues, weak accountability, and coordination gaps. However, existing studies differ widely in scope and method, often focusing on single-country cases or specific tools, and rarely offering regional synthesis. As a result, there is no clear overall picture of which public administration functions most actively adopt digital governance, what outcomes are consistently reported, and what barriers persist.

The absence of regional synthesis limits comparative understanding of how institutional conditions, governance capacity, regulatory environments, and technological readiness shape digital governance outcomes across Southeast Asia. Existing literature also gives limited attention to recurring implementation constraints such as digital inequality, infrastructure fragmentation, inter-agency coordination problems, cybersecurity concerns, and uneven citizen participation across different political and administrative settings. Without consolidated regional evidence, policymakers and public sector institutions face difficulty identifying common governance patterns, shared implementation issues, and areas requiring policy and administrative reform.

This review therefore synthesizes empirical findings from Southeast Asian studies to clarify patterns of application, reported results, recurring challenges, and research gaps, while also examining how digital governance influences administrative modernization, institutional coordination, transparency mechanisms, and citizen interaction across varying governance contexts in the region. The study seeks to contribute regional evidence that can support future digital governance planning, comparative public administration research, and policy evaluation initiatives across Southeast Asia.

Research Objectives

To systematically review and synthesize empirical studies on the applications of digital governance in public administration across Southeast Asia in order to examine regional patterns of implementation, governance outcomes, institutional challenges, and emerging policy implications.

Research Questions

1. What forms of digital governance applications are reported in public administration studies in Southeast Asia?
2. Which public administration functions most commonly apply digital governance tools in the region?
3. What outcomes of digital governance implementation are reported in Southeast Asian public sector studies?
4. What challenges and constraints are identified in applying digital governance in public administration?
5. What gaps and future research directions emerge from existing Southeast Asian studies on digital governance?
6. What governance and policy implications emerge from the implementation of digital governance across Southeast Asian public administration systems?

METHODS

Research Design

This study adopted a systematic review design to identify, screen, assess, and synthesize empirical research on digital governance applications in public administration across Southeast Asia. The review followed a clearly defined protocol grounded in established systematic review reporting standards to promote transparency and consistency in study selection and analysis. The procedure included database searching, application of eligibility criteria, duplicate removal, screening and verification, data extraction, and thematic synthesis of findings drawn from the included studies. The study focused on published empirical evidence rather than primary field data and examined regional patterns across multiple Southeast Asian governance contexts.



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Data Source

The literature search was conducted exclusively using the Scopus database. Scopus was selected due to its broad coverage of peer-reviewed journals and its strong indexing of studies in public administration and governance. Limiting the search to a single database ensured consistency in retrieval, filtering, and citation tracking procedures. Scopus also provides extensive coverage of international and regional journals relevant to digital governance, e-government, public administration, and digital transformation research. The database supports advanced filtering and citation management functions that strengthened consistency during article retrieval and screening.

Search Strategy

Searches were performed in Scopus using the query format: "country name" AND "digital governance", applied to TITLE-ABS-KEY (title, abstract, and keywords). The following filters were applied: Document type: Article; Publication years: 2020–2025 and Geographic scope: Southeast Asian countries (as reflected in the search string). The search covered Brunei, Cambodia, Indonesia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, and Vietnam. The search process was conducted during February to March 2026. Searches were carried out systematically across the identified countries using the same keyword format and filtering conditions to maintain retrieval consistency. Manual browsing of retrieved records was also conducted during screening to verify relevance to public administration and digital governance contexts. The initial search yielded a total of 398 records. Table 1 presents the distribution of retrieved records by country.

Table 1

Distribution of Retrieved Scopus Articles on Digital Governance in Southeast Asia (2020–2025), Arranged from Highest to Lowest

SEA Country	Number of Retrieved Articles
Singapore	88
Indonesia	84
Vietnam	83
Thailand	67
Philippines	38
Myanmar	19
Cambodia	10
Brunei	7
Timor-Leste	2
Total	398

Instruments for Data Extraction and Coding

This study used a researcher-developed data extraction and coding matrix designed specifically for the objectives of the systematic review. The matrix served as the primary analytical instrument for organizing bibliographic information, study characteristics, governance applications, administrative functions, implementation outcomes, reported constraints, and identified research gaps. The extraction matrix also guided thematic coding and synthesis across the included studies. The coding categories were aligned with the research questions and theoretical foundation of the study, particularly the dimensions of Digital Era Governance (DEG) theory related to reintegration, needs-based organization, and digitization of administrative processes. Coding and classification were conducted manually through repeated examination and comparison of study findings to identify recurring themes and regional patterns.

Inclusion and Exclusion Criteria

Studies were included if they met the following criteria: (1) empirical research using qualitative, quantitative, or mixed methods; (2) journal articles indexed in Scopus between 2020 and 2025; (3) focused on digital governance or digital government applications; (4) examined public administration or public sector contexts; (5) conducted in one or more Southeast Asian countries; and (6) written in English. Meanwhile, studies were excluded if they focused solely on private sector digitalization, were conceptual or theoretical papers without empirical evidence, did not specify a Southeast Asian context, or were opinion articles, editorials, and other non-scholarly reports.

Screening and Selection Process

The screening and selection process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to ensure transparency and clarity in reporting. PRISMA provides a standardized structure for documenting how studies are identified, screened, assessed for eligibility, and included in a review. In this study, the process began with 398 records identified through the Scopus database. After removing duplicate entries, 311 records remained. Additional verification checks, including the removal of records flagged during study review (such as AIP removals), resulted in 297 records eligible for screening.

Following PRISMA's screening stage, titles and metadata were examined to assess preliminary relevance to digital governance in public administration, reducing the dataset to 131 potentially relevant studies. During the eligibility stage, abstract screening was conducted, and 14 records were excluded due to inaccessibility of the full text. Ultimately, 117 studies satisfied all inclusion criteria and were included in the final synthesis. The complete study selection process is illustrated in the PRISMA flow diagram presented in Figure 2.

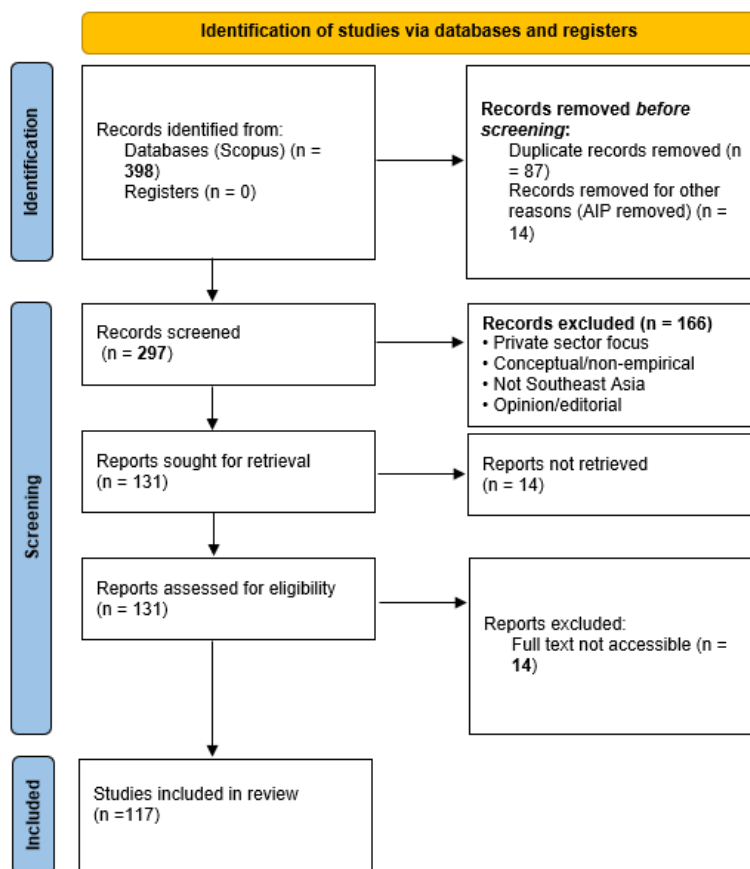


Figure 2. PRISMA Flow Diagram of Study Identification and Screening Process

Data Extraction

The extraction focused on both bibliographic information and substantive study characteristics relevant to digital governance in public administration. For each included article, the following variables were recorded: Southeast Asian country, authors, title, year of publication, source title (journal), DOI, and access link.

Beyond bibliographic details, the extraction emphasized analytical variables central to the review objectives. Each study was examined to determine whether it clearly addressed digital governance, the specific digital governance application discussed, the public administration function involved (e.g., service delivery, internal management, policy implementation, citizen engagement, or inter-agency coordination), the reported outcomes of implementation, and the



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challenges or constraints identified. The methodological orientation of each study (quantitative, qualitative, or mixed methods) was also documented to understand the nature of the evidence base. The extraction process followed the prepared coding matrix to maintain consistency in classification and thematic organization across all included studies.

Data Analysis

The 117 included studies were analyzed through thematic synthesis. The analysis focused on recurring patterns in published findings rather than primary data. Extracted information was organized around the review objectives: types of digital governance applications, administrative functions, reported outcomes, challenges, and research gaps.

Following Braun and Clarke's framework, the process involved familiarization with the dataset, development of initial codes, and grouping of related codes into themes. Themes were then reviewed, refined, and clearly defined to represent dominant patterns across the studies. The final themes captured application forms, implementation areas, outcomes, constraints, and gaps in the Southeast Asian literature. Findings were presented as a narrative synthesis that highlighted regional trends and cross-country variation. Coding and thematic interpretation were conducted manually through repeated reading, comparison, and consolidation of extracted findings. Analytical consistency was maintained through continuous alignment between extracted evidence, coding categories, and review objectives.

Ethical Considerations

This study relied exclusively on published articles indexed in Scopus and did not involve human participants, direct interviews, surveys, or primary field data collection. All included studies received proper citation to acknowledge original authors and prevent plagiarism. Data extraction and analysis followed principles of accuracy, neutrality, and transparency to prevent misinterpretation or selective reporting of findings.

The review also maintained academic integrity through systematic screening, consistent application of inclusion and exclusion criteria, and transparent documentation of the study selection process. Since the study used publicly accessible published literature, formal ethics board approval was not required. Data handling focused exclusively on published scholarly material and did not involve confidential records, personal identifiers, or restricted information.

Artificial intelligence tools were used only to assist in grammatical refinement and visual enhancement during preparation of the conceptual framework and selected manuscript visuals. All conceptual interpretation, thematic synthesis, analytical decisions, organization of findings, and scholarly content remained under the full evaluation, verification, and responsibility of the authors. AI-generated assistance was limited to language support and visual formatting enhancement and did not replace critical analysis, interpretation, or academic judgment.

RESULTS and DISCUSSION

Forms of Digital Governance Applications

Table 2 presents eight major forms of digital governance across Southeast Asia. The evidence shows that digital reform spans service platforms, smart urban systems, participation tools, regulatory frameworks, artificial intelligence, blockchain, sector-specific systems, and crisis technologies.

Table 2

Forms of Digital Governance Applications in Southeast Asia

Theme	Countries Observed	Supporting Studies
1. Digital Public Service Delivery Platforms	Indonesia, Philippines, Thailand, Vietnam, Singapore	Ayeo-Eo, 2026; Darusalam et al., 2024; Hoa, 2024; Lt et al., 2023; Nurlinah et al., 2025; Prachumrasee et al., 2025; Tiglao et al., 2023
2. Smart City and Urban Digital Governance Systems	Singapore, Indonesia, Thailand, Vietnam	Aldhi et al., 2025; Diaz-Sarachaga, 2025; Hansen & Dahiya, 2025; Irvine et al., 2022; Kamil et al., 2025; Lee, 2024; Pratama et al., 2023; Ruangwicha & Tuamsuk, 2026; Sha & Taeihagh, 2024; Sunindyo et al., 2025
3. Digital Participation and Citizen Engagement Platforms	Indonesia, Philippines, Cambodia, Thailand, Vietnam	Anindito et al., 2022; Jack et al., 2021; Ly & Ly, 2023; Nurlinah et al., 2025; Praratya et al., 2024; Quynh & Thanh, 2025; Tiglao et al., 2023; Tran et al., 2024



4. Data Governance and Regulatory Frameworks	Singapore, Indonesia, Vietnam, Thailand	Allen & Liao, 2025; Hicks, 2021; Lee & Lee, 2023; Le et al., 2025; Lysaght et al., 2023; Yuspin et al., 2023; Zhang, 2025
5. Artificial Intelligence and Advanced Analytics in Governance	Indonesia, Vietnam, Thailand, Singapore	Alamsyah & Aryfiyanto, 2025; Nguyen, 2025; Sereewatthanawut et al., 2026; Tran et al., 2025; Wardani et al., 2025; Lee, 2024
6. Blockchain and Distributed Ledger Applications	Indonesia, Thailand	Irawan et al., 2025; Thoppae & Praneetpolgrang, 2021; Yusni & Sigalingging, 2021
7. Sector-Specific Digital Governance Systems	Philippines, Indonesia, Myanmar, Singapore, Vietnam, Thailand	Dang & Vu, 2025; Goldstein & Faxon, 2022; Kusmiarto et al., 2021; Tiangco et al., 2024; Doan et al., 2025; Nguyen & Hong 2026; Dai et al., 2025
8. Crisis and Disaster Digital Governance Tools	Singapore, Philippines, Indonesia, Vietnam	Abdou, 2021; Das & Zhang, 2021; Turk, 2020; Li et al., 2022; Indra et al., 2025; Pratama et al., 2023

Digital public service delivery platforms appear across Indonesia, the Philippines, Thailand, Vietnam, and Singapore. National portals, e-licensing systems, and digital courts show a shift toward integrated service channels (Darusalam et al., 2024; Hoa, 2024; Tiglaio et al., 2023). These systems reduce physical transactions and centralize documentation. Countries with stronger institutional integration demonstrate higher platform maturity, especially Singapore and Indonesia (Prachumrasee et al., 2025). This pattern signals administrative consolidation through digital interfaces. From the perspective of Digital Era Governance (DEG), these developments illustrate reintegration of fragmented administrative functions into centralized digital systems that connect agencies, records, and service channels. The findings also indicate that governments increasingly position digital infrastructure as a core administrative mechanism rather than a supplementary communication tool. Meanwhile, smart city and urban digital governance systems are concentrated in Singapore, Indonesia, Thailand, and Vietnam. Smart Nation platforms in Singapore and SPBE integration in Indonesia indicate centralized digital coordination (Lee, 2024; Aldhi et al., 2025). Urban dashboards, IoT networks, and digital twins show reliance on data infrastructure for city management (Sha & Taeihagh, 2024; Irvine et al., 2022). Urban digital governance operates as a national development strategy rather than a municipal experiment. These systems demonstrate how DEG principles extend beyond digitization of records and services toward integration of governance, planning, infrastructure monitoring, and policy coordination through unified digital environments. Policy direction therefore shifts toward centralized digital coordination supported through national administrative reform agendas.

Digital participation and citizen engagement platforms extend participatory planning and complaint systems into digital space. Indonesia's e-musrenbang and online complaint systems illustrate this trend (Anindito et al., 2022; Nurlinah et al., 2025). Vietnam and Cambodia demonstrate social media governance and civic dialogue systems (Ly & Ly, 2023; Tran et al., 2024). Digital participation expands state-citizen communication, yet institutional control remains visible in centralized systems. This pattern partially aligns with DEG's principle of needs-based organization, where governments attempt to align services and communication channels with citizen demands and administrative accessibility. However, the findings also indicate that participation remains uneven across political contexts due to regulatory control, censorship concerns, and unequal access to digital platforms. Furthermore, data governance and regulatory frameworks reveal strong emphasis on legal modernization. Singapore and Vietnam have advanced personal data protection and AI governance policies (Lee & Lee, 2023; Le et al., 2025). Regulatory alignment with global standards such as GDPR appears in multiple jurisdictions (Hicks, 2021; Yuspin et al., 2023). Legal reform accompanies technological expansion. Digital growth therefore moves alongside regulatory recalibration. The findings suggest that digital governance expansion requires parallel institutional adaptation through updated legal frameworks, cybersecurity regulation, and data governance policies. Administrative modernization therefore depends not only on technological deployment but also on regulatory capacity and governance readiness.

Also, artificial intelligence and advanced analytics signal a shift toward predictive governance. AI screening tools and analytics platforms appear in Indonesia, Thailand, Singapore, and Vietnam (Nguyen, 2025; Sereewatthanawut et al., 2026). AI moderation and generative systems indicate state reliance on algorithmic decision tools (Lee, 2024). Governance increasingly relies on computational assessment rather than manual review. This transition illustrates DEG's emphasis on digitization of administrative processes, where automated systems increasingly influence policy implementation, administrative monitoring, and regulatory decision-making. The trend also raises governance concerns related to algorithmic transparency, public accountability, and ethical oversight across Southeast Asian public



institutions. Blockchain and distributed ledger applications remain limited but strategic. Indonesia and Thailand apply blockchain to document exchange and land certification (Irawan et al., 2025; Thoppae & Praneetpolgrang, 2021). Adoption centers on integrity-sensitive sectors. Scale remains narrow compared to AI and service portals. The limited scale of blockchain adoption indicates that highly technical governance systems still depend on institutional readiness, financial investment, and technical expertise before wider administrative integration becomes possible.

Sector-specific systems extend digital governance into health, land, environment, and higher education. Health registries in the Philippines and Vietnam show digitized service monitoring (Tiangco et al., 2024; Dang & Vu, 2025). Environmental and land systems in Indonesia illustrate resource governance integration (Kusmiarto et al., 2021). Sectoral digitalization indicates functional specialization across policy areas. Crisis and disaster governance tools accelerated during COVID-19. Singapore's SafeEntry system and contact tracing platforms across Southeast Asia illustrate emergency digital coordination (Abdou, 2021; Das & Zhang, 2021). Crisis dashboards and mapping tools extend digital capacity into risk governance (Indra et al., 2025). Emergency systems often precede permanent institutional reforms. The expansion of crisis technologies demonstrates how emergency conditions accelerated administrative digitization across Southeast Asia and normalized wider state reliance on digital monitoring systems. Policy implications emerge in relation to emergency preparedness, inter-agency coordination, and long-term governance adaptation during crises. Overall, across themes, digital governance in Southeast Asia demonstrates administrative integration, technological experimentation, and legal modernization. Differences in scale correspond with institutional capacity and political priorities. The evidence therefore indicates that digital governance outcomes remain strongly shaped through governance capacity, administrative coordination, regulatory systems, and state priorities across different Southeast Asian contexts.

Public Administration Functions Applying Digital Governance

Table 3 identifies nine functional areas where digital governance operates. Analysis shows that digitalization spans operational, regulatory, participatory, economic, environmental, and internal administrative domains.

Table 3

Public Administration Functions Applying Digital Governance in Southeast Asia

Subthemes	Countries Observed	Supporting Studies
1. Public Service Delivery and Administrative Operations	Indonesia, Philippines, Vietnam, Thailand, Singapore	Ayeo-Eo, 2026; Darusalam et al., 2024; Hoa, 2024; Hien et al., 2024; Kamil et al., 2025; Lt et al., 2023; Nurlinah et al., 2025; Prachumrasee et al., 2025; Rusmini et al., 2025; Tiglao et al., 2023
2. Policy Design, Regulation, and Legal Governance	Singapore, Indonesia, Vietnam, Thailand	Allen & Liao, 2025; Hicks, 2021; Lee & Lee, 2023; Le et al., 2025; Bui, 2025; Yuspin et al., 2023; Zhang, 2025; Anansaringkarn & Neo, 2021
3. Citizen Engagement and Participatory Governance	Indonesia, Philippines, Cambodia, Vietnam, Thailand	Anindito et al., 2022; Jack et al., 2021; Ly & Ly, 2023; Nurlinah et al., 2025; Praratya et al., 2024; Quynh & Thanh, 2025; Tran et al., 2024; Prachumrasee et al., 2024
4. Urban Governance and Smart City Management	Singapore, Indonesia, Thailand, Vietnam	Aldhi et al., 2025; Dai et al., 2025; Irvine et al., 2022; Ngo & Do, 2024; Pratama et al., 2023; Ruangwicha & Tuamsuk, 2026; Sha & Taeihagh, 2024;
5. Public Health and Social Service Governance	Singapore, Philippines, Indonesia, Vietnam	Abdou, 2021; Das & Zhang, 2021; Hansen & Dahiya, 2025; Irawan et al., 2025; Li et al., 2022; Tiangco et al., 2024; Nguyen, 2023
6. Economic Governance and Financial Administration	Singapore, Indonesia, Philippines, Vietnam, Thailand	Doan et al., 2025; Sunio et al., 2023; Tan, 2022; Munoz & Caceres, 2022; Dinh & Hai, 2024; Dellyana et al., 2023
7. Environmental and Resource Governance	Myanmar, Indonesia, Vietnam, Singapore, Thailand	Goldstein & Faxon, 2022; Heriyanto et al., 2025; Kusmiarto et al., 2021; Ngo & Do, 2024; Dai et al., 2025; Denfanapol et al., 2024



8. Crisis Management and Emergency Governance	Singapore, Philippines, Indonesia, Vietnam	Abdou, 2021; Das & Zhang, 2021; Indra et al., 2025; Turk, 2020; Pratama et al., 2023; Nguyen, 2023
9. Internal Governance, Accountability, and Anti-Corruption Systems	Thailand, Indonesia, Singapore, Vietnam	Darusalam et al., 2024; Febriyanti et al., 2023; Sereewatthanawut et al., 2026; Yuliana & Hasibuan, 2022; Trimanadi & Sensuse, 2025

Public service delivery remains the most visible domain of digital reform in Southeast Asia. Online permits, land registration systems, and digital identity platforms operate in Indonesia, Vietnam, and Singapore (Darusalam et al., 2024; Hien et al., 2024; Kamil et al., 2025). These systems reduce paperwork and shorten processing cycles. The findings support DEG’s argument that digitization reshapes administrative operations through integration of services, databases, and institutional processes into unified governance systems. Administrative efficiency therefore emerges not only from automation itself but also from consolidation of fragmented bureaucratic functions. Regulatory institutions also adjust to digital expansion. AI governance and cybersecurity frameworks in Singapore and Vietnam show that legal systems adapt alongside technological change (Lee & Lee, 2023; Le et al., 2025). Economic regulation follows similar patterns through digital trade rules and financial supervision reforms (Tan, 2022). The expansion of digital regulation also indicates that governance institutions increasingly require legal adaptation to address cybersecurity risks, digital transactions, and data governance responsibilities.

Citizen engagement platforms extend participation into digital channels. Indonesia’s e-musrenbang and Philippine complaint portals create new avenues for consultation (Anindito et al., 2022; Tiglaio et al., 2023). Urban governance integrates dashboards, smart mobility systems, and data-driven planning tools in cities such as Singapore and Bangkok (Aldhi et al., 2025; Sha & Taeihagh, 2024). These systems link infrastructure management with centralized data platforms. These findings align with DEG’s needs-based organization principle, where digital systems attempt to align governance services with citizen demands, mobility patterns, and urban management requirements. Public administration therefore shifts toward data-oriented coordination and real-time administrative monitoring. Public health governance shows rapid digital uptake, especially during the pandemic. Contact tracing and digital health registries in Singapore and the Philippines demonstrate institutional adjustment during crisis periods (Abdou, 2021; Tiangco et al., 2024). Emergency conditions accelerated institutional acceptance of digital governance systems and strengthened state reliance on centralized digital coordination mechanisms.

Moreover, economic and environmental governance also rely on digital systems. Tax digitization and banking reforms expand financial oversight in Indonesia and Vietnam (Doan et al., 2025; Munoz & Caceres, 2022). Climate monitoring and land management platforms in Indonesia and Myanmar strengthen environmental administration (Goldstein & Faxon, 2022; Heriyanto et al., 2025). Crisis dashboards and emergency coordination systems institutionalize digital tools beyond temporary emergencies (Indra et al., 2025). Internal accountability systems, including corruption complaint screening and performance monitoring in Thailand and Indonesia, enhance administrative transparency (Febriyanti et al., 2023; Trimanadi & Sensuse, 2025). Digital governance now operates across both external service functions and internal state management processes. The findings therefore suggest that digital governance in Southeast Asia no longer functions solely as an online service mechanism. Instead, digital systems increasingly influence policy coordination, regulatory oversight, fiscal administration, accountability systems, and institutional decision-making processes across multiple governance sectors. Policy implications include the need for interoperable systems, stronger institutional coordination, and long-term investment in administrative digital capacity.

Reported Outcomes of Digital Governance Implementation

Table 4 synthesizes the reported outcomes of digital governance implementation across Southeast Asia.

Table 4
Reported Outcomes of Digital Governance Applications in Southeast Asia

Theme	Countries	Supporting Studies
1. Administrative Efficiency and Process Optimization	Philippines, Indonesia, Singapore, Thailand, Vietnam	Djuraev et al. (2025); Darusalam et al. (2024); Thoppae & Praneetpolgrang (2021); Hansen & Dahiya (2025); Hoa (2024); Sereewatthanawut et al. (2026); Febriyanti et al. (2023)



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2. Improved Public Service Delivery and Accessibility	Brunei, Philippines, Indonesia, Singapore, Thailand, Vietnam	Haidi & Hamdan (2023); Abdou (2021); Lt et al. (2023); Anantanatorn (2025); Sha & Taeihagh (2024); Tiglaio et al. (2025)
3. Transparency, Accountability, and Anti-Corruption Gains	Indonesia, Thailand, Vietnam, Philippines	Darusalam et al. (2024); Anindito et al. (2022); Hoa (2024); Sereewatthanawut et al. (2026); Ayeo-Eo (2026)
4. Increased Citizen Engagement and Participation	Indonesia, Cambodia, Philippines, Vietnam, Singapore, Thailand	Wardani et al. (2025); Ly & Ly (2023); McDermott et al. (2025); Quynh & Thanh (2025); Shaker (2025); Prachumrasee et al. (2024)
5. Data-Driven Decision-Making and Policy Support	Indonesia, Singapore, Thailand, Vietnam	Heriyanto et al. (2025); Diaz-Sarachaga (2025); Tiglaio et al. (2025); Hien et al. (2024); Damrongrat et al. (2025)
6. Strengthened Digital Infrastructure and Institutional Capacity	Indonesia, Singapore, Thailand, Vietnam	Kamil et al. (2025); Lee (2024); Yuliana & Hasibuan (2022); Nguyen & Nguyen, 2025; Ruangwicha & Tuamsuk (2026)
7. Public Trust and Perceived Value Creation	Indonesia, Vietnam, Singapore	Nurlinah et al. (2025); Fadrial et al. (2024); Hien et al. (2024); Raimberdiev et al. (2025)
8. Regulatory Modernization and Legal Reform	Singapore, Vietnam, Indonesia, Thailand	Le et al. (2025); Lee (2024); Yuspin et al. (2023); Munoz & Caceres (2022); Ad'ha Aljunied (2020)
9. Economic and Sustainability Outcomes	Indonesia, Singapore, Thailand, Vietnam	Wang et al. (2026); Dai et al. (2025); Damrongrat et al. (2025); Kruk et al. (2025); Nguyen & Nguyen, 2025
10. Social Implications and Uneven Effects	Cambodia, Vietnam, Indonesia, Thailand, Singapore, Myanmar	Jack et al. (2021); Nga et al. (2025); Kusmiarto et al. (2021); Choi & Kenney (2024); Woods (2020); Auh & Kim (2025)

The evidence points first to gains in administrative efficiency and service continuity. Reduced processing time, workflow automation, and lower operating costs appear in the Philippines, Indonesia, Singapore, Thailand, and Vietnam (Darusalam et al., 2024; Hansen & Dahiya, 2025; Sereewatthanawut et al., 2026). During the pandemic, governments maintained service delivery through expanded online platforms and digital licensing systems (Abdou, 2021; Lt et al., 2023). Transparency mechanisms also improved in several cases. Online tracking of proposals, digital court publication, and automated complaint systems strengthened accountability in Indonesia, Thailand, and Vietnam (Anindito et al., 2022; Hoa, 2024). These outcomes support DEG assumptions that reintegrated digital systems can improve administrative coordination, reduce bureaucratic fragmentation, and expand accessibility of government services. The evidence also indicates that centralized digital systems strengthen continuity of governance functions during crisis conditions and administrative disruption.

Beyond efficiency and transparency, digital governance has reshaped participation and decision systems. Studies report higher e-political engagement and stronger youth participation across Indonesia, Cambodia, and Singapore (Wardani et al., 2025; Ly & Ly, 2023; Prachumrasee et al., 2024). Governments also rely more heavily on dashboards and predictive tools to guide planning and fiscal management (Diaz-Sarachaga, 2025; Heriyanto et al., 2025). Institutional capacity expanded through ICT investment, cybersecurity development, and workforce training in Indonesia and Singapore (Lee, 2024; Nguyen & Nguyen, 2025). Some studies indicate growth in public trust and perceived value creation where digital systems operate effectively (Nurlinah et al., 2025; Raimberdiev et al., 2025). Regulatory modernization accompanies these shifts through AI governance and data protection reform (Le et al., 2025; Yuspin et al., 2023). The findings indicate that digital governance increasingly influences institutional legitimacy, citizen interaction, and administrative responsiveness across Southeast Asian public sectors. Policy environments therefore require simultaneous attention to technology deployment, regulatory adaptation, and public accountability.

However, the outcomes remain uneven across contexts. Digital divide effects persist in Cambodia, Myanmar, and rural areas of Indonesia and Vietnam (Jack et al., 2021; Kusmiarto et al., 2021). Some citizens report limited uptake of portals despite infrastructure expansion (Nga et al., 2025). Concerns about surveillance and speech constraints appear in several settings (Woods, 2020; Choi & Kenney, 2024). Economic gains and sustainability indicators show positive trends in Singapore and Thailand, particularly in digital economy growth and smart city performance (Wang et al., 2026; Dai et al., 2025). The overall picture reveals strong administrative and economic effects, yet persistent equity and trust challenges remain within the region. These findings indicate that technological expansion alone does not automatically produce inclusive governance outcomes. DEG implementation remains dependent on



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institutional capacity, public trust, digital access, and governance accountability across different political and administrative settings.

Challenges and Constraints in Implementation

Table 5 presents cross-cutting constraints that limit the full impact of digital governance across Southeast Asia.

Table 5

Cross-Cutting Challenges in Digital Governance Across Southeast Asia

Theme	Countries	Supporting Studies (APA 7th)
1. Digital Divide and Unequal Access	Brunei, Cambodia, Indonesia, Myanmar, Philippines, Singapore, Thailand, Vietnam, Laos	Haidi & Hamdan (2023); Ly & Ly (2023); Rusmini et al. (2025); Auh & Kim (2025); Bokingkito et al. (2025); Tan (2022); Denfanapapol et al. (2024); Tran Pham & Nguyen (2024)
2. Limited Digital Literacy and Human Capacity Gaps	Brunei, Cambodia, Indonesia, Myanmar, Philippines, Thailand, Vietnam, Laos	Ayeo-Eo (2026); Jack et al. (2021); Dellyana et al. (2023); Sihotang et al. (2023); Prachumrasee et al. (2025); Dang & Vu (2025); Nguyen & Hong (2026)
3. Weak Infrastructure and Interoperability Problems	Cambodia, Indonesia, Myanmar, Philippines, Singapore, Thailand, Vietnam, Laos	Sihotang et al. (2023); Tiglao et al. (2025); Ruangwicha & Tuamsuk (2026); Ngo & Do (2024); Wang & Wang (2025); Goldstein & Faxon (2022)
4. Data Privacy, Surveillance, and Cybersecurity Risks	Indonesia, Philippines, Singapore, Thailand, Vietnam, Cambodia	Yuspin et al. (2023); Hansen & Dahiya (2025); Lee (2024); Nguyen (2023); Anansaringkarn & Neo (2021); Jack et al. (2021)
5. Legal and Regulatory Gaps	Indonesia, Singapore, Thailand, Vietnam, Philippines, Laos	Hicks (2021); Zhang (2025); Nguyen (2025); Doan et al. (2025); Djuraev et al. (2025)
6. Weak Institutional Coordination and Governance Fragmentation	Indonesia, Philippines, Thailand, Vietnam, Myanmar, Laos	Tiglao et al. (2025); McDermott et al. (2025); Ruangwicha & Tuamsuk (2026); Nguyen & Nguyen, 2025; Auh & Kim (2025)
7. Limited Citizen Participation and Tokenistic Engagement	Brunei, Cambodia, Indonesia, Singapore, Thailand, Vietnam, Laos	Molho (2023); Anindito et al. (2022); Shaker (2025); Nga et al. (2025)
8. Financial and Resource Constraints	Indonesia, Thailand, Vietnam, Singapore, Myanmar, Laos	Irawan et al. (2025); Irvine et al. (2022); Hoa (2024); Auh & Kim (2025)
9. Political Control, Censorship, and Trust Issues	Cambodia, Myanmar, Singapore, Thailand, Vietnam	Jack et al. (2021); Lee & Lee (2023); Anansaringkarn & Neo (2021); Nguyen (2023); Ad'ha Aljunied (2020)

The digital divide remains one of the most persistent barriers. Urban–rural gaps, device shortages, and connectivity disparities affect countries such as Cambodia, Myanmar, Indonesia, and Laos (Haidi & Hamdan, 2023; Ly & Ly, 2023; Rusmini et al., 2025). Marginalized groups and elderly populations face exclusion despite platform expansion (Auh & Kim, 2025). Limited digital literacy compounds access problems. Studies report skill deficits among both public officials and citizens in several countries, including the Philippines and Vietnam (Jack et al., 2021; Dellyana et al., 2023). Institutional training gaps slow administrative adaptation to new systems (Dang & Vu, 2025). These barriers weaken DEG's intended transition toward integrated and citizen-oriented governance because unequal access limits participation in digital public services and administrative systems.

Infrastructure and governance fragmentation create additional constraints. Several countries report data silos, incomplete national data centers, and system integration failures (Sihotang et al., 2023; Tiglao et al., 2025). Interoperability problems weaken cross-agency coordination in Indonesia, Thailand, and Vietnam (Ruangwicha & Tuamsuk, 2026). Legal uncertainty also limits digital reform. Inconsistent AI regulation and fragmented data protection



laws create ambiguity in policy enforcement (Hicks, 2021; Nguyen, 2025). Cybersecurity risks heighten public concern. Data breaches and surveillance anxieties affect trust in digital platforms in Singapore, Indonesia, and Cambodia (Yuspin et al., 2023; Lee, 2024). The findings therefore indicate that administrative digitization requires stronger institutional integration, cybersecurity governance, and regulatory coordination to sustain public trust and governance legitimacy.

In addition, political and institutional factors further shape implementation outcomes. Weak inter-agency coordination and bureaucratic rivalry hinder digital integration in Indonesia and the Philippines (Tiglao et al., 2025; Nguyen & Nguyen, 2025). Participation mechanisms often remain symbolic, with limited policy influence despite online platforms (Molho, 2023; Nga et al., 2025). Financial constraints also restrict sustainability, especially in lower-capacity municipalities (Irawan et al., 2025; Irvine et al., 2022). Concerns about executive control and censorship influence digital governance trajectories in Cambodia and Myanmar (Jack et al., 2021; Ad'ha Aljunied, 2020). These findings indicate that technological expansion alone does not resolve structural, institutional, and political constraints within Southeast Asian public sectors. Policy implications therefore extend beyond technical modernization and require institutional reform, governance accountability, inter-agency coordination, and inclusive regulatory systems capable of supporting long-term digital transformation.

Regional Synthesis, Research Gaps, and Future Directions

The review reveals several gaps in the Southeast Asian literature on digital governance. First, most studies concentrate on single-country cases, especially Singapore, Indonesia, and Vietnam, while countries such as Timor-Leste, Brunei, and Laos receive limited attention. This imbalance restricts regional comparison and limits understanding of variation across political and administrative systems. Second, many studies focus on specific tools such as portals, AI systems, or smart city dashboards without linking them to long-term institutional change. Few works examine cross-sector integration or longitudinal effects of digital reform. This pattern limits understanding of how DEG principles operate across long-term governance transformation and institutional restructuring in Southeast Asia.

Third, outcome measurement remains uneven. While efficiency and transparency receive strong emphasis (Darusalam et al., 2024; Sereewatthanawut et al., 2026), fewer studies assess equity, public trust over time, or unintended consequences such as exclusion and surveillance (Jack et al., 2021; Nga et al., 2025). Methodological gaps also appear in the evidence base. A significant portion of the literature relies on qualitative case studies, with limited large-scale quantitative assessment across countries. Comparative statistical analyses across Southeast Asia remain rare. There is also limited integration between digital governance research and political economy analysis, particularly in contexts where censorship and executive dominance shape digital trajectories (Ad'ha Aljunied, 2020; Lee & Lee, 2023). The findings indicate a need for future research that examines governance outcomes alongside institutional power relations, regulatory systems, and administrative capacity across different Southeast Asian states.

Future research can examine how institutional design, regime type, fiscal capacity, and administrative culture influence digital governance outcomes. More cross-country collaboration and mixed-method designs would strengthen regional synthesis and generate stronger empirical grounding for reform debates. Longitudinal and comparative studies can also provide stronger evidence regarding sustainability of digital governance reforms, citizen trust formation, and long-term administrative transformation across the region. Policymakers and public institutions can use such evidence to guide inclusive digital governance planning, institutional coordination, and regulatory modernization efforts in Southeast Asia.

Conclusions

This systematic review synthesizes 117 empirical studies on digital governance in Southeast Asia. The findings show that digital governance extends beyond online service provision and increasingly functions as a mechanism for administrative integration, regulatory modernization, institutional coordination, and data-driven governance. Public service delivery remains the most developed area, with evidence of reduced processing time, expanded online access, and improved continuity of government services across several countries. Smart city systems, digital participation platforms, AI governance tools, and sector-specific digital systems also indicate that Southeast Asian governments increasingly integrate digital technologies into planning, monitoring, regulation, and public administration functions.

The findings further indicate that the implementation of digital governance aligns with major principles of Digital Era Governance (DEG), particularly reintegration of fragmented administrative systems, digitization of governance processes, and expansion of citizen-oriented service platforms. However, implementation outcomes differ considerably across Southeast Asia due to variation in governance capacity, institutional coordination, regulatory readiness, fiscal resources, and digital infrastructure. Countries with stronger administrative integration and long-term digital governance strategies demonstrate more stable implementation outcomes, while lower-capacity settings continue to experience fragmented systems, infrastructure limitations, and uneven digital access.



The review also demonstrates that digital governance generates both administrative opportunities and governance risks. Efficiency gains, transparency improvements, and stronger data management coexist with concerns related to surveillance, digital exclusion, cybersecurity vulnerabilities, and unequal citizen participation. These findings indicate that technological modernization alone does not automatically produce inclusive or accountable governance outcomes. Sustainable digital transformation depends on institutional readiness, regulatory consistency, inter-agency coordination, public trust, and equitable digital access.

In addition, the study contributes regional evidence to public administration and digital governance scholarship through synthesis of cross-country implementation patterns, governance outcomes, and institutional constraints across Southeast Asia. The findings highlight the need for governance models that integrate technological innovation with democratic accountability, social inclusion, and regulatory adaptation. Digital governance in Southeast Asia therefore operates as a context-dependent administrative reform process shaped through political conditions, institutional arrangements, and state capacity rather than a uniform regional model.

Recommendations

National governments and public administration agencies across Southeast Asia may strengthen interoperability policies and inter-agency digital coordination systems to reduce fragmentation among public databases, licensing platforms, and administrative service portals. Development of unified standards for data exchange and digital coordination may improve administrative efficiency and reduce duplication across agencies.

Public sector institutions may expand digital literacy and technical capability programs for both government personnel and citizens, particularly in rural and lower-capacity communities. Targeted training programs for local government units, frontline personnel, and marginalized populations may improve accessibility and long-term utilization of digital public services.

Regulatory agencies and legislative institutions may strengthen legal frameworks related to cybersecurity, artificial intelligence, data privacy, and digital accountability. More consistent regulatory enforcement and updated governance policies may improve public trust and reduce uncertainty surrounding digital governance implementation.

Regional organizations and development institutions may support collaborative digital governance initiatives across Southeast Asia through technical cooperation, comparative benchmarking programs, and regional knowledge-sharing platforms. Stronger regional collaboration may generate more consistent governance standards and support lower-capacity states in digital transformation initiatives.

Future researchers may conduct longitudinal and comparative studies that examine long-term governance outcomes, citizen trust formation, administrative adaptation, and institutional sustainability associated with digital governance reforms. Mixed-method and cross-country studies may also strengthen empirical understanding of how political systems, fiscal conditions, and governance capacity influence digital governance outcomes across Southeast Asia.

Public administration scholars and policymakers may also expand evaluation frameworks beyond efficiency indicators to include equity, accessibility, transparency, public trust, and citizen experience. Broader governance evaluation criteria may provide stronger evidence for inclusive and accountable digital governance reform across the region.

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