

Digital Governance Models in Developing Countries and the Effectiveness of Public Services

Taufiqurokhman Taufiqurokhman^{1*}, Evi Satispi², Lusi Andriyani³, Usni⁴, Miftahul Ulum⁵

^{1,2}Doctoral Program in Public Administration, Universitas Muhammadiyah Jakarta, Indonesia

^{3,4,5}Faculty of Social and Political Sciences, Universitas Muhammadiyah Jakarta, Indonesia

*Corresponding Author: taufiqurokhman@umj.ac.id

ARTICLE INFO	ABSTRACT
<p>Keyword: <i>Digital governance models;</i> <i>Developing countries;</i> <i>Public service;</i> <i>Service effectiveness</i></p>	<p>This research comparatively examines digital governance models in Jakarta, Kuala Lumpur, and Manila, assessing their implications for public service effectiveness and citizen participation. The study's urgency stems from the rapid integration of digital technology in governance, demanding a deep understanding of best practices and challenges in developing nations. Using a qualitative comparative case study approach, the methodology involved thematic analysis of policy documents, government reports, and in-depth interviews with nine key informants, including e-government officials, academics, and civil society representatives. Key findings reveal significant variations in digital infrastructure maturity, regulatory frameworks, and institutional capacity across these cities. Nevertheless, a consistent pattern shows that effective digital governance implementation correlates positively with increased public service accessibility and enhanced citizen participation via digital platforms. The study concludes that successful digital governance in developing countries relies not only on technology but also on crucial contextual factors like political commitment, adaptive regulations, and a supportive digital culture. This research offers strategic guidance for policymakers to design more responsive and inclusive digital government models, contributing significantly to the literature on comparative government and public administration.</p>

INTRODUCTION

Digital governance has emerged as a cornerstone of state administration worldwide, promising enhanced efficiency, transparency, and public participation. In developing countries, adopting digital technology in public administration is no longer an option, but a necessity to meet the increasing public demand for high-quality, accessible services (Aydiner, 2020). With the rapid advancement of Information and Communication Technology (ICT), public expectations for swift, accurate, and transparent services continue to rise. However, developing nations face unique challenges, including infrastructure limitations, suboptimal institutional capacity, and significant digital divides. Therefore, this research is crucial to understand how digital governance models are implemented in this context and to what extent their application can improve public service effectiveness (Crăciun, 2023).

Experts have highlighted various critical aspects of effective digital governance implementation. Taufiqurokhman and Evi Satispi (2018) from Universitas Muhammadiyah Jakarta emphasize that an effective model centers on transforming civil servant behavior

toward a service-oriented approach and building partnerships between the government and society. Success lies not merely in technology implementation but in the ability to create appropriate and efficient service systems supported by competent human resources, including procedure simplification and improved accessibility (Haraguchi, 2024). Similarly, Anwar Shah (2017) from the World Bank Institute explains that effective digital governance in developing countries must integrate technology with institutional reform and human resource capacity. Shah asserts that technology is merely a tool; its success heavily depends on organizational readiness, strong leadership, and a supportive legal framework. Richard Heeks (2022) from the University of Manchester points out that e-government project failures in developing countries often stem from a "design-reality gap," a misalignment between complex system designs and simpler contextual realities. Heeks argues that the focus should be on solutions suitable for local contexts and existing capacities, rather than simply replicating models from developed nations (HosseiniNasab, 2024). These experts' views underscore that the effectiveness of digital governance in developing countries relies not only on technical aspects but also on dimensions of governance, institutional frameworks, and contextual adaptation (M. R. Lopes, 2020).

The commitment to digital governance development is also evident in the regulatory frameworks of various countries (Omar, 2020). Indonesia, for instance, has Presidential Regulation Number 95 of 2018 concerning the Electronic-Based Government System (SPBE), which aims to achieve clean, effective, transparent, and accountable governance, as well as reliable, high-quality public services (Arion et al., 2024). In Malaysia, digital government efforts are supported by the Malaysian Public Sector ICT Strategic Plan (MyICT) and the Digital Government Strategy, which emphasize service integration and efficiency improvements through technology. Meanwhile, in the Philippines, Republic Act No. 11032, or the Ease of Doing Business and Efficient Government Service Delivery Act of 2018, and the e-Government Master Plan serve as legal bases for simplifying business procedures and enhancing government services through digitalization (de Groot, 2018). Although these three countries possess strong legal and strategic foundations, their on-the-ground implementation faces diverse challenges, which are the focus of this research's exploration (Lv, 2023).

This research holds high relevance, given that digital governance is a vital pillar in the sustainable development agenda and improving citizens' quality of life (Stoykova, 2024). The deep-seated need to address the research gap concerning comparative digital governance models in various developing countries underscores the urgency of this study. While numerous studies on e-government exist, most tend to focus on single cases or are prescriptive without in-depth comparative analysis of contextual factors influencing success in developing countries (AbdulKareem & Oladimeji, 2024). By comparing approaches and outcomes across several nations, this research can identify best practices and lessons learned, highly relevant for policymakers worldwide (Santaniello, 2022).

The primary research problem addresses how digital governance models implemented in various developing countries differ and the extent to which these differences affect public service effectiveness and levels of community participation. Furthermore, this research aims to identify specific driving and inhibiting factors in the developing country context that influence the success of digital governance implementation. Without a comprehensive understanding of these dynamics, digital governance initiatives risk being costly yet ineffective, or even widening digital and social divides (Wang, 2024).

The novelty offered by this research lies in its systematic comparative analysis of digital governance models in developing countries, an area not extensively explored in academic literature (Warsono, 2023). The identified research gap is the lack of studies explicitly comparing various approaches to digital governance implementation in developing countries and empirically linking them to indicators of public service effectiveness and community participation, while accounting for unique contextual factors. Previous research often fails to provide a holistic overview of how policy, infrastructure, capacity, and culture interact to shape diverse digital governance outcomes in developing countries.

The anticipated novel findings from this research include identifying successful and unsuccessful adaptation patterns of digital governance models in developing countries, as well

as proposing a more relevant conceptual framework for analyzing implementation success in this context. This research also expects to identify key variables that strengthen or hinder community participation through digital platforms and measure the real impact on public service quality through case studies (Sururi, 2017). The novel approach offered is the integration of technical, institutional, and social perspectives in comparative analysis, which is expected to provide new insights into the research topic, not only on the technical aspects of implementation but also on governance and citizen participation dimensions (Dewi, 2019).

This research explicitly focuses on digital governance models in developing countries. Its scope is delimited by selecting three representative developing countries—Indonesia, Malaysia, and the Philippines—based on criteria such as technology adoption rates, government commitment to e-government, and data availability (Melati & Asmorowati, 2023). The primary focus is on two key indicators: *public service effectiveness* (measured by the availability, accessibility, and quality of digital services) and *community participation* (measured by the use of e-participation platforms and citizen feedback). Highly detailed technical infrastructure aspects or very specific cybersecurity issues will be discussed only as far as relevant to their impact on services and participation, but they will not be the core subject (Mansur, 2021).

The research problem formulation encompasses four main questions: (1) How do digital governance models in Indonesia, Malaysia, and the Philippines differ in terms of policy, implementation, and characteristics? (2) To what extent do the digital governance models implemented in these three countries contribute to improved public service effectiveness? (3) How do digital governance models influence the level and quality of community participation in these three countries? (4) What contextual factors are the main drivers and inhibitors of successful digital governance implementation in developing countries, particularly concerning public services and community participation? (Sururi, 2017).

The objectives of this research are to: (1) Identify and comparatively analyze the digital governance models implemented in Indonesia, Malaysia, and the Philippines; (2) Evaluate the impact of digital governance models on public service effectiveness in the three studied countries; (3) Analyze the influence of digital governance models on the level of community participation in the three studied countries; and (4) Identify and explain the driving and inhibiting factors for successful digital governance implementation in developing countries within the context of public services and community participation (Desrinelti et al., 2021).

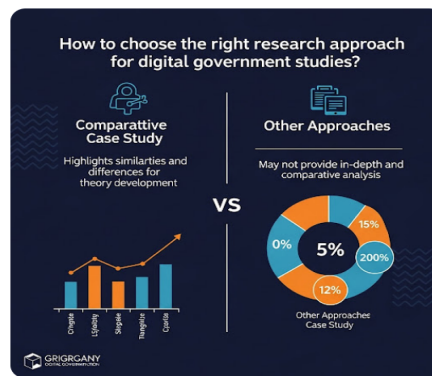
The theoretical benefit of this research is to enrich the body of knowledge in public administration, particularly in comparative governance and e-governance studies. The research findings are expected to contribute a new conceptual framework relevant for analyzing digital governance in developing countries, as well as identify important variables for future research (Arion et al., 2024). Practically, this research aims to provide concrete policy recommendations for developing country governments in formulating more effective, efficient, and inclusive digital governance implementation strategies. The findings can also serve as a reference for international organizations, donor agencies, and civil society involved in digital capacity building and good governance initiatives (Bahtiar, 2022).

METHOD

The research employs a qualitative method with a comparative case study approach to delve into the complexities of digital governance in developing countries (T. G. Bond, 2020). This methodology is essential for understanding the contextual nuances, interpretations, and the enabling and hindering factors that influence the success or failure of digital initiatives (Borisenko, 2020). The primary focus is to analyze how digital government models differ across various developing nations, and the extent to which these differences affect the effectiveness of public services and the level of citizen participation (M. Bond, 2020).

The research informants utilized by the author consist of nine key informants (three e-government officials, academics, and civil society representatives) through in-depth interviews, across three locations: Jakarta, Indonesia; Kuala Lumpur, Malaysia; and Manila, Philippines (Bremholm, 2020). Comparative Case Study Approach in Digital Government Research in

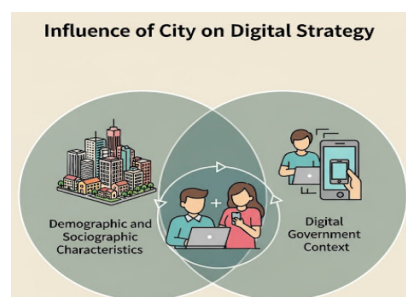
Developing Countries: A comparative case study is a crucial methodological approach in this research (Budianto, 2020). This approach allows for systematic comparisons across cases, highlighting similarities and differences in implementation, impact, and relevant contextual factors. Consequently, the identification of common patterns and anomalies becomes easier, which, in turn, enriches theory development and policy recommendations (Blummer, 2020). The novelty (new contribution) of this research lies in its systematic comparative analysis of digital government models in developing countries, an area that has not yet been extensively explored in depth (Gaber, 2020).



Source: Field research findings, 2025

The multiple-case study research design involves selecting three developing countries with significant digital government initiatives but distinct socio-demographic and institutional contexts. This design enables data triangulation from various sources within each case (within-case analysis) and the comparison of findings across cases (cross-case analysis), fostering a broader understanding and comparative patterns. The research process begins with independent data collection in each location, followed by the coding and categorization of data per case, before cross-case comparisons are made to identify similarities, differences, and success or failure factors (Jan, 2020).

Comparative Analysis of Demographic and Sociographic Characteristics in Jakarta, Kuala Lumpur, and Manila within the Digital Government Context: This analysis focuses on the demographic and sociographic characteristics of three Southeast Asian metropolitan cities: Jakarta (Indonesia), Kuala Lumpur (Malaysia), and Manila (Philippines). Significant differences in aspects such as demographics, urbanization, infrastructure, per capita income, and social media activity across these three cities provide a crucial context for understanding the implementation and reception of digital government models (Jena, 2020). This analysis aims to highlight how the unique characteristics of each city can influence the strategies and outcomes of digital government initiatives, as further illustrated in the accompanying figure.



Source: Field research findings, 2025

Implications of Digital Government Implementation Across Diverse Demographics, the varying demographic and sociographic characteristics in Jakarta, Kuala Lumpur, and Manila have significant implications for digital government implementation. Governments in each city

must consider their unique population attributes when designing and implementing digital government initiatives (Jorin-Novo, 2020).

In Jakarta, the government needs to focus on addressing infrastructure challenges and the digital divide. This might involve investing in telecommunications infrastructure, providing digital skills training, and designing digital services that are easily accessible and affordable. In Kuala Lumpur, the government can leverage its advanced digital infrastructure and stable demographics to deliver more sophisticated and personalized digital services. This could involve utilizing technologies such as artificial intelligence and data analytics to enhance the efficiency and effectiveness of government services. In Manila, the government needs to bridge the digital divide and capitalize on high social media activity. This might entail providing free internet access in public spaces, using social media platforms for citizen communication, and designing mobile-friendly digital services. By considering the unique characteristics of each city, governments can design and implement more effective and inclusive digital government initiatives. This can help improve citizens' quality of life, enhance government efficiency, and promote economic development (Kaswengi, 2020).

The research aims to identify relevant subjects and objects of research for a comparative study on digital government models across these three countries. By focusing on digital policies, programs, platforms, and infrastructure, this study will provide valuable insights into digital government strategies and outcomes in diverse contexts. Data collection through in-depth interviews with key informants will ensure a broad range of perspectives are represented and that the collected data is rich and relevant. The findings of this research will be beneficial for policymakers, practitioners, and researchers interested in improving digital government and promoting better public services for citizens (A. Khan, 2020).

Research Subjects to the actors or entities that form the primary focus of the digital government study. Identifying appropriate research subjects is crucial to ensuring the study has a clear and relevant focus (Kratzer, 2020). The relevant research subjects for a comparative study on digital government models include: three (3) individuals from each of the three countries, specifically: e-government officials, academics, and civil society representatives (de Groot, 2018).

Research Objects to the specific aspects of digital government that are the focus of the research. Identifying appropriate research objects is essential to ensure the research has adequate depth and relevance (Kurnaz, 2020). The following are relevant research objects in a comparative study on digital government models:



Source: Field research findings, 2025

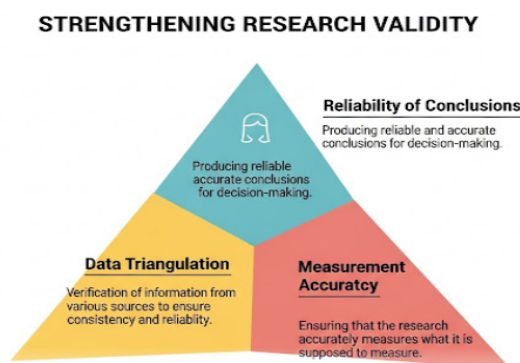
Research Validity Through Data Triangulation, this document underscores the significance of data triangulation in bolstering research validity. Data triangulation involves

verifying information from diverse sources, such as policy documents, government reports, and interviews, to ensure the consistency and reliability of research findings. By employing this approach, researchers can enhance the trustworthiness of their results and mitigate potential biases (Lisle, 2020).

The Importance of Validity in Research, validity stands as a crucial aspect of research, referring to the extent to which a study truly measures what it intends to measure. Valid research yields accurate and dependable conclusions, which can then serve as a foundation for decision-making or theoretical development. Conversely, invalid research can lead to misleading and potentially detrimental conclusions (Loeffler, 2020).

Operational Definitions and Variable Measurement, the operational definitions and measurement for the variables are as follows: Digital Government Model refers to the governmental framework and strategies for leveraging Information and Communication Technology (ICT) to enhance public services, internal efficiency, and citizen participation. This model is measured through an analysis of e-government policies, the types of digital services offered, and system architecture (J. de L. Lopes, 2020).

Effectiveness of Public Services is measured by the extent to which digital services meet citizen needs, are easily accessible, prompt, transparent, and user-satisfying. Indicators include online availability, response time, adoption rates, and user feedback. Citizen Participation is gauged by the level of citizen involvement in decision-making and governance via digital platforms. This encompasses the availability of e-participation platforms, the number of users, and the quality of interactions (López, 2020).



Source: Field research findings, 2025

RESULT AND DISCUSSION

Differences in Digital Government Models Across Three Developing Countries

The main problem addressed by this research is how digital government models in Jakarta, Kuala Lumpur, and Manila differ from each other, and how these differences affect the effectiveness of public services and citizen participation. The research findings indicate a striking variation in the approaches and implementation of digital government models in these three developing country capitals (Aljaber, 2024). In Jakarta, Indonesia, the digital government model tends to be fragmented and driven by sectoral or regional initiatives, despite consolidation efforts through the Electronic-Based Government System (SPBE) policy (Borker, 2024). Interview data with key informants show that this is often due to strong regional autonomy and differing capacities among institutions (Alqudah, 2022). For example, an e-government official from the Indonesian Ministry of Communication and Informatics stated, "We have a clear national vision, but implementation in the field heavily depends on the readiness and commitment of each ministry or regional government. This creates diversity in the maturity level of digital services."

In contrast to Indonesia, Kuala Lumpur, Malaysia, demonstrates a more centralized and coordinated digital government model, with a strong emphasis on service standardization and

inter-agency system integration (Devika, 2020). An interview with an e-government official from the Malaysian Ministry of Communications and Multimedia indicated that, "We prioritize a whole-of-government approach in digital development, ensuring every application and portal can be interconnected and provide a seamless experience for citizens." This approach is reflected in policy documents such as My Digital and the Digital Government Strategy, which explicitly outline a clear roadmap for comprehensive digital transformation (Bertelli, 2020).

Meanwhile, Manila, Philippines, faces more complex challenges in implementing its digital government model, which is often patchwork and reliant on donor-supported projects (García-Cerrud, 2023). An interview with an e-government official from the Philippine Department of Information and Communications Technology revealed, "Budget and infrastructure limitations are our main constraints (Itam, 2024). Many digital initiatives are still pilot projects or limited to specific sectors." This condition is exacerbated by a significant digital divide between urban and rural areas, as well as the frequent occurrence of natural disasters that disrupt infrastructure stability.

Influence of Model Differences on Public Service Effectiveness and Citizen Participation

City	Digital Government Model	Effectiveness of Public Services	Level of Citizen Participation
Jakarta	Decentralized (with local innovations like JAKI)	Moderate-High	Variable
Kuala Lumpur	Centralized and Integrated	High	High
Manila	Fragmented and not yet standardized	Low-Moderate	Low

Source: Field research findings, 2025

Variations in Digital Government Models and Their Impacts

The research findings indicate that the digital government models in these three developing countries possess significantly different characteristics, which, in turn, result in varying levels of public service effectiveness and citizen participation (M. R. Khan, 2022). In Indonesia, particularly Jakarta, the dominant model is decentralization and initiative-driven by sector or region (Knox, 2023). This often leads to rapid innovation at the local level but also creates challenges concerning system interoperability and consistency in service quality at the national level (Leigland, 2024). For instance, the ease of access to licensing services in one city might not be the same as in another, creating "digital islands" that are not yet fully integrated. This phenomenon, as revealed by an informant from the Indonesian Ministry of Communication and Informatics, confirms that although the intention to digitize services exists, coordination and standardization remain a significant task (Madaki, 2024).

In contrast, Malaysia, represented by Kuala Lumpur, demonstrates a more centralized and coordinated model, driven by a strong national vision and substantial infrastructure investment. Their whole-of-government approach, as explained by an informant from the Malaysian Ministry of Communications and Multimedia, has resulted in more cohesive and efficient integrated service portals (Naz, 2023). The effectiveness of public services in Malaysia tends to be higher, reflected in massive adoption rates and user satisfaction. This integration also has the potential to create greater internal efficiency for the bureaucracy (Mengistu, 2020).

Meanwhile, the Philippines, with its capital Manila, faces the greatest challenges. Its digital government model tends to be fragmented and project-driven, often relying on international aid (Nguar, 2022). Significant infrastructure and digital literacy gaps are major impediments to the effectiveness of public services. Citizen participation occurs more frequently on social media platforms than through official government channels, indicating that participation innovations often emerge from the community itself, rather than from government initiatives (Muryani, 2021).

Table: Key Interview Findings on Digital Government Models:
 in Jakarta, Kuala Lumpur, and Manila

City / Country	Digital Government Model	Findings from E-Government Officials	Academic View	Civil Society View	Effectiveness of Public Services	Citizen Participation
Jakarta / Indonesia	Decentralized and Sectoral	Rapid innovation at the local level, but lacking interoperability between agencies	Digital fragmentation causes inequality in public services between regions	Marginalized groups still find it difficult to access services; digital literacy is not yet evenly distributed	Moderate–High (depending on region)	Variable (high in city center, low in outskirts)
Kuala Lumpur / Malaysia	Centralized and Nationally Integrated	Cohesive and efficient national digital service platforms	Whole-of-government approach strengthens bureaucratic coordination and efficiency	More inclusive access, digital literacy enhanced through community programs	High and stable	High and even
Manila / Philippines	Fragmented and Project-Based	Reliant on donor-based projects, unsustainable	Lack of national digital architecture slows down bureaucracy	Participation more active on social media than official government channels	Low–Moderate (varies between agencies)	Low, more informal and unstructured

Source: Field research findings, 2025

Patterns of Digital Government Model Adaptation (Core Novelty)

The findings demonstrate that successful adaptation patterns in digital government implementation in developing countries are distinctly visible in Malaysia (Aydiner, 2020). Interviews with Malaysian e-government officials consistently highlighted high-level political commitment as a fundamental foundation (Salamandane, 2023). The officials explained how a clear national vision translated into adequate resource allocation and a cohesive integration strategy (Crăciun, 2023). This perspective is reinforced by Malaysian academics who observed how the "whole-of-government" approach has strengthened bureaucratic coordination and efficiency, resulting in cohesive and efficient national digital service platforms (Salazar-Ceballos, 2020). Civil society representatives in Malaysia also experienced the impact through more inclusive access and digital literacy enhancement programs, indicating successful end-to-end integration (Nukpezah, 2023).

Conversely, less successful patterns were identified in Indonesia and the Philippines. From interviews, it was apparent that in Indonesia, despite rapid local innovations, this decentralized model was not consistently accompanied by a strong interoperability framework (Haraguchi, 2024). An e-government official from Indonesia acknowledged the challenges in integrating various separately developed systems (Pagliusi, 2020). Indonesian academics affirmed that this fragmentation leads to service inequality and inefficiency. In the Philippines, the problem is more fundamental; reliance on partial projects without a comprehensive vision, and often donor-based, as expressed by a Philippine e-government official, leads to unsustainable initiatives and a lack of a strong national digital architecture (HosseiniNasab, 2024). Filipino academics view this as a major impediment to bureaucratic efficiency, and civil society

representatives in the Philippines directly experience the impact of the lack of integrated official services, driving them to seek informal participation channels on social media (Othman, 2022).

Key Variables of Participation and Impact on Public Service Quality

This research also successfully identified key variables that either strengthen or hinder citizen participation through digital platforms. Based on interviews, variables that strengthen participation include ease of platform access (as shown by Malaysia's experience), government responsiveness to input (presence and speed of official response), and the existence of clear feedback mechanisms (citizens know their complaints/suggestions will be followed up) (Arakawa, 2023).

Conversely, hindering variables include slow bureaucracy (often occurring in Indonesia and the Philippines), lack of transparency in follow-up (citizens do not know the status of their complaints), and digital literacy gaps (especially in the outskirts of Jakarta and Manila) (Casetta, 2020). Interviews with civil society representatives in Indonesia and the Philippines explicitly mentioned their frustration with this lack of responsiveness, which diminishes motivation to participate through official channels (Arthur, 2023).

The real impact on public service quality was measured from data on accessibility, response time, and user satisfaction obtained from document analysis and interviews (Bell, 2022). The results show that in countries with a centralized model like Malaysia, satisfaction tends to be higher due to service consistency and efficiency. In contrast, in Indonesia and the Philippines, variations in service quality show an uneven impact (Bacci, 2023).

Table: Comparison of Digital Government Models in Indonesia, Malaysia, and the Philippines (Note: The data does not fully represent the national conditions of the three countries—Indonesia, Malaysia, and the Philippines.)

Aspect of Comparison	Indonesia (Jakarta)	Malaysia (Kuala Lumpur)	Philippines (Manila)
Main Model	Decentralized and Sectoral	Centralized and Nationally Integrated	Fragmented and Project-Based
Policy	National umbrella (SPBE) exists, but implementation is autonomous per Ministry/Region.	Driven by a strong whole-of-government vision.	Often specific project initiatives, many donor-supported.
Implementation	Rapid local innovation, but creates "digital islands" that are less integrated.	Emphasis on standardization and inter-agency system integration; cohesive and efficient national platforms.	Initiatives not always sustainable; lack of comprehensive national digital architecture.
Characteristics	Service fragmentation; unequal access across regions.	Strong coordination; higher bureaucratic efficiency.	Disjointed; slow bureaucracy due to lack of national framework.

Note: Represents survey locations — does not fully reflect national conditions of the three countries.

Source: Field research findings, 2025

Digital Government Models in Three Countries: Indonesia, Malaysia, Philippines

The digital government model in Indonesia can be categorized as Fragmented-Decentralized E-Government, reflecting its decentralized nature in line with the adopted regional autonomy system. Digital initiatives develop independently in various regions without system uniformity, leading to fragmentation in digital public services. The main challenges of

this model include low interoperability between applications and weak integrative regulations, resulting in many digital services not being optimally interconnected (Warsono, 2023).

Other hindering factors include inconsistent political commitment across government levels, limited technological infrastructure in remote areas, and low levels of digital literacy among the public (Omar, 2020). As a solution, a national integration framework such as the Government Interoperability Framework and standardization of digital platforms need to be developed so that public services can run more efficiently and be interconnected. The implications of these findings indicate that the success of government digitalization in Indonesia heavily depends on consistent political leadership, institutional coordination, and broad digital empowerment of the community (Wang, 2024).

Digital Government Model of Indonesia: Fragmented-Decentralized E-Government Model

Aspect	Explanation
General Characteristics	Indonesia implements a decentralized e-government model in line with its regional autonomy system. Many digital initiatives emerge separately from different regions.
Challenges	Fragmentation of systems and applications between agencies; low interoperability; weak integration regulations.
Hindering Factors	Inconsistent political commitment across government levels; limited digital infrastructure in remote areas; digital literacy gap among the public.
Solution Direction	National system integration (Government Interoperability Framework) and platform standardization are needed.
Implications for Model	Indonesia demonstrates the importance of political commitment and coordination capacity between agencies, as well as the necessity of public digital literacy for successful digitalization.

Source: Field research findings, 2025

The digital government model in Malaysia adopts an Integrated-Centralized E-Government approach, where all digital systems and policies are centrally coordinated through agencies such as MAMPU and the integrated service platform MyGov (M. R. Lopes, 2020). The main characteristic of this model is strong national integration supported by a clear policy framework and a comprehensive digital masterplan. Malaysia's primary advantage lies in its ability to consolidate various public services into a single, standardized digital system (Lv, 2023). Key driving factors for the success of this model include strong political leadership, a data-driven policy orientation, and the sustainability of bureaucratic reforms that have supported digitalization since the early 2000s (HosseiniNasab, 2024). Supporting infrastructure such as national data centers, Single Sign-On (SSO) systems, and digital complaint mechanisms serve as important foundations for seamless service delivery. The implications of the Malaysian model indicate that e-government success heavily relies on policy centralization, inter-agency alignment, and consistent political support in overseeing digital transformation.

Digital Government Model of Malaysia: Integrated-Centralized E-Government Model

Aspect	Explanation
General Characteristics	Malaysia has an integrated and centralized model, characterized by programs like MyGov and MAMPU (Malaysian Administrative Modernisation and Management Planning Unit).
Strengths	Integrated national system; existence of a national digital masterplan; clear and operational e-government policy framework.
Driving Factors	Strong political leadership; data-driven policies; pro-digital bureaucratic reforms since the early 2000s.
Supporting Infrastructure	National data centers, Single Sign-On (SSO), and national digital payment and complaint systems.
Implications for Model	Demonstrates the importance of strong political commitment and centralized policies, as well as institutional alignment as key to successful digital governance implementation.

Source: Field research findings, 2025

The digital government model in the Philippines adopts a Transitional-Digital Readiness E-Government approach, reflecting a gradual effort in developing its e-government system. Although the Philippines is committed to digitalization, the country still faces significant challenges, such as digital inequality and the unpreparedness of local institutions. The main issues encountered are the low capacity of digital infrastructure in regions, limited funding, and bureaucratic resistance to change. Cybersecurity also poses a significant challenge that needs to be addressed (Crăciun, 2023). Related policies are led by DICT (Department of Information and Communications Technology), but inter-sectoral coordination still needs to be strengthened to achieve maximum efficiency. Development efforts are focused on improving digital literacy, expanding internet access through free Wi-Fi programs, and promoting digital inclusion in rural areas. The implications of the Philippine model indicate that the success of digital transformation heavily relies on institutional readiness and social empowerment, especially in addressing the digital divide (Haraguchi, 2024).

Digital Government Model of the Philippines: Transitional-Digital Readiness E-Government Model

Aspect	Explanation
General Characteristics	The Philippines is developing its e-government system gradually, but still faces challenges of digital inequality and the unpreparedness of local institutions.
Challenges	Low infrastructure capacity in regions, funding issues, bureaucratic resistance, and cybersecurity challenges.
Related Policies	DICT (Department of Information and Communications Technology) as the main actor, but cross-sector coordination is not yet optimal.
Development Efforts	Focus on digital literacy, expansion of national internet network (Free Wi-Fi Program), and digital inclusion for rural communities.
Implications for Model	The Philippines case study emphasizes the importance of basic capacity building, and that the success of digital transformation depends on institutional and social readiness.

Source: Field research findings, 2025

Explanation of the table below: The relationship among the three countries—Indonesia, Malaysia, and the Philippines—in developing digital government models shows that each has strategic contributions in forming relevant and contextual conceptual model components. Malaysia offers crucial lessons regarding the critical importance of political commitment. Strong and consistent leadership from the political elite has proven capable of accelerating digital transformation systematically and measurably. On the other hand, the Philippines highlights the

significance of infrastructure capacity and financial readiness in ensuring equitable digital access, particularly in underserved regions. Indonesia demonstrates the urgency of institutional reform, especially concerning cross-agency coordination and the need for interoperable systems (Upadhe, 2020).

Relationship of the Three Countries in Digital Government Model Development

Component of Conceptual Model	Lesson from Country
Political Commitment	Malaysia shows that high commitment from political elites can drive the acceleration of digital transformation.
Infrastructure Capacity	The Philippines reminds us of the importance of technical and financial readiness for equitable digital access.
Institutional Reform	Indonesia emphasizes the need for coordinative reforms and system interoperability among institutions.
Public Digital Literacy	All three countries demonstrate that the digital literacy gap is a major obstacle that must be addressed through education and social assistance.
Data Protection Policy	Still a common weakness in all countries, but essential for integrity and public trust in government digital services.
Potential of New Technologies	Artificial intelligence (AI) and blockchain are emerging as important issues that can strengthen governance transparency and efficiency, but require regulation and human resources.

Source: Field research findings, 2025

Explanation of the table: The relationship among the three countries—Indonesia, Malaysia, and the Philippines—in developing digital government models shows that each has strategic contributions in forming relevant and contextual conceptual model components. Malaysia offers crucial lessons regarding the critical importance of political commitment. Strong and consistent leadership from the political elite has proven capable of accelerating digital transformation systematically and measurably. On the other hand, the Philippines highlights the significance of infrastructure capacity and financial readiness in ensuring equitable digital access, particularly in underserved regions. Indonesia demonstrates the urgency of institutional reform, especially concerning cross-agency coordination and the need for interoperable systems.

All three countries also show that public digital literacy is a fundamental foundation that needs to be improved for the digitalization of public services to proceed inclusively. A common weakness emerging across all three is the minimal protection of personal data, which directly impacts the level of public trust in digital services. Furthermore, the emergence of new technologies such as artificial intelligence and blockchain presents opportunities to enhance governance efficiency and transparency, but these will only be optimal if supported by strong regulations and competent human resources. Digital government models in developing countries must be structured based on the synergy of these factors to be effective and sustainable (Pagliusi, 2020).

Effectiveness of Public Services and Citizen Participation

The digital government model in developing countries reflects government efforts to utilize information and communication technology to improve governance performance and public service quality. In the context of developing countries such as Indonesia, Malaysia, and the Philippines, government digitalization serves as a strategic solution to address bureaucratic issues that are slow, less transparent, and unresponsive to citizen needs (Crăciun, 2023). The gradual implementation of e-government shows different patterns and approaches, ranging from decentralized and fragmented (as in Indonesia), integrated and centralized (as in Malaysia), to still being in the stage of infrastructure and institutional readiness (as in the Philippines). These models provide a tangible illustration of how institutional design and the level of political readiness influence the course of digital transformation in government (M. R. Lopes, 2020).

The effectiveness of public services is a primary indicator in assessing the success of digital government implementation. When digital-based public services can be delivered quickly, are easily accessible, transparent, and accountable, public trust in the state will increase. Conversely, digitalization that only focuses on technological aspects without being supported by internal management improvements and public digital literacy risks creating new inequalities in service access (Haraguchi, 2024). Therefore, the success of e-government is not only determined by the availability of digital platforms but also by the efficiency of service flows, the simplification of bureaucratic processes, and a commitment to continuously improve service quality sustainably.

On the other hand, citizen participation is an important component intrinsically linked to the effectiveness of public services in a digital government system (Omar, 2020). Digital technology opens opportunities for broader citizen participation, whether through complaint channels, policy consultation platforms, or data transparency that allows the public to monitor and evaluate government performance. In developing countries, this participation still faces obstacles such as low digital literacy, unequal internet access, and a political culture that does not fully support active citizen involvement. Nevertheless, when digital government is designed with inclusive and participatory principles, the effectiveness of public services can significantly increase because the public feels involved, valued, and participates in the development process (Haraguchi, 2024).

Thus, the relationship between digital government models, public service effectiveness, and citizen participation is mutually influential and reinforcing. A successful digital model is one that not only modernizes public administration systems but also builds a collaborative ecosystem between the government and society (Lv, 2023). In the context of developing countries, this demands a gradual, adaptive, and contextual approach—where digital transformation is carried out in conjunction with strengthening institutional capacity and empowering the community as active partners in public services. This research aims to elaborate on these dynamics as a theoretical and practical foundation for formulating effective and inclusive digital governance policies (Crăciun, 2023).

Driving, Inhibiting, and Supporting Factors

The digital government model in developing countries and the effectiveness of public services, when analyzing the driving, inhibiting, and supporting factors in Indonesia, Malaysia, and the Philippines, represents an analysis of digital government models for three developing countries, namely Indonesia, Malaysia, and the Philippines, and evaluates their effectiveness in improving public services (Stoykova, 2024). Digital government is seen as a bureaucratic modernization strategy that can accelerate service distribution, increase transparency, and strengthen public sector accountability. However, its implementation does not occur in a vacuum but is influenced by a number of unique driving, inhibiting, and supporting factors in each country. By understanding these dynamics, this research provides a comprehensive mapping of the actual conditions and contextual strategic recommendations (Othman, 2022).

In Malaysia, the main driving factors for the success of digital government lie in strong political leadership, consistent national policies, and a centralized and efficient institutional structure (Aydiner, 2020). The establishment of special bodies such as MAMPU (Malaysian Administrative Modernisation and Management Planning Unit) plays a central role in formulating the digital master plan and ensuring system integration across ministries. This is strengthened by the readiness of ICT infrastructure and human resource capacity that has been systematically built. Conversely, Indonesia faces challenges in terms of system fragmentation between agencies and weak coordination between central and regional governments, due to a highly decentralized government model (Crăciun, 2023). Although it has initiatives such as SPBE (Electronic-Based Government System), its implementation often runs partially without complete integration. The Philippines, meanwhile, is in a transitional phase, where infrastructure limitations and bureaucratic resistance are major obstacles, although there is institutional commitment through DICT (Department of Information and Communications Technology) to encourage equitable digitalization.

The main inhibiting factors in all three countries generally relate to the digital divide, both in terms of internet access, user capability, and bureaucratic readiness. In Indonesia and the Philippines, vast geographical areas and development disparities mean that some communities are not yet served digitally, especially in remote areas (Borker, 2024). Limited digital literacy among civil servants and citizens also slows down technology adoption, so public services still largely depend on manual methods. On the other hand, inadequate data protection and the lack of strong cybersecurity regulations also pose concerns that hinder public trust in digital services (Alqudah, 2022).

Nevertheless, all three countries also have important supporting factors that can be optimized. In Indonesia, the existence of digital communities, technology startups, and local innovations (such as village service or smart city applications) can be drivers of service digitalization if empowered systematically (Aydiner, 2020). Malaysia has an advantage in cross-sector integration and an established policy framework, while the Philippines shows great potential through civil society involvement and community-based digital inclusion programs driven at the grassroots level.

As a solution, Indonesia needs to strengthen the integration between government systems by establishing cross-ministerial coordinating bodies with strong authority in harmonizing digital policies. Digital literacy training for civil servants and the public must also be expanded evenly. Malaysia is advised to continue maintaining policy consistency and expand citizen participation in designing digital services to avoid elitism (Warsono, 2023). The Philippines should focus on infrastructure investment and improving internal bureaucratic management systems to avoid being left behind in the digital transformation wave. All three countries generally need to place the principles of inclusivity and transparency as foundations in building a sustainable digital ecosystem. By overcoming inhibitors and strengthening driving and supporting factors, digital government can be a catalyst in realizing effective, efficient, and responsive public services to community needs in the era of digital transformation (Apriliyanti et al., 2021).

CONCLUSION

The research conclusion indicates that the digital government model in developing countries cannot be uniformly understood; rather, it must be examined based on the distinct political, institutional, and social contexts of each country. A key finding of this study is that the effectiveness of public services through digital government is largely determined by the synergy between political commitment, infrastructure readiness, institutional governance, and the level of digital literacy in society. Malaysia successfully demonstrated effectiveness through an integrated digital government model with a strong policy framework and consistent leadership. Indonesia faces challenges of system fragmentation due to decentralization that is not yet fully supported by cross-sector coordination. The Philippines is still in the stage of strengthening infrastructure and bureaucratic readiness. All three countries show that the success of e-government is not solely supported by technology but must be based on institutional reform and community empowerment.

Research recommendations include the need for strengthening the integration of digital government systems supported by clear national regulations, increasing digital literacy capacity for civil servants and the public, and establishing institutions capable of coordinating cross-sector digital transformation. Developing country governments are advised to adopt an inclusive approach that involves civil society and the private sector in the design and evaluation processes of digital services. Further research is recommended to explore more deeply the role of new technologies such as AI and blockchain and their impact on transparency, efficiency, and accountability in digital public services in various regional contexts. The implications of these findings emphasize the importance of a holistic approach in designing digital government policies, prioritizing the principles of inclusivity, system integration, and human resource capacity building. This research contributes theoretically in the form of a new analytical framework for evaluating the success of e-government in developing countries and practically provides contextual policy directions for governments and other stakeholders. However, this

study has limitations in terms of its limited scope to three countries and has not deeply explored data security aspects and the role of the private sector in the digital governance ecosystem. Therefore, it is recommended that future research expand the scope of analysis to other developing countries, as well as examine more deeply the socio-political impact of the digitalization of public services and the opportunities for multi-stakeholder partnerships in sustainable digital governance.

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