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The Role of the Community in Smart Governance Policy for Realizing a Smart City in the Special Region of Jakarta

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Abstract: The successful implementation of Smart City depends not only on digital technology but also on meaningful community participation through Smart Governance. However, previous studies have placed greater emphasis on technological and institutional dimensions, while the role of the community in shaping collaborative digital governance remains underexplored. This study aims to identify the forms and mechanisms of community participation, analyze the factors influencing the effectiveness of participation, and develop an effective participation model within the Smart Governance framework in Jakarta. The study employs a qualitative case study approach with a pragmatic paradigm. Data were collected through semi-structured in-depth interviews, observations of the implementation of digital public services, particularly Jakarta's government digital service platforms, and analysis of relevant policy documents and official reports. The data were analyzed through analytical coding involving iterative stages of data reduction, data presentation, and conclusion verification. The findings show that community participation is diverse and encompasses operational, participatory-procedural, and collective-advocacy roles. The effectiveness of participation is determined by the interaction among community capacity, digital governance mechanisms, and institutional support, which contribute to improved public service responsiveness, government accountability, and public trust. The novelty of this study lies in the development of an empirically grounded spectrum of community participation roles and an integrated participation model for the implementation of Smart Governance in Jakarta.

Keywords: Community Participation, Digital Participation, Smart Governance, Smart City, Jakarta

INTRODUCTION

The rapid advancement of digital technology has fundamentally transformed urban governance, making the Smart City concept a strategic approach to addressing increasingly complex urban challenges. Rapid urbanization, population growth, environmental degradation, infrastructure limitations, and increasing demands for efficient public services have encouraged governments to integrate Information and Communication Technology (ICT) into

urban governance (Nam et al., 2011; Paiva et al., 2021). Therefore, Smart City has evolved beyond technological modernization into a multidimensional governance paradigm that combines digital innovation, institutional capacity, and stakeholder collaboration to improve governance effectiveness, public service quality, and sustainable urban development (Lopez et al., 2021; Moura et al., 2021). Emerging technologies, including the Internet of Things (IoT), artificial intelligence (Artificial Intelligence/AI), big data analytics, cloud computing, and digital platforms, enable governments to strengthen evidence-based policymaking, optimize service delivery, and improve interactions with the community (Alahi et al., 2023; Huang et al., 2021). In addition, recent research emphasizes that the successful implementation of Smart City depends not only on technological advancement but also on governance systems capable of promoting inclusiveness, resilience, and long-term sustainability (Angelidou et al., 2022; Attaran et al., 2022; Salman et al., 2023).

Within the Smart City framework, Smart Governance is a core dimension because it integrates technological innovation, institutional capacity, collaborative governance, and community participation to improve governance effectiveness and create public value. Smart Governance emphasizes transparency, accountability, responsiveness, and evidence-based decision-making, while also promoting collaboration among government, communities, academia, civil society, and the private sector (Gil-Garcia et al., 2016; Meijer et al., 2016). Recent research also shows that Smart Governance strengthens institutional effectiveness through digital transformation, collaborative policymaking, and citizen-oriented public services (Kaiser & A, 2024; Nastjuk et al., 2022; Penmetsa et al., 2022). This concept is reinforced by Digital Era Governance, which promotes integrated, data-driven, and citizen-centered public administration (Dunleavy et al., 2008; Margetts et al., 2024). Similarly, Participatory Governance Theory emphasizes active community involvement throughout the policy cycle to strengthen policy legitimacy and democratic governance (Grote et al., 2014; Palumbo & R, 2017), while Role Theory highlights the complementary roles of government and communities in achieving effective governance (Ansell et al., 2008; Biddle & B., 2013; Emerson et al., 2012). Therefore, Smart Governance should be understood as a socio-technical governance model that integrates technology, institutions, and community participation, requiring institutional collaboration, active community engagement, and effective governance mechanisms to achieve Smart City objectives (Calzada & I, 2020; Ciasullo et al., 2020; Ciesielska et al., 2024; García-Marzá et al., 2024; Liu et al., 2021).

Previous studies have consistently identified community participation as one of the key factors determining the effectiveness of Smart Governance. Studies on Smart Sustainable Cities show that active community participation contributes to urban sustainability and inclusive governance (Alamoudi et al., 2023), while research on collaborative urban planning emphasizes its role in enhancing stakeholder engagement and decision-making (Bastos et al., 2022; Chantry & W, 2023). From an institutional perspective, governance performance is strengthened through institutional governance (Pansera et al., 2023), digital inclusion (Aditya et al., 2023; Mutambik et al., 2023), and technology-supported community engagement (Kusumastuti et al., 2022). In addition, research on public value co-creation shows that community-centered innovation supports more responsive and sustainable Smart Governance (Anthony & B, 2024; Caputo et al., 2023; Myeong et al., 2023). Overall, these findings indicate that effective Smart Governance depends not only on digital technology but also on institutional readiness, digital literacy, public trust, collaborative governance, and active community participation, thereby positioning the community as a strategic actor in sustainable urban governance.

In Indonesia, Smart Governance has been strengthened through the implementation of the Electronic-Based Government System (SPBE) and various Smart City initiatives. As the national political, administrative, and economic center, the Special Region of Jakarta launched

the Jakarta Smart City initiative on December 15, 2014, to digitize public services and promote transparent, responsive, and accountable governance. Its main platform, Jakarta Kini (JAKI), integrates public services, complaint management, government information, and communication between the community and government through various features such as JakLapor, which facilitates community reporting of urban problems. Despite these initiatives, Jakarta continues to face major urban challenges, including traffic congestion, flooding, environmental degradation, rapid urbanization, and increasing pressure on public infrastructure (Perwira et al., 2024; Syaban et al., 2023). These challenges are further complicated by rapid metropolitan development and the complexity of urban management (Munjirin & M, 2024). In addition, Jakarta's performance in the 2024 Smart City Index indicates that improvements are still needed in governance quality, digital infrastructure, innovation, and community engagement. Previous studies have also highlighted the importance of strengthening digital governance (Firman et al., 2022), improving the effectiveness of JAKI as an integrated digital platform (Prasetia et al., 2024; Subiyanto et al., 2024), and promoting collaborative public services through digital innovation (Webber et al., 2024).

Despite these advances, an important research gap remains. Previous studies have primarily examined Smart Governance from the perspectives of digital transformation, e-government, governance performance, and community engagement, with limited attention to how community participation contributes throughout the policy cycle, particularly in a metropolitan context such as Jakarta. Participatory Governance Theory emphasizes active community involvement throughout the governance process (Grote et al., 2014), while collaborative governance emphasizes the importance of multi-stakeholder interaction (Ansell et al., 2008; Emerson et al., 2012). Likewise, research on digital governance promotes integrated institutional and technological approaches but provides limited explanation of their interaction with community participation (Dunleavy et al., 2023; García-Marzá et al., 2024). Therefore, this study employs Participatory Governance Theory to examine the role of the community in the implementation of Smart Governance policy in the Special Region of Jakarta. Unlike previous studies that have primarily focused on technology adoption or governance performance, this study integrates community participation, institutional collaboration, and Smart Governance into a single analytical framework. The novelty of this study lies in explaining community participation as a strategic governance mechanism that strengthens collaborative policymaking and institutional responsiveness to support sustainable Smart City development. Accordingly, this study aims to analyze the role of the community in the implementation of Smart Governance policy, identify the factors influencing effective digital participation, and develop a community participation model to realize a Smart City in the Special Region of Jakarta.

METHODS

This study employs a qualitative case study approach to examine the role of community participation in Smart Governance policy to realize Smart City development in the Special Region of Jakarta. The study adopts a pragmatic paradigm that emphasizes solving practical problems and generating applicable knowledge to improve public governance. This paradigm is considered appropriate because the study not only seeks to understand community participation in Smart Governance policy but also to develop practical recommendations for strengthening community engagement in digital public services. The case study approach enables an in-depth exploration of the interactions among the community, government institutions, and digital technology within the Jakarta Smart City initiative.

The study was conducted in the Special Region of Jakarta, Indonesia, where *Smart Governance* policy is implemented through the Jakarta *Smart City* initiative and the Jakarta Kini (JAKI) platform. Jakarta was selected because it is the political, administrative, and

economic center of Indonesia and is one of the leading regions in *Smart City* implementation in Indonesia. Data were collected during the research period from November 2024 to January 2026 to obtain comprehensive information on community participation and government practices in the implementation of *Smart Governance* policy.

Participants were selected using purposive sampling based on their experience and involvement in the implementation of *Smart Governance* policy. The informants consisted of JAKI users, community representatives, cultural experts, professional associations, Jakarta *Smart City* administrators, bureaucrats, government officials, and policymakers responsible for *Smart Governance* policy. The involvement of various stakeholder groups enabled the study to obtain comprehensive perspectives on community participation, institutional collaboration, and digital public service implementation. Data were collected through non-participant observation, semi-structured interviews, and document analysis. The observations focused on community interactions with digital public services, particularly the use of JAKI, while the interviews explored participants' experiences, perceptions, supporting factors, barriers, and recommendations for improving *Smart Governance* policy. Documentary evidence, including government regulations, Jakarta *Smart City* reports, official statistics, and relevant academic literature, was used to complement and validate the primary data.

This study focuses on five analytical concepts, namely community roles, *Smart Governance* policy, digital participation, supporting and inhibiting factors, and a community participation model. These concepts were operationalized into analytical indicators and examined using various data sources and data collection techniques, thereby enabling triangulation across participants and documentary evidence.

Table 1. Operationalization of Research Concepts

Main Concept	Indicators	Data Sources	Collection Techniques	Analysis
Community Roles	Utilization of digital services, procedural participation, collective participation	Community members, community leaders	Interviews, documentation	Analytical coding
<i>Smart Governance</i>	Transparency, participation, public service efficiency, technology utilization, stakeholder collaboration, data security	Government officials, policy documents	Interviews, documentation	Thematic interpretation
Digital Participation	Platform access, intensity of use, perceived usefulness, public trust	JAKI users	Interviews	Analytical coding
Supporting and Inhibiting Factors	Digital literacy, infrastructure, institutional responsiveness, regulatory support	All informants	Interviews, documentation	Cross-case synthesis
Community Participation Model	Community capacity, governance process, institutional factors, governance outcomes	All research data	Synthesis	Conceptual modeling

Qualitative data were analyzed using analytical coding based on the Miles and Huberman interactive model, which consists of data collection, data reduction, data presentation, and conclusion drawing and verification. Data collection and analysis were conducted iteratively so that emerging themes could be continuously refined until data saturation was achieved. Analytical coding was applied to identify patterns of community participation, institutional collaboration, supporting and inhibiting factors, and their implications for the implementation of *Smart Governance* policy in Jakarta.

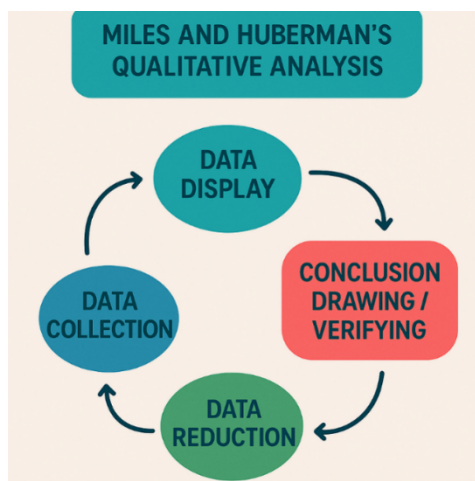


Figure 1. Interactive Model of Qualitative Data Analysis Adapted from Miles and Huberman (1994)

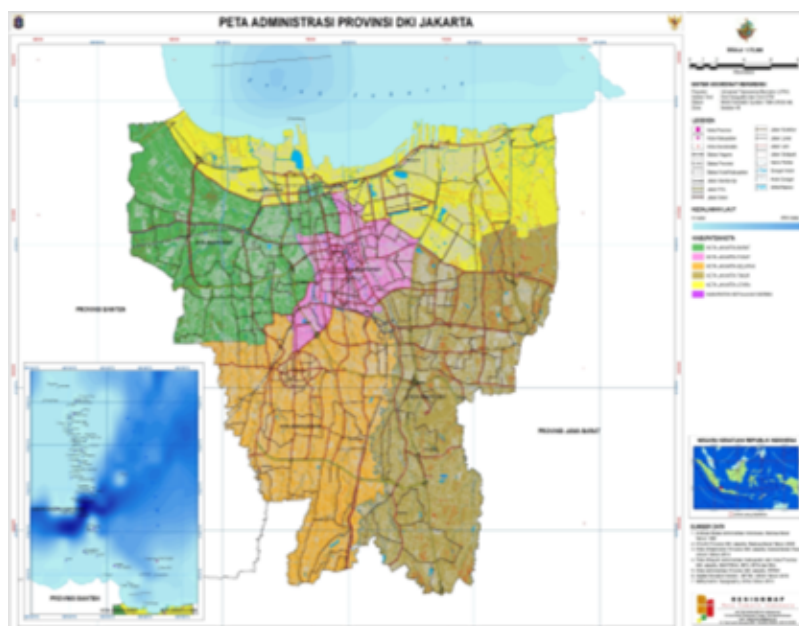
To ensure the reliability of the findings, this study applied source, technique, and time triangulation, complemented by member checking, prolonged engagement, persistent observation, peer discussion, and the criteria of credibility, transferability, dependability, and confirmability. These procedures ensured that the findings accurately reflected the empirical context while enhancing the validity and reliability of the qualitative analysis.

RESULTS AND DISCUSSION

This section presents the empirical findings and analytical interpretation of the role of the community in *Smart Governance* policy to realize *Smart City* Jakarta. The findings were obtained from in-depth interviews with seven informants representing various stakeholder positions and were analyzed through analytical coding and cross-informant synthesis. In accordance with the research structure, the results are presented based on the *Smart Governance* policy indicators, namely government transparency, community participation, public service efficiency, government technology use, stakeholder collaboration, and risk management and data security. The subsequent analysis is synthesized into a spectrum of community roles, a conceptual model, a benchmarking comparison with Seoul, and the theoretical novelty identified in the study.

Research Context and Smart Governance Policy Setting

The study was conducted in the Special Region of Jakarta, whose geographical, administrative, and institutional characteristics create a complex context for the implementation of *Smart Governance* policy. Jakarta is a lowland metropolitan region with significant spatial differentiation, including the Thousand Islands Administrative Regency and five administrative cities. This administrative configuration concentrates strategic authority at the provincial level and requires strong vertical coordination to ensure that *Smart City* policies address service needs at the local level. Therefore, this study views *Smart Governance* policy not merely as an issue of digital service provision but also as a governance process shaped by territorial complexity, institutional coordination, and community participation. The administrative map used in the dissertation is retained as contextual evidence in Figure 2.



Source: Tematikindo Map

Figure 2. Administrative Map of the Special Region of Jakarta

Institutionally, Jakarta *Smart City* developed from the provincial development policy framework and was strengthened through Governor Regulation Number 280 of 2014. Its development included an initial complaint application, the establishment of six *Smart City* pillars, the launch of JAKI in 2019, and the strengthening of its institutional position as a public service agency. These developments provided digital government infrastructure that enables the community to interact with government services, submit complaints and aspirations, monitor responses, and, at higher levels of engagement, contribute to evaluation, innovation, collaboration, and policy processes.

Community Roles across Smart Governance Policy Indicators

Analytical coding shows that community participation cannot be reduced to a single form of digital use. Among the seven informants, the data indicate various combinations of awareness, platform use, reporting, evaluation, collaboration, policy input, and representation. Six *Smart Governance* policy indicators were used as a shared analytical framework to compare these different positions. The synthesis results are presented in Table 2.

Table 2. Cross-Informant Analytical Synthesis of Community Roles in Smart Governance Policy

Smart Governance Indicator	Representative Analytical Codes	Cross-Informant Findings	Analytical Interpretation
Government transparency	Awareness of platforms, access to public information, data openness, monitoring, policy visibility	Digital platforms increase access to government information and make service and policy processes more visible. However, the depth of public information utilization differs among informants.	Transparency functions as a condition that enables monitoring, evaluation, and accountability.
Community participation	Digital reporting, expression of aspirations, monitoring of follow-up, e-Musrenbang, advocacy, policy input	Participation ranges from reporting and submitting complaints to formal channels for aspirations, evaluation,	Participation forms a spectrum rather than a single uniform behavior.

Smart Governance Indicator	Representative Analytical Codes	Cross-Informant Findings	Analytical Interpretation
		community collaboration, and political representation.	
Public service efficiency	Rapid response, reduction of administrative burden, ease of access, service integration, substantive problem resolution	Digital services are generally perceived to shorten procedures and facilitate access, but the quality of response and cross-sector follow-up is not uniform.	Efficiency depends on system performance and institutional responsiveness.
Government technology use	JAKI, CRM, JIKA, Jakarta Satu, e-KTP, e-Musrenbang, digital administrative platforms	Technology is used as a service channel, administrative instrument, source of information, source of evaluation, and, at higher levels of engagement, as support for policy processes.	Technology becomes more meaningful when connected to participation and decision-making.
Stakeholder collaboration	Government-community interaction, community partnerships, innovation contributions, inter-institutional coordination, representation	Collaboration develops from reporting and basic coordination toward community-based collaboration, service innovation, cross-institutional coordination, and representation mechanisms.	Collaboration is strengthened when institutional mechanisms transform community input into coordinated action.
Risk management and data security	Digital literacy, system reliability, data protection, trust, access inequality, security awareness	Technical readiness is generally available, but gaps remain in digital literacy, service coverage, infrastructure, ease of use, data protection, and public trust.	The sustainability of participation depends on technical reliability and social readiness.

Cross-informant comparison further reveals clear differences in the positions occupied by the seven informants. These roles do not represent mutually exclusive social categories; rather, they describe different levels and forms of engagement observed in the empirical data. The final spectrum developed in the dissertation ranges from awareness and selective use toward increasingly active, evaluative, collaborative, policy-oriented, and strategic participation.

Table 3. Spectrum of Community Roles Emerging from Cross-Informant Analysis

Community Role	Empirical Characterization	Position in the Participation Spectrum
Aware and Selective User	Recognizes digital government services and uses them selectively according to needs, perceived usefulness, communication, and trust.	Operational participation
Critical Digital Actor	Uses digital services while critically evaluating responsiveness, ease of use, transparency, infrastructure, data protection, and the effectiveness of participation channels.	Operational participation with critical evaluation
Active Digital User	Uses government digital platforms to report public problems, provide input, and monitor follow-up.	Operational participation
Evaluator and Innovation Contributor	Evaluates public services and provides experiences, feedback, and assessments that can support service improvement and innovation.	Participatory-procedural role
Digital Policy Co-Creator	Connects digital systems, data, planning, and community input with policy processes and decision-making support.	Participatory-procedural role
Digital Community Collaborator	Engages through community mechanisms, coordination, and collaboration that connect the community and government.	Collective-advocacy role

Strategic Smart City Partner	Represents and voices community interests through advocacy and representation mechanisms, and connects public aspirations with policy processes.	Collective-advocacy role
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Figure 3. Spectrum of Community Roles Generated from the Analysis of Seven Informants

The spectrum shows that community participation develops based on differences in digital literacy, access to technology, awareness of citizens' rights and responsibilities, social capital, experience in participation, and institutional support. At lower levels, participation is manifested through awareness and selective use of services. Participation then becomes more visible through reporting and monitoring and subsequently develops into contributions to evaluation and innovation, policy co-creation, community collaboration, and strategic engagement through representation. These findings do not mean that every citizen must follow the same sequence. Rather, they indicate that *Smart Governance* policy creates various spaces for participation and that the depth of community influence depends on the capacity of citizens and community groups, as well as the responsiveness and institutional openness of government.

Cross-Informant Synthesis and Conceptual Model

The main finding from the cross-informant analysis is that community participation in *Smart Governance* policy in Jakarta is generated through the interaction of three elements: community capacity, *Smart Governance* policy mechanisms, and institutional factors. Community capacity includes digital literacy, access to technology, awareness of citizens' rights and responsibilities, and social capital. These capacities are translated into participation through government digital platforms, bureaucratic responsiveness, transparency, and policy feedback. The quality and sustainability of these interactions are moderated by bureaucratic behavior, institutional integration, political and regulatory support, and inclusiveness in participation design.

This relationship produces three main forms of community participation. The first is the operational role, in which citizens use digital public services and report public problems. The second is the participatory-procedural role, in which citizens express their aspirations and provide policy input through formal mechanisms. The third is the collective-advocacy role, in which communities or representative mechanisms voice collective interests, conduct oversight, and encourage broader policy changes. These three forms are interconnected rather than

separate, and empirical evidence shows that participation can deepen when supporting and institutional systems provide credible opportunities for the community to exert influence.



Figure 4. Conceptual Model of Community Roles in Smart Governance Policy to Realize a Smart City in Jakarta

The conceptual model positions community capacity and readiness as the foundation of participation. Subsequently, *Smart Governance* policy mechanisms connect citizens with government institutions through digital platforms, responsiveness, transparency, and feedback. Institutional factors influence the quality of these interactions and the sustainability of participation. The resulting governance outcomes include increased public service responsiveness, strengthened government accountability, and increased public trust, which contribute to broader outcomes in the form of a participatory, inclusive, and sustainable *Smart City* in Jakarta.

The model also clarifies that the availability of technology alone is insufficient. The empirical findings show that technology can facilitate participation, but its influence on governance depends on whether the community can access and understand the system, whether the government responds to their input, and whether institutional arrangements provide meaningful opportunities for participation. Therefore, the role of the community evolves from merely being a service user into a contributor to evaluation, innovation, policymaking, community collaboration, and strategic representation.

Comparison of Smart Governance Policy with Seoul

Seoul was selected as a benchmark because the study identified similarities in metropolitan scale, dense urbanization, and complex public problems. Jakarta and Seoul have both developed digital government ecosystems that include public service platforms, open data, complaint mechanisms, and data integration. The main difference identified by the study lies in governance orientation. Jakarta's digitalization remains primarily oriented toward service effectiveness and responses to complaints, whereas Seoul has developed digital mechanisms that enable the community to participate more directly in the substance of policy.

Table 4. Comparison of Smart Governance Policy between Seoul and Jakarta

Indicator	Seoul Practices	Jakarta Implementation	Community Role	Identified Gap	Strengthening Direction
Government transparency	Open data, real-time dashboards, and policy analytics support public monitoring.	JAKI, Jakarta Open Data, <i>e-Budgeting</i> , SPBE, and <i>Jakarta Smart City</i> dashboards increase public access to information.	Participation is visible through access, social oversight, feedback, and monitoring.	Information provision is stronger than co-use; data literacy and policy dialogue remain uneven.	Develop an <i>Open Governance Platform</i> , strengthen public data literacy, and provide accessible dashboards.
Community participation	<i>mVoting</i> , <i>Participatory Budgeting</i> , and <i>e-Petition</i> enable participation from problem identification to evaluation.	JAKI, CRM, digital Musrenbang, and complaint channels provide participation mechanisms.	The community provides input, aspirations, development proposals, and reports.	Participation remains primarily consultative and responsive rather than joint decision-making.	Establish participatory governance mechanisms in planning, implementation, monitoring, and evaluation.
Public service efficiency	Integrated services through a citizen-oriented digital ecosystem with rapid resolution and continuous evaluation.	<i>Jakarta Smart City Dashboard</i> , JAKI, e-KTP, and electronic administrative services support service delivery.	The community acts as an active service user and provides feedback on service quality.	Cross-service integration is not yet fully smooth, and service quality varies across institutions.	Strengthen life-event-based services, <i>Single Sign-On</i> , and SPBE interoperability.
Government technology use	Technology supports digital democracy and policy participation.	Technology is widely used for digital service delivery, administration, and data-based governance.	The community uses technology for services, reporting, monitoring, and providing input.	Technology remains more dominant as a service instrument than as an instrument for policy collaboration.	Develop technology as a means of collaborative decision-making.
Stakeholder collaboration	Digital mechanisms are institutionalized as part of broader community-government interaction.	Collaboration occurs through complaint handling, community engagement, service innovation, and institutional coordination.	Community participation develops through partnerships and representation mechanisms.	Permanent institutional forums for community collaboration remain limited.	Establish a sustainable <i>Jakarta Smart Governance Forum</i> .
Risk management and data security	Integrated operations and cybersecurity mechanisms strengthen protection and trust.	Jakarta strengthens cybersecurity, community data protection, and information infrastructure through SPBE.	The community protects personal data, provides consent, and reports misuse.	Public trust and digital security literacy still need to be strengthened.	Strengthen information security governance, implementation of personal data protection, cyber resilience, and digital security education.

The benchmarking results show that Jakarta already has a strong foundation in regulation, institutional arrangements, and digitalization. The main gap does not lie in the absence of technology but rather in the limited institutionalization of the community as a policy actor throughout the policy cycle. Therefore, the implication of the comparison is not to increase the number of digital applications but to strengthen institutional mechanisms that connect community participation with policy formulation, implementation, monitoring, and evaluation.

Theoretical Novelty: Adaptive-Participatory Smart Governance Policy

The synthesis of the empirical findings and theoretical analysis of this study produces a theoretical novelty referred to as the Adaptive-Participatory Theory of *Smart Governance* policy. In this formulation, *Smart Governance* policy is understood as a dynamic interaction ecosystem between government and the community, in which technology functions as a bridge connecting community aspirations with decision-making processes. Therefore, the community is positioned not only as a recipient of digital services but also as a co-creator and strategic partner in addressing urban problems.

Table 5. Mapping of Theoretical Novelty

Aspect	Previous Role	Theoretical Novelty
Community position	User/respondent (passive)	Co-creator/strategic partner (active)
Technology function	Administrative efficiency tool	Space for negotiation and data diplomacy
Main barrier	Infrastructure limitations	Bureaucratic culture and digital literacy
Main outcome	Service satisfaction	Policy legitimacy and public trust

The model requires four main prerequisites within the community, namely digital literacy, equal access to technology, awareness of citizens' rights and responsibilities, and strong social capital. These prerequisites are reinforced by responsive bureaucratic behavior, institutional integration, political support, and inclusiveness in digital governance arrangements. Therefore, the findings of this study reposition participation from merely an additional feature of digital service provision to a core component of *Smart Governance* policy. The ultimate implication is that the success of *Smart City* Jakarta does not depend solely on technological sophistication but on the government's ability to provide spaces for participation and decision-making opportunities through digital platforms that are inclusive, collaborative, and adaptive to community needs.

CONCLUSIONS

This study concludes that the implementation of *Smart Governance* policy in the Special Region of Jakarta depends not only on the availability of digital technology but also on the quality of community participation throughout the governance process. The findings show that community participation extends beyond the role of service users and develops into a continuum of operational, participatory-procedural, and collective-advocacy roles. The effectiveness of these roles is shaped by community capacity, including digital literacy, access to technology, civic awareness, and social capital, while institutional responsiveness, policy support, inter-institutional integration, and inclusive governance determine whether participation can be translated into meaningful governance outcomes.

The study further concludes that effective *Smart Governance* policy is achieved through the interaction between community capacity as the primary input, *Smart Governance* policy mechanisms as the mediating process, and institutional factors as moderators that strengthen or weaken community engagement. This interaction results in increased public service responsiveness, strengthened government accountability, and increased public trust, thereby contributing to the realization of a more participatory, inclusive, and sustainable *Smart City*. Rather than viewing the community as passive recipients of digital public services, the

proposed model positions the community as active governance actors whose participation directly influences policy implementation and governance performance.

The main contribution of this study lies in the development of the Conceptual Model of Community Participation for *Smart Governance* Policy Implementation, which enriches the *Smart Governance* policy literature by explaining the sequential and relational mechanisms through which community participation creates governance value. The model provides theoretical and practical implications by offering an analytical framework that can guide governments in designing participatory digital governance systems that integrate technological innovation with institutional responsiveness and community empowerment. Thus, this study contributes to the field of public administration and *Smart Governance* policy more broadly by demonstrating that sustainable digital transformation requires the integration of technological capabilities, institutional quality, and active community participation as complementary components of effective governance.

REFERENSI

- Aditya, T., Ningrum, S., Nurasa, H., Irawati, & I. (2023). Community needs for the digital divide on the smart city policy. *Heliyon*, 9(8), E18932. <https://doi.org/10.1016/j.heliyon.2023.e18932>
- Alahi, E., E., Sukkuea, A., Tina, W., F., Nag, A., Kurdthongmee, W., Suwannarat, K., Mukhopadhyay, & S., C. (2023). Integration of IoT-Enabled Technologies and Artificial Advancements and Future Trends. *Sensors (Switzerland)*, 23(5206), 1–22.
- Alamoudi, K., A., Abidoye, B., R., Lam, & M, T. Y. (2023). The Impact of Citizens' Participation Level on Smart Sustainable Cities Outcomes: Evidence from Saudi Arabia. *Buildings*, 13(2), 1–25. <https://doi.org/10.3390/buildings13020343>
- Angelidou, M., Politis, C., Panori, A., Barkratsas, T., Fellnhöfer, & K. (2022). Emerging smart city, transport and energy trends in urban settings: Results of a pan-European foresight exercise with 120 experts. *Technological Forecasting and Social Change*, 183(August), 121915. <https://doi.org/10.1016/j.techfore.2022.121915>
- Ansell, C., Gash, & A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, 18(4), 543–571. <https://doi.org/10.1093/jopart/mum032>
- Anthony, & B. (2024). The Role of Community Engagement in Urban Innovation Towards the Co-Creation of Smart Sustainable Cities. *Journal of the Knowledge Economy*, 15(1), 1592–1624. <https://doi.org/10.1007/s13132-023-01176-1>
- Attaran, H., Kheibari, N., Bahrepour, & D. (2022). Toward integrated smart city: a new model for implementation and design challenges. *GeoJournal*, 87(S4), 511–526. <https://doi.org/10.1007/s10708-021-10560-w>
- Bastos, D., Fernández-Caballero, A., Pereira, A., Rocha, & N., P. (2022). Smart City Applications to Promote Citizen Participation in City Management and Governance: A Systematic Review. *Informatics*, 9(4), 1–29. <https://doi.org/10.3390/informatics9040089>
- Biddle, & B., J. (2013). *Role theory*: Expectations, identities, and behaviors. Academic Press.
- Calzada, & I. (2020). Democratising smart cities? Penta-helix multistakeholder social innovation framework. *Smart Cities*, 3(4), 1145–1173. <https://doi.org/10.3390/smartcities3040057>
- Caputo, F., Magliocca, P., Canestrino, R., Rescigno, & E. (2023). Rethinking the Role of Technology for Citizens' Engagement and Sustainable Development in Smart Cities. *Sustainability (Switzerland)*, 15(13), 1–19. <https://doi.org/10.3390/su151310400>
- Chantry, & W. (2023). 'Built from the internet up': assessing citizen participation in smart city planning through the case study of Quayside, Toronto. *GeoJournal*, 88(2), 1619–1637. <https://doi.org/10.1007/s10708-022-10688-3>

- Ciasullo, V., M., Troisi, O., Grimaldi, M., Leone, & D. (2020). Multi-level governance for sustainable innovation in smart communities: an ecosystems approach. *International Entrepreneurship and Management Journal*, 16(1), 1167–1195. <https://doi.org/https://doi.org/10.1007/s11365-020-00641-6>
- Ciesielska, M., Pereira, & G., V. (2024). The role of governance to support smart community development: a systematic literature review. *Proceedings of the Annual Hawaii International Conference on System Sciences*, 1(January), 2223–2232.
- Dunleavy, P., Margetts, H., Bastow, S., Tinkler, & J. (2008). *Digital Era Governance* IT Corporations, the State, and E-Government. OUP Oxford.
- Dunleavy, P., Margetts, & H. (2023). Data science, *artificial intelligence* and the third wave of *digital era governance*. *Public Policy and Administration*, 1(1), 1–30. <https://doi.org/10.1177/09520767231198737>
- Emerson, K., Nabatchi, T., Balogh, & S. (2012). An integrative framework for *collaborative governance*. *Journal of Public Administration Research and Theory*, 22(1), 1–29. <https://doi.org/10.1093/jopart/mur011>
- Firman, F., Sumatono, S., Muluk, K., M., Setyowati, & E. (2022). *Smart Governance: A Study of the Jakarta Smart City During the Covid-19 Pandemic*. *KnE Social Sciences*, 1(1), 491–502. <https://doi.org/10.18502/kss.v7i5.10573>
- García-Marzá, D., Calvo, & P. (2024). Algorithmic Democracy A Critical Perspective Based on Deliberative Democracy. *Springer International Publishing*.
- Gil-Garcia, R., J., Zhang, J., Puron-Cid, & G. (2016). Conceptualizing smartness in government: An integrative and multi-dimensional view. *Government Information Quarterly*, 33(3), 524–534. <https://doi.org/10.1016/j.giq.2016.03.002>
- Grote, J., Gbikpi, & B. (2014). Participatory Governance Political and Societal Implications (B. Gbikpi & J.
- Huang, K., Luo, W., Zhang, W., Li, & J. (2021). Characteristics and problems of *smart city* development in China. *Smart Cities*, 4(4), 1403–1419. <https://doi.org/10.3390/smartcities4040074>
- Kaiser, & A, Z. R. M. (2024). *Smart governance* for smart cities and nations. *Journal of Economy and Technology*, 2(June), 216–234. <https://doi.org/10.1016/j.ject.2024.07.003>
- Kusumastuti, D., R., Nurmala, N., Rouli, J., Herdiansyah, & H. (2022). Analyzing the factors that influence the seeking and sharing of information on the *smart city digital platform*: Empirical evidence from Indonesia. *Technology in Society*, 68(1), 101876. <https://doi.org/10.1016/j.techsoc.2022.101876>
- Liu, D., Qi, & X. (2021). *Smart governance*: The era requirements and realization path of the modernization of the basic government governance ability. *Procedia Computer Science*, 199(1), 674–680. <https://doi.org/10.1016/j.procs.2022.01.083>
- Lopez, R., L. J., Castro, & G, A. I. (2021). Sustainability and resilience in *smart city* planning: A review. *Sustainability (Switzerland)*, 13(1), 1–25. <https://doi.org/10.3390/su13010181>
- Margetts, H., Dunleavy, & P. (2024). The political economy of digital government: How Silicon Valley firms drove conversion to data science and *artificial intelligence* in public management. *Public Money and Management*, 1(1), 1–11. <https://doi.org/10.1080/09540962.2024.2389915>
- Meijer, A., Bolívar, & R, M. P. (2016). Governing the *smart city*: A review of the literature on smart urban governance. *International Review of Administrative Sciences*, 82(2), 392–408. <https://doi.org/10.1177/0020852314564308>
- Moura, F., Silva, & e, J. de A. (2021). Smart Cities: Definitions, Evolution of the Concept, and Examples of Initiatives. *Research Anthology on Business Aspects of Cybersecurity*, 1(January), 989–997. https://doi.org/10.1007/978-3-319-95873-6_6
- Munjirin, & M. (2024). Redesigning The Organization Of The Jakarta City Government:

- Adaptation And Innovation Towards A Sustainable City. *Eduvest - Journal of Universal Studies*, 4(3), 1021–1032. <https://doi.org/10.59188/eduvest.v4i3.1118>
- Mutambik, I., Almuqrin, A., Alharbi, F., Abusharhah, & M. (2023). How to Encourage Public Engagement in *Smart City* Development—Learning from Saudi Arabia. *Land*, 12(10), 1–16. <https://doi.org/10.3390/land12101851>
- Myeong, S., Bokhari, & A, S. A. (2023). Building Participative E-Governance in Smart Cities: Moderating Role of Institutional and Technological Innovation. *Sustainability (Switzerland)*, 15(20), 1–23. <https://doi.org/10.3390/su152015075>
- Nam, T., Pardo, & T., A. (2011). Conceptualizing *smart city* with dimensions of technology, people, and institutions. *Government Information Quarterly*, 28(3), 282–291. <https://doi.org/10.1016/j.giq.2011.01.004>
- Nastjuk, I., Trang, S., Papageorgiou, & E., I. (2022). Smart cities and *smart governance* models for future cities: Current research and future directions. *Electronic Markets*, 32(4), 1917–1924. <https://doi.org/10.1007/s12525-022-00609-0>
- Paiva, S., Ahad, A., M., Tripathi, G., Feroz, N., Casalino, & G. (2021). Enabling technologies for urban smart mobility: Recent trends, opportunities and challenges. *Sensors*, 21(6), 1–45. <https://doi.org/10.3390/s21062143>
- Palumbo, & R. (2017). Participatory Governance. In *Global Encyclopedia of Public Administration, Public Policy, and Governance*. https://doi.org/https://doi.org/10.1007/978-3-319-31816-5_1834-1
- Pansera, M., Marsh, A., Owen, R., Arturo, J., L., F., Lillian, J., & U, D. A. (2023). Exploring Citizen Participation in *Smart City* Development in Mexico City: An institutional logics approach. *Organization Studies*, 44(10), 1679–1701. <https://doi.org/10.1177/01708406221094194>
- Penmetsa, K., M., Camara, & B, S. J. (2022). Building a Super Smart Nation: Scenario Analysis and Framework of Essential *Stakeholders*, Characteristics, Pillars, and Challenges. *Sustainability (Switzerland)*, 14(5), 1–23. <https://doi.org/10.3390/su14052757>
- Perwira, I., Harijanti, D., S., Susanto, M., Adhihernawan, & M., Y. (2024). Capital city relocation in Indonesia: compromise failure and potential dysfunction. *Cogent Social Sciences*, 10(1). <https://doi.org/10.1080/23311886.2024.2345930>
- Prasetya, D., I. P. S., Wijaya, S., K. A., Yudhartha, D., I. P., Savitri, & R. (2024). Analisis Persepsi Masyarakat Terhadap Aplikasi JAKI (Jakarta Kini) di Provinsi DKI Jakarta. *Ganaya : Jurnal Ilmu Sosial Dan Humaniora*, 7(1), 1–12. <https://doi.org/10.37329/ganaya.v7i1.2941>
- Salman, Y., M., Hasar, & H. (2023). Review on environmental aspects in *smart city* concept: Water, waste, air pollution and transportation smart applications using IoT techniques. *Sustainable Cities and Society*, 94(July), 104567. <https://doi.org/https://doi.org/10.1016/j.scs.2023.104567>
- Subiyanto, F., R., Guffari, A., M., Saputra, A., A., Nurdin, & N. (2024). Mengkaji Dampak Implementasi Aplikasi JAKI Terhadap Aksesibilitas Pelayanan Publik di Kota Jakarta. *Indonesian Journal of Social Development*, 1(4), 14. <https://doi.org/10.47134/jsd.v1i4.2801>
- Syaban, N., A. S., Appiah-Opoku, & S. (2023). Building Indonesia's new capital city: an in-depth analysis of prospects and challenges from current capital city of Jakarta to Kalimantan. *Urban, Planning and Transport Research*, 11(1), 1–30. <https://doi.org/10.1080/21650020.2023.2276415>
- Webber, S., Maalsen, S., Emmanuel, & L. (2024). Tracking, calculating, watching: Governing and delay in the Jakarta *Smart City*. *Transactions of the Institute of British Geographers*, 49(2), 1–16. <https://doi.org/10.1111/tran.12630>