Inclusive Digital Governance in Urban Settings: A Case Study of the Adminduk Smart Service in Samarinda

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Abstract

Digital transformation is central to modern urban governance, but its success depends not only on technology but also on inclusivity and equal access. This study analyzes the implementation of the Adminduk Smart Service in Samarinda within the framework of inclusive urban digital governance. Using qualitative methods-observations and interviews with officials-the study examines service delivery, alignment with inclusivity principles, and institutional challenges. Findings show that the platform expands access through web-based services and local assistance counters, but faces barriers such as digital literacy gaps, inconsistent procedures, and technical limitations. The study contributes conceptually to inclusive digital governance and practically by recommending stronger citizen participation, improved capacity-building, and resilient infrastructure.

Keywords: public services, digital governance, population administration.

INTRODUCTION

In the midst of accelerating digital transformation, governments across the world are striving to improve efficiency and transparency through the use of information and communication technology (ICT) in public governance. This approach, known as digital governance, refers to the strategic use of technology to make government systems more efficient [1].

However, the success of digital governance is not only determined by the sophistication of the technology but also by the extent to which the system reaches and involves all levels of society equally. Within this framework, the concept of Inclusive Urban Digital Governance emerges. It represents a model of digital governance in urban areas that prioritizes inclusivity, accessibility, and fairness of services for all citizens, including groups vulnerable to digital exclusion [2].

An essential component of inclusive digital governance is the availability of online public services that can be accessed by all community groups, without being constrained by location, socioeconomic status, or levels of digital literacy. The principle of digital inclusion emphasizes that technology adoption in public services must consider the gaps in access and digital capabilities among citizens. Without this awareness, digital transformation risks reinforcing inequality by widening the digital divide, thereby exacerbating social exclusion instead of reducing it.

In Indonesia, local governments are actively pursuing digital transformation to improve the efficiency, transparency, and accessibility of public services. One such initiative is the Adminduk Smart Service implemented by the Population and Civil Registration Office (Disdukcapil) of Samarinda City. Through this service, citizens can process population documents such as

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electronic ID cards, Child Identity Cards (KIA), and birth certificates online via the official website. The system is designed to accommodate urban residents with high mobility and limited time to visit service offices directly. It is also adapted for use on various devices, including low-spec smartphones, to ensure accessibility for middle-to-lower income groups. This design reflects a tangible effort to digitize public services with a focus on equal access in urban areas. Furthermore, the Adminduk Smart Service aligns with the principles of open government and citizen-centric governance. It simplifies conventional administrative processes through technology while also creating participatory spaces for citizens in managing their own administrative affairs [3].

While the Adminduk Smart Service represents progress in digital transformation, questions remain about whether it truly embodies inclusivity, particularly for vulnerable groups such as the elderly, low-income citizens, and people with disabilities. Barriers such as limited internet access, low digital literacy, and varying levels of technological readiness could potentially exclude these groups from benefiting fully from the service.

Based on this context, this study seeks to examine the implementation of the Adminduk Smart Service as a form of inclusive digital governance at the city level. Specifically, the study focuses on how digital governance is implemented in practice, the degree to which inclusivity is embedded in the Adminduk Smart Service, and also how public institutions respond to institutional and technological challenges in ensuring equal access and service quality. This study contributes to the growing discourse on Inclusive Urban Digital Governance in the field of public administration, particularly in developing-country contexts. Practically, it provides an evaluation of the effectiveness of digital services in municipal government, offering insights for policymakers to strengthen digital inclusion and ensure that no citizen is left behind in the process of digital transformation.

METHOD

This study employs a descriptive qualitative approach, as the researcher aims to describe the implementation of the Adminduk Smart Service within the framework of digital inclusion and governance, including the challenges faced by the Population and Civil Registration Office (Disdukcapil).

The main research site is the Samarinda City Population and Civil Registration Office. Research data were collected through three techniques, with the data collection process conducted from 14 July to 25 July 2025 :

a) Interviews. A total of two in-depth interviews were conducted. The informants were the Head of the Division of Population Administration Information Management (PIAK), Disdukcapil Samarinda (Didik Purwanto, S.STP., M.Si.), and a PIAK Division Officer (Arie, S.Kom). The interview was held twice in a week and explored themes such as the operational process of the Adminduk Smart Service, digital inclusion strategies, technical and institutional challenges, and citizen accessibility.

b) Observation. Data were gathered through direct observation at the Samarinda City Population and Civil Registration Office, focusing on service flow, staff–citizen interactions, and the practical use of the Adminduk Smart Service platform.

c) Documentation Study. Relevant documents were reviewed, including the official profile of the Population and Civil Registration Office and the Adminduk Smart Service project script.

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Data were analyzed using Miles and Huberman's interactive model, which involves iterative processes of data reduction, data display, and conclusion drawing [4].

RESULTS AND DISCUSSION

The findings show that the implementation of digital governance in population administration services has reshaped the interaction patterns between government and citizens. This transformation is not only about digitizing administrative procedures, but also about building a more efficient, transparent, and inclusive service system. The following sections analyze the system in Samarinda City through the main dimensions of Inclusive Urban Digital Governance.

a) Implementation of Digital Governance

Field observations and interviews indicate that the Adminduk Smart Service is a web-based platform designed for universal access without the need for separate Android or iOS versions. The services offered include the issuance of birth and death certificates, family cards, and domicile changes, all accessible through a single official portal (https://disdukcapil.samarindakota.go.id/). Users create accounts, upload required documents, and select their desired services. A key feature is real-time document tracking, which informs applicants about the status of their submissions and reasons for rejection if documents do not comply with requirements.

This design demonstrates a shift toward efficiency and accountability, consistent with governance models emphasizing process simplification and citizen-centered service delivery [5]. Yet, incomplete or incorrectly formatted submissions remain a recurring issue.

**Table 1. Application Through Adminduk Smart Service Service
(October 1, 2024 to July 31, 2025)**

Request	Complete	Non-Compliant
55815	40720	15091

(*Source*: Samarinda City Population and Civil Registration Office)

From October 1, 2024, to July 31, 2025, 55,815 applications were recorded; 40,720 (72.9%) were successfully processed, while 15,091 (27.0%) were rejected due to document non-compliance. These rejections highlight that technical systems alone cannot guarantee service completion without citizen digital literacy and capacity to meet formal requirements.

b) Inclusivity and Accessibility

The system has made notable efforts to expand access for vulnerable groups. Digital assistance counters at the urban village level serve as an important bridge for elderly citizens, people with disabilities, and residents with limited digital literacy. At these counters, officers provide hands-on assistance with form completion, document uploads, and service navigation, thereby reducing travel costs and processing time for applicants who might otherwise face barriers in accessing administrative services. This system is part of the SIDA (Adminduk Digital Information System) or *Adminduk Smart Service* Samarinda program which offers easy online

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services through the urban village [6]. This approach demonstrates a shift from a purely technology-driven model toward a more socially responsive form of digital governance [7].

In addition, localized digital literacy initiatives play a critical role in sustaining inclusion. Neighborhood leaders and community officials are trained as "digital agents," enabling them to guide residents in accessing and utilizing the platform [8]. This approach emphasizes that equitable digital transformation requires not only the provision of technical infrastructure but also the involvement of human intermediaries who can bridge gaps in access and participation [9]. By embedding these intermediaries within community structures, the system ensures that digital services are not limited to those who are already digitally literate, but are extended to wider and more diverse social groups [10].

These initiatives extend beyond access by strengthening trust, building local capacity, and fostering shared responsibility in service delivery. In doing so, the Adminduk Smart Service positions itself as a driver of social equity and ensures that marginalized groups are not excluded from digital transformation.

c) Transparency and Accountability

Transparency is strengthened through the integration of features such as online service tracking and accessible complaint channels. These mechanisms enable citizens to monitor the progress of their applications without the need for physical visits to government offices, thereby aligning with the broader principles of open government. The real-time tracking system not only provides timely information on application status but also functions as an accountability tool for service providers, reducing opportunities for bureaucratic opacity [11]. Similarly, the complaint channels provide a formal avenue for citizens to express grievances, though their actual utilization remains limited.

Despite these advances, citizen participation in the Adminduk Smart Service remains primarily confined to the role of end-users, with little opportunity to influence service design, feedback loops, or broader policy development [12]. This pattern reflects concerns in the literature that digital platforms, if not coupled with participatory mechanisms, risk reinforcing hierarchical and passive modes of service delivery rather than fostering genuine engagement. Digital inclusion is not only a matter of providing access but also ensuring that citizens—particularly those from vulnerable or digitally marginalized groups—are meaningfully involved in the co-creation and governance of such platforms.

In this context, inclusivity becomes a critical measure of digital governance. Groups with lower digital literacy, limited access to technology, or special needs may find themselves excluded from these transparency mechanisms, thereby perpetuating existing inequalities. Without proactive strategies to bridge these gaps—such as digital literacy programs, community assistance points, or interface adjustments for accessibility—the promise of transparency may remain unevenly distributed across the population. Thus, while Adminduk Smart Service demonstrates progress toward transparent governance, its inclusiveness requires further institutional commitment to participatory and equitable digital practices.

d) Equality and Non-Discrimination

The system also addresses equality by targeting services for people with disabilities. The "Pak Dola Kadis" innovation employs persons with disabilities as couriers to deliver documents

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directly to households, charging modest service fees (IDR 20,000–50,000) [13]. This initiative not only ensures home delivery of documents but also provides socio-economic empowerment for couriers, aligning with *inclusive governance* principles that combine service innovation with social justice. By embedding equality into service delivery, the platform demonstrates how digital governance can advance both efficiency and rights-based inclusion, reducing barriers faced by marginalized groups.

e) Institutional and Technical Challenges

The transformation of public services towards a digital system requires governance that is inclusive, adaptive, and responsive to institutional, technical, and social dynamics. Research in the field reveals that although the *Adminduk Smart Service* system is designed to expand access and efficiency of population administration services, in practice it still faces a number of challenges that have the opportunity to hinder the realization of inclusivity in digital governance.

Institutional aspects and Human Resources (HR) are the first crucial point in facing digital governance challenges. Based on field findings, the disparity in perception among officers regarding user account validation procedures creates inconsistencies in services. For example, there are differences perceptions among officers in responding to the submission of birth certificates on behalf of five-month-old children through personal accounts. Some officers accept the application, while others require the use of parents' accounts. This disintegration reflects the lack of technical guidance as a debriefing for employees to deal with conditions that are not recorded as standard in standard operating procedures (SOPs). Therefore, the success of digitalization in public services is greatly influenced by the readiness of organizations in building common understanding and cross-sector cooperation [14].

In addition, the implementation of *the Adminduk Smart Service* initially experienced a technical obstacle that was quite crucial, namely the limited digital storage capacity of only 100GB. This limitation caused the system to experience *overcapacity*, so that digital services were temporarily closed, especially during morning to noon operating hours, to prevent the accumulation of digital documents that have not been processed. This disruption has a direct impact on the smooth running of services and forces officers to temporarily stop the process of validating and issuing documents online. Realizing the urgency of this problem, the Samarinda City Population and Civil Registration Office has gradually begun to shift its digital storage infrastructure to Amazon Web Services (AWS). With this integration, digital archives are no longer stored in a limited on-premises or cloud server, but are directly routed to a more reliable AWS system. This transition is not only a technical solution to the problem of over capacity, but also a strategic step to strengthen the digital foundation of population services going forward. The resilience of digital infrastructure is an important element in maintaining the stability and sustainability of public services [15].

In addition, social challenges are also an important concern in the context of inclusive digital governance. Although web-based services such as *Adminduk Smart Service* are designed to be accessible from various devices without the need for additional application installation, some people still experience obstacles in their use. The perception that digital services are more complicated than conventional services reflects the low digital literacy among citizens, especially the elderly and people with limited access to technology [16]. The risk of digital exclusion can widen the gap in access to public services if not handled seriously. Realizing this, the Samarinda

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City Population and Civil Registration Office collaborated with the urban village as an extension of digital services. Through this scheme, urban village officers are given access to a special cooperation account to help upload documents and process service applications on behalf of residents who have not been able to access the system independently.

CONCLUSION

This research shows that the implementation of Adminduk Smart Service in Samarinda City has reflected an important part of inclusive urban digital governance. This service actually seeks to reach the community through the provision of digital assistance counters at the urban village level, assistance in uploading digital documents, and the active role of urban village officials in bridging the digital literacy gap. This effort is a concrete step in overcoming the digital divide and strengthening digital social inclusion.

In terms of governance, this system shows that the program is only partially in line with the principles of inclusive governance, especially in terms of accessibility and equity, as well as transparency and accountability which is reflected through a system of service tracking and feedback. However, community involvement is still passive, not fully participatory in the process of designing or evaluating services.

Theoritically, this study extends the discourse on inclusive digital governance by contextualizing it in a mid-sized Indonesian city, highlighting how local-level digital interventions can be linked to broader frameworks of responsive and participatory urban governance. Practically, this research contributes to strengthening local government innovation in inclusive digital-based population administration services, especially in areas with limited digital infrastructure. Theoretically, these results expand the scope of inclusive e-governance studies by linking local-level digital interventions within responsive and participatory urban governance frameworks.

Policy recommendations that can be provided from this study include:
- Strengthen citizen participation through consultative forums and surveys.
- Increase digital capacity for the elderly and suburban communities.
- Enhance local institutional synergy for sustainability and cross-sector integration.

Methodological implications and opportunities for further study include:
- Employ Participatory Action Research (PAR) to actively involve citizens in service development.
- Conduct comparative studies across Indonesian cities to assess the transferability of inclusive digital models.
- Undertake longitudinal research to evaluate the sustainable impact of digital services on social inclusion.

DECLARATION OF GENERATIVE AI

During the preparation of this work the authors used *ChatGPT by OpenAI* in supporting article structuring, refining academic language, and translation selected parts to English. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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