

Strengthening Public Participation through E-Democracy: A Case Study of Digital Governance Via The PADUKO Application in Padang Panjang City

Penguatan Partisipasi Publik melalui E-Demokrasi: Studi Kasus Tata Kelola Digital melalui Aplikasi PADUKO di Kota Padang Panjang

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Abstract

The rapid development of information and communication technology has expanded opportunities for governments to promote participatory, transparent, and accountable governance through e-democracy. This study analyzes the implementation of the PADUKO (Online Population Administration Services) application as a form of digital governance and e-democracy in Padang Panjang City. Using an evaluative case study with a qualitative approach, data were collected through in-depth interviews, observation, and document analysis, and were validated using source triangulation and focus group discussions. The findings show that PADUKO improves service transparency, access to digital information, citizen participation, and inter-agency collaboration in population administration services. However, citizen participation remains largely procedural and consultative, corresponding to the levels of consultation and placation in Arnstein's ladder of participation. Challenges such as unequal digital literacy, limited infrastructure, and uneven public awareness continue to constrain meaningful engagement. This study concludes that the effectiveness of e-democracy initiatives depends not only on technological readiness but also on supportive institutional frameworks and active community involvement to achieve substantive citizen empowerment in local governance.

Keywords

E-democracy; Digital governance; Citizen participation.

Abstrak

Perkembangan pesat teknologi informasi dan komunikasi telah memperluas peluang bagi pemerintah untuk mendorong tata kelola pemerintahan yang partisipatif, transparan, dan akuntabel melalui e-demokrasi. Penelitian ini menganalisis implementasi aplikasi PADUKO (Pelayanan Administrasi Kependudukan Online) sebagai bentuk tata kelola digital dan e-demokrasi di Kota Padang Panjang. Penelitian ini menggunakan studi kasus evaluatif dengan pendekatan kualitatif. Data dikumpulkan melalui wawancara mendalam, observasi, dan analisis dokumen, serta divalidasi melalui triangulasi sumber dan diskusi kelompok terfokus (FGD). Hasil penelitian menunjukkan bahwa PADUKO meningkatkan transparansi layanan, akses informasi digital, partisipasi masyarakat, serta kolaborasi antarperangkat daerah dalam pelayanan administrasi kependudukan. Namun demikian, partisipasi masyarakat masih bersifat prosedural dan konsultatif, yang berada pada tingkat konsultasi dan peredaman (placation) dalam tangga partisipasi Arnstein. Tantangan seperti kesenjangan literasi digital, keterbatasan infrastruktur, dan rendahnya pemerataan kesadaran publik masih membatasi keterlibatan masyarakat yang bermakna. Penelitian ini menyimpulkan bahwa efektivitas inisiatif e-demokrasi tidak hanya ditentukan oleh kesiapan teknologi, tetapi juga oleh dukungan kelembagaan dan keterlibatan aktif masyarakat untuk mencapai pemberdayaan warga yang substantif dalam tata kelola pemerintahan lokal.

Kata Kunci

E-demokrasi; Pemerintahan digital; Partisipasi masyarakat.



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1. Introduction

Across different regions of the world, governments are actively adopting digital platforms to respond to rising public expectations for faster and more efficient services, broader access to public information, and greater opportunities for citizens to engage in public affairs (Dawes, 2009). This digital transformation has significantly reshaped the relationship between the state and its citizens, creating new spaces for interaction, communication, and engagement while simultaneously introducing complex challenges related to social inclusion, unequal power relations, and the overall quality of democratic governance.

One of the main critiques directed at e-government lies in its tendency to position citizens primarily as passive recipients or consumers of public services, rather than as active participants in governance and decision-making processes (Handayani et al., 2015). Digital platforms operating under the e-government model generally emphasize one-way service delivery mechanisms, in which citizens submit requests and receive administrative outputs without being provided with meaningful opportunities to influence policy formulation, service design, or governmental decision-making (Ariawan, 2025).

Unlike e-government, which primarily prioritizes efficiency and service delivery, e-democracy places citizens at the center of governance by recognizing them as active political actors who possess the capacity to influence public decisions (OECD, 2018). Through digital platforms, citizens are expected to gain broader and more timely access to public information, engage in consultations and deliberative processes, and collaborate with government institutions in shaping public policies and monitoring their implementation (UN E-Government Survey., 2020).

Scholars have conceptualized e-democracy as a multidimensional framework that encompasses several interrelated components, most notably e-information, e-participation, and e-collaboration (Moon, 2002). Rather than viewing digital platforms merely as technical infrastructures, this conceptualization positions them as institutional spaces where democratic interactions can occur in new and potentially transformative ways. By lowering barriers to information access, digital platforms are expected to reduce information asymmetry between government and citizens, thereby strengthening transparency and accountability (Meijer, 2012).

Beyond transparency, e-information also plays an important role in shaping citizens' trust in government. When public information is accessible, accurate, and up to date, citizens are more likely to perceive government institutions as open and responsive. Conversely, limited or selective disclosure of information may reinforce perceptions of opacity and exclusion. Therefore, the effectiveness of the e-information dimension does not depend solely on the quantity of information provided, but also on its relevance, clarity, and usability (Nugroho, 2011).

Gil-Garcia (2014) states that digital platforms can enable participation by individuals who may be constrained by distance, time, or mobility, and can potentially reach groups that are underrepresented in conventional participatory forums. However, the mere availability of digital participation channels does not automatically guarantee meaningful engagement (Jaeger, 2003).

The third dimension, e-collaboration, represents a more advanced and integrative form of digital participation. E-collaboration involves partnerships and cooperative arrangements between government, citizens, civil society organizations, and other stakeholders in the design, implementation, and evaluation of public policies and services (Prabowo, 2017). Through digital platforms, e-collaboration seeks to move beyond consultation toward shared problem-solving and co-production of public value (Suria, 2025).

Sutrisna et al., (2024) suggest that e-democracy is not a single practice or technological solution, but a continuum of democratic engagement enabled by digital tools. Although citizens may gain access to information or be able to submit feedback through digital platforms, their inputs are not always meaningfully incorporated into policy outcomes or service redesign (Jaeger, 2003).

Susniwati (2024) states that digital platforms may create the appearance of participation by enabling citizens to express opinions or submit complaints, while decision-making authority remains centralized within government institutions. Consequently, citizen engagement is often limited to responding to predefined agendas rather than actively shaping policy priorities or institutional practices (Dwiputrianti, 2018).

Arnstein (1969) ladder of citizen participation is a classic framework that conceptualizes participation as a continuum ranging from non-participation and tokenism to genuine citizen power. Arnstein distinguishes between lower levels of participation-such as informing, consultation, and placation-which may improve communication but do not fundamentally redistribute power, and higher levels, such as partnership, delegated power, and citizen control, which reflect substantive empowerment. Although developed prior to the digital era, Arnstein's framework remains highly relevant for evaluating contemporary e-democracy initiatives, as it enables a distinction between procedural participation facilitated by digital platforms and genuine citizen influence over governance processes. In the context of digital governance, Arnstein's ladder provides a critical lens for examining whether e-democracy initiatives merely enhance interaction or alter power relations between government and citizens (Prastya, 2021).

While participation is acknowledged as a normative objective within the SPBE framework, implementation has largely prioritized service delivery and administrative integration (Dwiputrianti, 2018). As a result, digital governance practices often remain closer to the e-government paradigm than to the broader ideals of e-democracy. However, prior studies indicate that these platforms remain predominantly transactional and service-oriented, with citizen interaction largely limited to submitting requests and receiving documents (UN E-Government Survey, 2020).

Most existing studies on digital population administration in Indonesia have primarily focused on technical performance, service quality, organizational efficiency, and user satisfaction (Pratama et al., 2025). Limited attention has been given to examining whether digital population administration platforms facilitate citizen participation, enhance transparency, or strengthen accountability.

This gap in the literature is increasingly relevant in the context of ongoing digital governance reforms (Fung, 2006). When digital services are designed mainly for transactional efficiency, they tend to reinforce a passive model of citizenship in which citizens are positioned as service users rather than as active participants in governance (Wirtz, 2015).

Within this context, the Padang Panjang City Government introduced the PADUKO (Online Population Administration Services) application as a local digital innovation to improve population administration services. PADUKO enables citizens to access services online, submit documents electronically, and monitor application progress without visiting government offices (Bertot, 2010).

2. Methods

This study employs a qualitative case study approach to analyze the implementation of the PADUKO (Online Population Administration Services) application as a form of digital governance and e-democracy in Padang Panjang City. The research focuses on examining PADUKO from an e-democracy perspective, particularly in

relation to access to information, citizen participation, and government responsiveness. Accordingly, this study addresses four main research questions: (1) how PADUKO is implemented as a digital population administration service; (2) how citizens perceive and experience PADUKO; (3) the roles of government agencies in supporting the application; and (4) the extent to which PADUKO enables meaningful citizen participation based on Arnstein's ladder of participation.

Gil-Garcia (2014) conducted in-depth interviews with key informants from the Population and Civil Registration Office, the Communication and Informatics Office, and other relevant local government units, as well as with citizens who had used PADUKO services. FGDs were organized to validate and enrich interview findings by facilitating collective reflection among stakeholders. Observation was carried out to understand the operational use of PADUKO, while document analysis involved reviewing regulations, official reports, and technical documents related to PADUKO and the Electronic-Based Government System (SPBE).

Suria (2025) states that the analytical framework combines e-democracy concepts (e-information, e-participation, and e-collaboration) with Arnstein's (1969) ladder of citizen participation to assess the depth and quality of citizen involvement facilitated by PADUKO. Informants were selected using purposive sampling, focusing on individuals directly involved in or affected by the implementation of PADUKO to ensure data relevance (Jaeger, 2003; Suria, 2025).

3. Results and Discussion

PADUKO is the official application of the Padang Panjang City Government, providing population administration services, public complaints, permits, information on government activities, and other services. This application is available on Android and is free for all residents. PADUKO provides various population administration services accessible through the official website paduko.padangpanjang.go.id. Some of the main services offered include Document Creation and Amendments: Birth certificates, death certificates, marriage certificates, divorce certificates, family cards (KK), Child Identity Cards (KIA), and electronic ID cards (KTP-el); Population Transfers: Moving in and out services for residents who change domicile; Special Services: The "*Selalu Samawa*" feature integrated with the Religious Affairs Office (KUA) for couples getting married; and "*Mendung Sesaat*" (Short Cloud) in collaboration with the Religious Court for those who are divorcing.

Through PADUKO, the public can submit document requests by uploading the required documents. After verification by the Civil Registration Office (Disdukcapil), the documents will be sent digitally via email or WhatsApp. Residents can print the documents themselves using 80-gram A4-size HVS paper, in accordance with Minister of Home Affairs Regulation Number 109 of 2019. For security, each document is equipped with an electronic signature and a personal identification number (PIN). For residents without printing facilities, Disdukcapil provides a free home delivery service through its officers.

Based on an independent survey by the Research and Community Service Institute (LPPM) of Andalas University in January 2021, found that Disdukcapil Padang Panjang received a "very good" rating in its service delivery to the public. While PADUKO has brought numerous benefits, its implementation remains challenging, including a digital literacy gap among the elderly and limited internet infrastructure in some areas. To address these challenges, the Civil Registration and Population Office (Disdukcapil) continue to conduct outreach and training for the community and strives to improve service quality through application development and supporting infrastructure. Overall, PADUKO represents a significant step forward in implementing e-government at the local level, making it easier for the public to access population administration services efficiently and transparently.

3.1. Implementation of E-Democracy in PADUKO

To assess the quality of citizen participation facilitated by PADUKO, this study adopts a ladder of citizen participation, which conceptualizes participation as a continuum ranging from non-participation (manipulation, therapy), tokenism (informing, consultation, placation), to citizen power (partnership, delegated power, citizen control). This framework allows the analysis to move beyond quantitative indicators of access or usage and to evaluate the depth and influence of citizen participation within digital governance platforms.

Wirtz (2015) referring to the concept proposed by e-democracy, encompasses three main elements: e-information, e-participation, and e-collaboration. These three elements complement each other in creating a more transparent, participatory, and responsive governance system.

The e-information element focuses on open access to public information for citizens. In the context of PADUKO, the application provides a variety of real-time information to the public, such as government activity agendas, the status of population administration services, official announcements, and regional regulations and policies. This information can be accessed at any time by users, either through the Android application or the official PADUKO website.

In addition, there is a feature that displays reports on regional apparatus performance achievements, budget utilization, and activity plans, reinforcing the principles of transparency and public accountability. The availability of this information demonstrates the Padang Panjang City Government's commitment to open government principles, where citizens can directly monitor and assess local government performance.

The e-participation element is realized through the "Citizen Report" feature, which allows the public to submit complaints, criticisms, suggestions, or service requests directly to the relevant agencies (Susniwati, 2024). This system provides regular notifications regarding the progress of report follow-up, so reporters not only provide input but also receive assurance regarding the government's response.

This feature strengthens public participation in monitoring and improving services while also serving as an effective channel for public aspirations. Furthermore, citizens are given the opportunity to provide ratings on the quality of services they have received. This makes PADUKO a participatory medium that encourages active and constructive citizen involvement in government processes.

The e-collaboration aspect is demonstrated through cross-sector synergies between local governments and other institutions. An example is the "Selalu Samawa" feature, which is integrated with the Office of Religious Affairs (KUA), to simplify the administrative process for couples planning to marry. Another collaboration is seen in the "Mendung Sesaat" feature, which collaborates with the Religious Courts to handle divorce administrative processes. These initiatives reflect the government's efforts to build interoperable governance, not only among government agencies but also with socio-religious and legal institutions.

In addition to service integration, local governments also hold online discussions (digital forums) and thematic webinars through PADUKO to gather citizen aspirations, listen to community needs, and directly communicate policies. This expands the dialogue between citizens and the government, strengthening social partnerships within the context of public services.

The implementation of e-democracy through PADUKO also adheres to the principles of accountability and responsiveness. Based on interviews, local governments respond to citizen complaints within an average of less than 48 hours, and the entire process is recorded in the system for auditing at any time. This demonstrates a serious effort to maintain public trust in the quality of services.

Furthermore, PADUKO is designed to reach various segments of society, including those with limited access to technology. The government provides printing and document delivery services for citizens without digital devices or adequate internet access. This approach demonstrates a commitment to the principle of inclusivity, where every citizen, without exception, has equal access to public services.

Janssen et al., (2012) using a case study of the PADUKO application in Padang Panjang City, demonstrate that the government's digital platform not only functions as an administrative tool for service efficiency but also has the potential to strengthen citizen participation in public decision-making processes. Second, this research enriches the local literature by presenting a contextual perspective from a small city-level region in Indonesia, which has not been widely covered by similar studies. Third, methodologically, this research offers an integrated evaluative approach that can be used as a model for assessing the success of local government digital policies not only from a technical perspective but also from a democratic and participatory perspective. Thus, the results of this research contribute to the development of a more holistic analytical framework for examining e-governance practices in the era of the digital transformation of government.

Based on Arnstein's framework, the participation facilitated through the "Citizen Report" feature primarily reflects the level of consultation and, in some cases, placation. While citizens are able to submit complaints and monitor government responses, they have limited influence over policy formulation or service design.

Despite the availability of participatory features, this study finds that not all citizens actively access PADUKO. Interviews indicate several factors contributing to this condition, including limited digital literacy among certain groups, a preference for face-to-face services, a lack of awareness about participatory features, and perceptions that citizen input does not substantially influence decision-making outcomes. This finding suggests that the existence of digital participation channels does not automatically translate into substantive participation. Thus, PADUKO demonstrates that e-government platforms may enhance administrative responsiveness, yet democratic participation remains largely procedural rather than empowering, highlighting the persistent gap between digital access and substantive citizen power.

3.2. Impact on Public Services

The implementation of PADUKO has generated several positive impacts on public service delivery in Padang Panjang City. First, it has improved public access to administrative services, with more than 70% of population administration services now accessible remotely, reducing physical visits to government offices. Second, PADUKO has accelerated government responsiveness, as reflected in the average response time to citizen complaints, which is less than 48 hours. Third, the application enhances transparency and accountability through a service rating feature that allows citizens to directly evaluate officer performance after receiving services. These improvements are reflected in a local satisfaction survey, which reported an 85% satisfaction rate with PADUKO services in 2023.

Pratama et al., (2025) note that while PADUKO enables citizens to submit complaints, monitor follow-up actions, and provide feedback, participation largely remains consultative in nature. Referring to Arnstein's (1969) ladder of citizen participation, these forms of engagement correspond to the levels of consultation and placation, where citizens are heard and responded to but have limited influence over policy formulation or service design.

In addition to these achievements, the implementation of PADUKO also faces several structural challenges that affect both service effectiveness and the depth of public participation. A digital literacy gap persists among certain segments of the population, particularly the elderly and individuals with lower educational backgrounds, limiting their ability to utilize digital services independently. Infrastructure constraints, including limited internet connectivity in hilly and peripheral areas, further restrict equal access to PADUKO services. Moreover, limitations in human resource capacity for technical and administrative management, along with suboptimal data integration between government agencies, result in some services still being processed manually.

These challenges help explain why, despite the availability of PADUKO as a digital platform, not all citizens actively engage with the application. This finding reinforces the argument that the presence of digital service infrastructure alone does not automatically translate into meaningful participation. Instead, deeper institutional support, capacity building, and participatory mechanisms are required to move PADUKO beyond efficiency-oriented e-government toward a more substantive form of e-democracy.

Figure 1 illustrates the level of utilization of various services provided through the PADUKO application in Padang Panjang City. The graph shows a clear variation

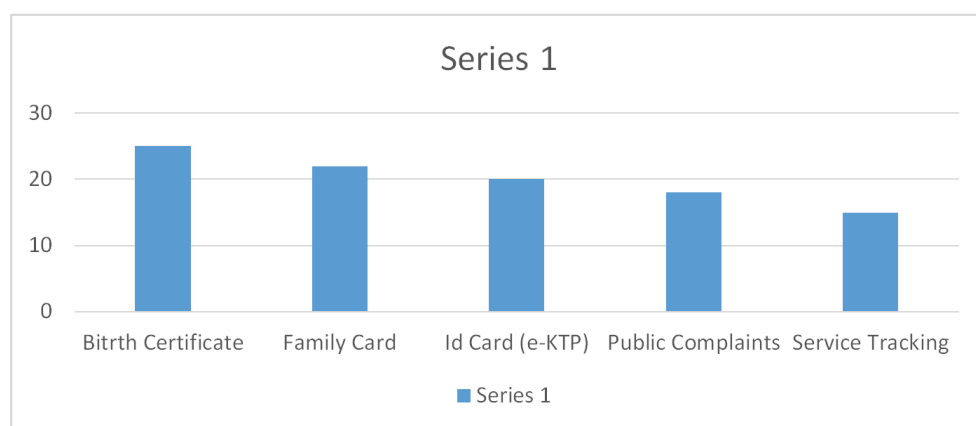


Figure 1. level of utilization of PADUKO Services

Source: Processed by Authors, 2025

in usage across different service types, indicating distinct user priorities and patterns of interaction with the digital platform.

The most frequently utilized service is birth certificate issuance (25%), followed by family card (22%) and electronic identity card (KTP-el) services (20%). These findings demonstrate that PADUKO is primarily used for core population administration services that are essential to citizens' legal identity and access to social, economic, and political rights. The high utilization of these services reflects strong public demand for efficient, accessible, and time-saving administrative processes, and suggests that PADUKO has been effective in addressing practical service needs through digitalization.

In contrast, services that are more closely associated with citizen participation—namely public complaints (18%) and service tracking (15%)—show relatively lower levels of utilization. Although these features are integral to the participatory and transparency-oriented objectives of digital governance, their lower usage indicates that citizen engagement through participatory channels remains limited. This pattern suggests that PADUKO functions predominantly as a transactional service platform rather than as a fully participatory e-democracy tool.

The disparity between the high use of administrative services and the lower use of participatory features highlights an important issue in the implementation of e-democracy at the local level. While citizens readily adopt digital platforms for services that provide direct and immediate benefits, they are less inclined—or less able—to utilize features that enable feedback, monitoring, and engagement with government processes. This may be influenced by factors such as limited awareness of participatory features, varying levels of digital literacy, or skepticism regarding the impact of citizen input on government decision-making.

Overall, the data presented in Figure 1 indicate that PADUKO has successfully enhanced efficiency and accessibility in population administration services. However, from an e-democracy perspective, the relatively low utilization of participatory features suggests that citizen participation remains largely procedural. These findings reinforce the argument that digital governance initiatives must go beyond service efficiency by actively promoting, socializing, and institutionalizing participatory mechanisms if they are to contribute meaningfully to democratic governance.

Table 1. Levels of Citizen Participation Based on Arnstein's Ladder

Level Of Participation	Percentage (%)
Information	40
Consultation	30
Placation	20
Partnership	5

Source: Processed by Authors, 2025

Table 1 presents the levels of citizen participation in the implementation of the PADUKO application, classified according to Arnstein's ladder of participation. The data show that the dominant form of participation is at the information level (40%), indicating that most citizen engagement occurs through access to information provided by the government. This suggests that PADUKO has been effective in enhancing transparency and improving the dissemination of public information related to population administration services.

The consultation level accounts for 35%, reflecting opportunities for citizens to submit feedback, complaints, or suggestions through digital channels. While this indicates a degree of two-way communication between citizens and government institutions, participation at this level remains largely advisory, with limited evidence that citizen input directly influences policy decisions or service redesign.

Participation at the placation level constitutes 20%, suggesting that some citizen inputs are acknowledged and partially accommodated. However, decision-making authority remains predominantly in the hands of government institutions, and citizen involvement is not yet institutionalized as a shared governance mechanism.

In contrast, partnership-level participation is minimal (5%), indicating limited collaboration between citizens and government in decision-making processes. This distribution highlights that, although PADUKO has expanded access to information and consultation mechanisms, citizen participation largely remains at the lower and middle rungs of Arnstein's ladder. Consequently, the application has not yet fully realized its potential as an e-democracy platform capable of fostering substantive citizen empowerment.

4. Conclusion

PADUKO represents a concrete example of e-democracy implementation at the local government level. The application has contributed to improving service accessibility,

administrative responsiveness, and transparency in public service delivery. However, its implementation also reveals persistent challenges related to technological readiness, digital literacy, uneven public awareness, and the sustainability of participatory mechanisms.

The implementation of e-democracy principles through PADUKO demonstrates how digital technology can be utilized to strengthen government–citizen interaction. Through the e-information dimension, PADUKO provides transparent and real-time access to public information, enabling citizens to monitor service processes and government performance. Elements of e-participation are facilitated through interactive features such as the “Citizen Report,” which allows citizens to submit complaints, suggestions, and service requests, and to track government responses. Meanwhile, e-collaboration is reflected in cross-agency service integration with institutions such as the Office of Religious Affairs (KUA) and the Religious Courts, contributing to administrative efficiency and inter-organizational coordination.

Beyond these dimensions, PADUKO incorporates accountability, responsiveness, and inclusivity as core principles of democratic governance. The system’s reporting mechanisms, digital documentation, and alternative service options for citizens with limited access to technology demonstrate an institutional commitment to equitable service provision. Nevertheless, empirical findings indicate that not all citizens actively utilize PADUKO, suggesting that the availability of digital participation channels does not automatically translate into substantive public engagement.

Referring to Arnstein’s ladder of citizen participation, this study concludes that PADUKO predominantly facilitates procedural and consultative forms of digital participation, corresponding to the levels of consultation and placation. While citizens can express aspirations and monitor government responses, their influence over policy formulation and service design remains limited. This finding indicates that PADUKO strengthens transparency and responsiveness but that e-democracy within the platform remains largely tokenistic rather than empowering, highlighting the need for deeper institutional mechanisms to enhance substantive citizen participation.

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