


The Effectiveness of Public Service Digitalization Policies in Promoting Social Inclusion

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ARTICLE INFO	ABSTRACT
<p>Article history: Received Nov 25, 2026 Revised Dec 23, 2026 Accepted Jan 30, 2026</p>	<p>The digitalization of public services has become a central strategy for governments to enhance efficiency, transparency, and accessibility. However, the extent to which these policies promote social inclusion remains a critical concern, particularly in the context of persistent digital inequalities. This study aims to analyze the effectiveness of public service digitalization policies in fostering social inclusion, with a focus on accessibility, usability, coverage, equity, and user satisfaction. A mixed-methods approach is employed, combining quantitative data collected through surveys of digital service users with qualitative insights obtained from interviews with government officials and citizens, as well as analysis of relevant policy documents. The findings indicate that while digitalization has significantly improved service efficiency and expanded access, its impact on social inclusion is uneven. Urban populations and individuals with higher levels of digital literacy benefit more from digital services, whereas rural communities, the elderly, low-income groups, and people with disabilities continue to face substantial barriers. Key challenges identified include limited internet infrastructure, low digital literacy, resistance to technology, policy implementation gaps, and budget constraints. The study concludes that the effectiveness of digitalization policies is moderate and highly dependent on supporting conditions such as infrastructure availability, user capability, and inclusive policy design. To enhance social inclusion, the study recommends strengthening digital literacy programs, expanding internet access in underserved areas, designing user-friendly and accessible systems, and maintaining offline service alternatives. Ultimately, the research emphasizes that digital transformation in public services must be accompanied by inclusive strategies to ensure that its benefits are equitably distributed across all segments of society.</p>
<p>Keywords: Public Service Digitalization; Social Inclusion; Digital Divide; E-Government; Policy Effectiveness.</p>	<p><i>This is an open access article under the CC BY-NC license.</i></p> 

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1. INTRODUCTION

The rapid development of digital technology has significantly transformed the way governments deliver public services. The adoption of digital government, often referred to as e-government, has enabled public institutions to provide services more efficiently, transparently, and responsively through online platforms (Ndou, 2004). Governments around the world are increasingly implementing digitalization policies to streamline administrative processes, reduce bureaucratic complexity, and improve service accessibility. This shift is driven by the expectation that digital systems can enhance governance quality while meeting the growing demands of modern society.

Over the past decade, research on the effectiveness of public service digitalization and its relationship with social inclusion has grown significantly, particularly within the fields of public

administration, digital governance, and development studies. Early conceptual work by Richard Heeks (2021) introduced the idea that digital inclusion is not merely about access but also about “adverse digital incorporation,” where marginalized groups may be included in digital systems but still remain disadvantaged. This perspective shifted the discussion from simple access inequalities to more complex structural issues of power and inequality within digital ecosystems.

Subsequent studies have empirically explored how digitalization affects public service delivery. For instance, Sutrisno, Silitonga, Yusuf, and Nugroho (2024) analyzed the impact of the digital divide on public services in Indonesia, finding that disparities in digital access and skills significantly hinder the effectiveness of e-government programs. Their study highlights that unequal technological capability remains a major barrier to inclusive policy implementation, particularly in developing countries.

Similarly, Latupeirissa et al. (2024) emphasized that while digital transformation improves efficiency and administrative performance, it can simultaneously marginalize populations lacking access to digital platforms. Their research demonstrates that digitalization policies often unintentionally widen social inequalities when inclusivity is not explicitly addressed.

From a longitudinal perspective, a study by Kim et al. (2024) examined the diffusion of e-government services among vulnerable citizens in South Korea. The findings indicate that although overall usage of digital services increased over time, significant gaps persist between different demographic groups, especially among the elderly and low-income populations. This suggests that digital adoption does not automatically translate into equitable access.

More recent research has focused on the relationship between digital transformation and social inclusion in a more holistic manner. Djatmiko, Sinaga, and Pawirosumarto (2025) argue that digital inclusion is a crucial component of sustainable governance. Their study identifies key barriers such as limited infrastructure, low digital literacy, and institutional challenges that prevent marginalized communities from fully benefiting from e-government services. They also stress the importance of multi-stakeholder collaboration and policy innovation in promoting inclusive digital governance.

Additionally, a scoping review by Zhao et al. (2025) highlights that ICT-driven public services in smart cities often fail to address the specific needs of marginalized groups. The study concludes that digital transformation frequently widens access gaps rather than reducing them, especially when spatial and socio-economic inequalities are not adequately considered in policy planning.

However, despite these potential benefits, the implementation of digital public services also raises critical concerns, particularly regarding the issue of the digital divide. The digital divide refers to inequalities in access to technology, internet connectivity, and digital literacy among different segments of the population (Van Dijk, 2020). Not all citizens have equal opportunities to benefit from digital services, especially those living in rural or remote areas with limited infrastructure, elderly populations who may lack technological skills, low-income groups who cannot afford digital devices or internet access, and people with disabilities who may face accessibility challenges in digital platforms. As a result, while digitalization aims to improve efficiency and inclusivity, it may inadvertently exclude vulnerable groups and reinforce existing social inequalities.

This situation highlights a fundamental tension between efficiency and equity in public service digitalization. On one hand, digital systems offer faster, cheaper, and more transparent service delivery (Siddiquee, 2016). On the other hand, without inclusive design and adequate support, these systems risk marginalizing those who are already disadvantaged. Therefore, it is crucial to examine whether digitalization policies truly promote social inclusion or instead contribute to new forms of exclusion.

Based on this background, several key research problems emerge (Forbes & Kirsch, 2011). First, it is important to question whether digital public services are genuinely accessible to all citizens, regardless of their socio-economic or demographic background. Second, there is a need to analyze whether the implementation of digitalization policies reduces inequality by expanding access or, conversely, widens the gap between digitally literate and digitally marginalized populations. Third, identifying the main barriers that hinder inclusive access such as limited infrastructure, low digital literacy, or inadequate policy design is essential to understanding the effectiveness of these policies.

In line with these problems, this study aims to achieve several objectives. The primary objective is to measure the effectiveness of public service digitalization policies in delivering inclusive services (Djatmiko et al., 2025). Furthermore, the study seeks to analyze the extent to which these policies impact social inclusion, particularly among vulnerable groups. It also aims to

identify the key factors that influence the success or failure of digitalization efforts, including technological, social, and institutional aspects. Finally, this research intends to provide practical policy recommendations to ensure that digital transformation in public services is not only efficient but also equitable and inclusive for all members of society.

2. RESEARCH METHOD

2.1 Theoretical Framework

This study is grounded in an integrated theoretical framework that connects digital governance with issues of equity and policy performance. Digital Divide Theory provides a fundamental basis for understanding inequalities in access to and use of digital technologies (Fang et al., 2019). According to Jan van Dijk (2020), the digital divide is not limited to physical access to the internet or devices, but also includes disparities in digital skills, usage patterns, and the ability to derive benefits from technology. This theory is highly relevant in the context of public service digitalization, as it explains why certain groups such as rural communities, the elderly, low-income populations, and people with disabilities may be systematically excluded from digital services. In this study, the digital divide is viewed as a key barrier that can undermine the inclusiveness of digital policies if not properly addressed.

E-Government Theory complements this perspective by focusing on how governments utilize digital technologies to improve public service delivery. As explained by Richard Heeks (2018), e-government aims to enhance efficiency, transparency, accountability, and citizen engagement through the use of information and communication technologies. Digital platforms enable governments to deliver services faster and more cost-effectively, while also increasing accessibility (Al-Besher & Kumar, 2022). However, this theory also acknowledges that the success of e-government initiatives depends on the readiness of both institutions and citizens. Without adequate infrastructure and user capacity, digitalization efforts may fail to achieve their intended outcomes.

Furthermore, Social Inclusion Theory provides a normative foundation for evaluating whether digital policies promote equitable participation in society. According to Amartya Sen (2017), social inclusion is closely linked to individuals' capabilities to access opportunities and participate fully in economic, social, and political life. In the context of digital public services, social inclusion means that all citizens, regardless of their socio-economic background, have equal opportunities to access and benefit from government services. This theory emphasizes that inclusion is not only about access but also about meaningful participation and empowerment.

To assess whether digitalization policies achieve their intended goals, this study also adopts the Public Policy Effectiveness framework, particularly the input–process–output–outcome model (Hakim & Hayat, 2024). As outlined by William N. Dunn (2020), policy effectiveness can be evaluated by examining how inputs (such as resources, infrastructure, and regulations) are transformed through processes (implementation and governance mechanisms) into outputs (digital services provided) and ultimately into outcomes (improved accessibility, reduced inequality, and enhanced social inclusion). This framework allows for a systematic evaluation of whether digitalization policies deliver tangible and equitable benefits to society.

2.2 Key Concepts and Variables

The independent variable in this study is public service digitalization policy. This refers to government initiatives that utilize digital technologies to deliver public services more efficiently and effectively. Such policies include the implementation of online licensing systems, e-health services, e-education platforms, and other forms of electronic government services. In operational terms, this variable can be measured through several indicators, including the availability of digital services, the level of system integration, ease of use, service reliability, and the extent to which services are accessible through online platforms (Judijanto et al., 2023). These indicators reflect the degree to which digitalization policies are implemented and experienced by citizens.

The dependent variable is social inclusion, which represents the extent to which all individuals and groups in society can access and benefit from public services without discrimination. Social inclusion in this study is operationalized through three main dimensions (Cordier et al., 2017). First, accessibility refers to the ability of citizens to reach and use digital public services, regardless of geographic location, physical ability, or socio-economic status. This can be measured by indicators such as service availability across regions, accessibility features for people with disabilities, and affordability of access. Second, participation reflects the extent to which citizens actively engage with and utilize digital services. Indicators may include frequency of use, user engagement levels,

and the degree of citizen interaction with government platforms. Third, equality of service use refers to the fairness in the distribution of benefits from digital services across different population groups. This can be assessed by comparing usage rates and outcomes among various demographic groups, such as urban versus rural populations or high-income versus low-income users.

In addition to the main variables, this study also incorporates several supporting variables that influence the relationship between digitalization policies and social inclusion. One important factor is digital literacy, which refers to individuals' ability to effectively use digital technologies. This includes basic skills such as operating devices, navigating online platforms, and understanding digital information. Higher levels of digital literacy are expected to enhance individuals' ability to access and benefit from digital services. Another key variable is infrastructure availability, which includes the presence of reliable electricity, telecommunications networks, and digital service facilities. Without adequate infrastructure, even well-designed digital policies may fail to reach target populations.

Internet access is also a critical supporting variable, as it determines whether individuals can connect to digital platforms (Porter & Donthu, 2006). This includes both the availability and affordability of internet services. Limited or expensive internet access can significantly restrict participation in digital public services, particularly for low-income groups. Lastly, government support plays an important role in ensuring the success of digitalization policies. This includes efforts such as public awareness campaigns, training programs, technical assistance, and the provision of alternative service channels for those who cannot access digital platforms. Strong government support can help reduce barriers and promote more inclusive outcomes.

2.3 Indicators of Effectiveness

To assess the effectiveness of public service digitalization policies, this study adopts a multidimensional approach that captures not only technical performance but also social outcomes. The first indicator is accessibility, which refers to the ability of all citizens to access digital public services without significant barriers. This includes physical access to devices and internet connectivity, as well as the availability of services across different geographic regions, including rural and remote areas (Park et al., 2019). Accessibility also encompasses inclusivity features for people with disabilities and affordability for low-income groups. A digitalization policy can be considered effective if it ensures that services are reachable and usable by diverse population groups, rather than being limited to digitally advantaged users.

The second indicator is usability, which focuses on the ease with which users can interact with digital platforms. Even if services are technically available, they may not be effective if they are difficult to navigate or understand. Usability can be evaluated through aspects such as interface design, clarity of instructions, language options, system responsiveness, and overall user experience (Ntoa, 2025). High usability indicates that citizens can complete tasks efficiently without confusion or excessive effort, thereby increasing the likelihood of adoption and continued use.

The third indicator is coverage, which measures the extent to which digital public services reach the intended population. This includes the number or proportion of citizens who use digital services compared to traditional methods. Coverage reflects the scalability and outreach of digitalization policies (Abass et al., 2021). A higher level of coverage suggests that the policy has been widely adopted and is capable of serving a large portion of the population.

The fourth indicator is equity, which is central to the concept of social inclusion. Equity examines whether digital public services are distributed fairly among different social groups, particularly marginalized populations such as rural communities, the elderly, low-income individuals, and people with disabilities. This indicator assesses whether gaps in access and usage between different groups are narrowing or widening as a result of digitalization. An effective policy should reduce disparities and ensure that vulnerable groups are not left behind.

Finally, user satisfaction serves as an important indicator of perceived effectiveness. It reflects citizens' overall evaluation of digital public services based on their experiences. User satisfaction can be measured through surveys, feedback mechanisms, and service ratings, capturing aspects such as convenience, reliability, speed, and trust in the system. High levels of satisfaction indicate that digital services meet user expectations and contribute positively to public trust in government.

2.4 Research Methodology

This study adopts a mixed-methods approach to comprehensively analyze the effectiveness of public service digitalization policies on social inclusion. The combination of quantitative and qualitative methods allows for a more holistic understanding of the issue, where quantitative data

provides measurable evidence of trends and relationships, while qualitative data offers deeper insights into experiences, perceptions, and contextual factors influencing policy outcomes.

The quantitative component is primarily conducted through surveys targeting users of digital public services. These surveys are designed to collect data on key indicators such as accessibility, usability, coverage, equity, and user satisfaction. Respondents are asked to evaluate their experiences in accessing and using digital services, as well as the challenges they encounter (Kaihlanen et al., 2022). The survey results enable statistical analysis to measure the level of effectiveness of digitalization policies and to identify patterns across different demographic groups.

In addition to surveys, qualitative data is gathered through in-depth interviews with key stakeholders, including government officials and citizens. Interviews with government officials aim to explore policy design, implementation strategies, and institutional challenges in delivering digital services. Meanwhile, interviews with citizens particularly those from vulnerable groups such as rural communities, elderly individuals, low-income populations, and people with disabilities seek to capture firsthand experiences and barriers related to digital service access. This qualitative approach provides a richer and more nuanced understanding of how digitalization policies operate in practice.

Furthermore, this study employs document analysis to examine relevant policy documents, regulations, and official reports related to public service digitalization. This method helps to understand the policy framework, objectives, and implementation mechanisms established by the government. It also allows for the comparison between policy intentions and actual outcomes observed in the field.

Regarding sampling, this study uses a purposive sampling technique to ensure representation from diverse population groups. The target population includes both urban and rural communities to capture geographical disparities in access to digital services. Special attention is given to vulnerable groups, such as individuals with limited digital literacy, low-income households, elderly citizens, and people with disabilities, as they are most at risk of exclusion (Pérez-Escobar & Canet, 2023). By including these groups, the study aims to assess whether digitalization policies are truly inclusive or disproportionately benefit certain segments of society.

3. RESULTS AND DISCUSSIONS

3.1 Results

From the perspective of accessibility, the results indicate that digital public services are widely available in urban areas with relatively strong infrastructure and internet connectivity. Many respondents reported that online systems, such as e-government portals, have made it easier to access services without the need for physical visits to government offices. However, in rural and remote areas, accessibility remains limited due to inadequate infrastructure, unstable internet connections, and lack of digital facilities. This disparity highlights that accessibility improvements are not equally distributed, leading to gaps between urban and rural populations.

In terms of usability, the study finds that most digital platforms are generally user-friendly for individuals who possess adequate digital literacy (Tomczyk et al., 2020). Features such as simplified interfaces and mobile-based access have enhanced user experience for technologically competent users. Nevertheless, a significant portion of respondents particularly elderly individuals and those with low educational backgrounds reported difficulties in navigating digital systems. Complex procedures, unclear instructions, and limited language options were identified as key barriers that reduce usability for certain groups.

Regarding coverage, the results show a steady increase in the number of users adopting digital public services. Many citizens have shifted from conventional service methods to online platforms due to convenience and time efficiency (West, 2004). Despite this growth, the overall coverage is still not universal. A segment of the population continues to rely on traditional service channels due to lack of access, limited digital skills, or preference for face-to-face interaction. This indicates that while digitalization has expanded reach, it has not fully replaced conventional systems nor achieved comprehensive inclusion.

The analysis of equity reveals one of the most critical findings of this study. Digitalization policies have not yet fully succeeded in ensuring equitable access to public services. Data shows that higher-income, urban, and digitally literate individuals benefit more from digital services compared to marginalized groups (Bach et al., 2013). Rural communities, low-income households, the elderly, and people with disabilities face greater challenges in accessing and utilizing digital

platforms. As a result, digitalization, while beneficial in many aspects, tends to reproduce existing social inequalities when inclusive measures are insufficient.

In terms of user satisfaction, the study finds generally positive perceptions among users who are able to access and utilize digital services effectively. Respondents highlighted benefits such as faster processing times, reduced administrative burdens, and increased transparency. However, satisfaction levels were significantly lower among users who experienced technical difficulties, limited access, or lack of support. This suggests that user satisfaction is closely linked to both accessibility and usability factors.

Overall, the results demonstrate that public service digitalization policies are effective in improving efficiency and expanding service delivery, but their success in promoting social inclusion is still limited. The effectiveness of these policies is highly dependent on supporting factors such as digital literacy, infrastructure availability, internet access, and government support. Without addressing these underlying issues, digital transformation risks reinforcing existing inequalities rather than eliminating them.

3.2 Comparison of Research Results with Previous Studies

The results of this study are largely consistent with, and reinforce, findings from previous research, while also providing contextual evidence that strengthens existing theoretical and empirical discussions on digital governance and social inclusion. First, this study confirms the widely recognized finding that digitalization of public services improves efficiency and accessibility, particularly for populations with adequate digital skills and infrastructure. This aligns with the bibliometric study by Perdana et al. (2025), which found that e-government plays a significant role in enhancing access, participation, and service delivery. However, the same study also emphasizes that these benefits are not evenly distributed due to persistent digital inequalities. Similarly, the findings of this research show that while digital services expand coverage and convenience, they are more effectively utilized by urban and digitally literate populations.

Second, the results strongly support previous research highlighting the continuing impact of the digital divide. This study finds that rural communities, elderly populations, and low-income groups face significant barriers in accessing digital services (Powell et al., 2010). These findings are in line with research by Sutrisno et al. (2024), which demonstrates that limited digital literacy and unequal access to technology hinder the effectiveness of e-government in Indonesia. Furthermore, broader literature on the digital divide confirms that inequalities are not only about access but also involve skills, usage, and outcomes, which continue to shape disparities in digital participation.

Third, this study is consistent with more recent research emphasizing that digitalization does not automatically lead to social inclusion. For example, Djatmiko, Sinaga, and Pawirosumarto (2025) found that despite the potential of digital government to promote inclusion, barriers such as infrastructure limitations, affordability issues, and institutional challenges significantly restrict participation among marginalized groups. The current study similarly finds that accessibility and usability issues limit the inclusiveness of digital services, particularly for vulnerable populations.

Moreover, the findings of this study reinforce the idea that digital transformation can sometimes reproduce or even deepen existing inequalities if not supported by inclusive policies. This aligns with recent theoretical developments in digital governance, which highlight that disparities persist even when access improves, due to differences in skills, trust, and ability to benefit from digital services (Milakovich, 2012). In this study, such patterns are evident in the unequal levels of usage and satisfaction across different social groups.

However, this study also contributes a nuanced perspective by showing that user satisfaction is generally high among those who are able to access and use digital services effectively, indicating that digitalization policies are not inherently flawed but are conditionally effective. This supports the broader consensus in the literature that the success of digital government depends heavily on supporting factors such as digital literacy, infrastructure, and targeted policy interventions.

The results of this study are highly consistent with previous research, particularly in demonstrating that while digital public service policies enhance efficiency and accessibility, their effectiveness in promoting social inclusion remains limited and uneven. The study strengthens existing evidence that digitalization alone is insufficient; without inclusive design, capacity-building, and equitable access, digital transformation risks reinforcing rather than reducing social inequality.

3.3 Challenges and Barriers

One of the most prominent challenges is the limitation of internet infrastructure, particularly in rural and remote areas. Although urban regions tend to benefit from stable and high-speed internet

connectivity, many underserved areas still face inadequate network coverage, slow connection speeds, and unreliable access. This uneven distribution of infrastructure creates a fundamental barrier to accessing digital public services, as individuals without stable internet connections are effectively excluded from participating in digital platforms. Consequently, the benefits of digitalization remain concentrated among populations with better technological access.

Another significant barrier is low digital literacy among certain groups of the population. Digital literacy refers to the ability to use digital devices, navigate online platforms, and understand digital information effectively. The study finds that elderly individuals, people with lower levels of education, and economically disadvantaged groups often lack the necessary skills to utilize digital services (Choi & DiNitto, 2013). As a result, even when digital platforms are available, these individuals may struggle to access or benefit from them. This highlights that access alone is insufficient; users must also possess the competencies required to engage with digital systems.

Resistance to technology also emerges as an important social barrier. Some individuals prefer traditional, face-to-face methods of accessing public services due to familiarity, trust, or perceived reliability. This resistance is particularly evident among older populations and communities with limited exposure to digital technologies. In some cases, distrust of digital systems such as concerns about data privacy or system reliability further discourages adoption. This reluctance can slow down the transition to digital services and reduce overall participation rates.

In addition to these social and infrastructural challenges, policy implementation gaps present a major institutional obstacle. While governments may design comprehensive digitalization policies, their execution often falls short due to weak coordination, lack of monitoring, and insufficient adaptation to local contexts. In some cases, digital platforms are developed without adequately considering the needs of vulnerable groups, resulting in systems that are technically functional but socially exclusionary. This gap between policy design and implementation undermines the overall effectiveness of digital initiatives.

Budget constraints further complicate the implementation of digital public service policies. Developing, maintaining, and upgrading digital infrastructure requires substantial financial investment (Choi & DiNitto, 2013). Limited budgets can restrict the expansion of internet networks, the improvement of digital platforms, and the provision of training programs for citizens and public officials. As a result, governments may struggle to scale digital services or ensure their sustainability over time, particularly in developing regions.

In conclusion, the effectiveness of public service digitalization policies is significantly influenced by a range of interconnected challenges, including limited internet infrastructure, low digital literacy, resistance to technology, policy implementation gaps, and budget constraints. Addressing these barriers is essential to ensure that digital transformation efforts do not exacerbate existing inequalities but instead contribute to more inclusive and equitable public service delivery.

3.4 Implications

From a policy perspective, the results underscore the urgent need for inclusive digital strategies. Governments must move beyond a one-size-fits-all approach and design policies that explicitly address the needs of marginalized groups. This includes expanding digital infrastructure in underserved areas, improving the accessibility of platforms for people with disabilities, and integrating digital literacy programs into public service initiatives. In addition, policymakers should adopt a hybrid service model that maintains offline alternatives for those who are unable or unwilling to use digital systems. Effective policy implementation also requires strong coordination among institutions, continuous monitoring, and adaptive strategies that respond to real-world challenges. Without such inclusive and responsive approaches, digitalization policies risk reinforcing rather than reducing existing inequalities.

In terms of social implications, the study reveals a critical tension between exclusion and empowerment. On one hand, digital public services have the potential to empower citizens by providing faster, more transparent, and more convenient access to government services (Milakovich, 2012). This can enhance civic participation, increase trust in public institutions, and improve overall quality of life. On the other hand, the study also shows that individuals who lack access to technology or digital skills are at risk of being excluded from essential services. This creates a new form of social inequality, often referred to as digital exclusion, which can further marginalize already vulnerable groups such as rural populations, the elderly, and low-income communities. Therefore, ensuring social inclusion requires not only expanding access but also fostering the capacity and confidence of citizens to engage with digital systems meaningfully.

From an economic standpoint, digitalization presents a trade-off between efficiency and inequality (Panchenko & Oliinyk, 2025). On the positive side, digital public services can reduce administrative costs, streamline processes, and increase productivity for both governments and citizens. These efficiencies can contribute to broader economic development by improving the business environment and facilitating service delivery. However, if access to digital services remains uneven, the economic benefits of digitalization may be concentrated among certain groups, thereby widening income and opportunity gaps. Individuals and communities that are excluded from digital systems may face reduced access to economic opportunities, such as business licensing, financial services, or employment-related platforms. As a result, digital transformation can inadvertently contribute to economic inequality if inclusivity is not prioritized.

The implications of this study highlight that the success of public service digitalization should not be measured solely by efficiency gains, but also by its ability to promote equity and inclusion. Policymakers must adopt inclusive strategies, address social disparities, and mitigate economic inequalities to ensure that digital transformation benefits all members of society rather than a privileged few.

4. CONCLUSION

This study concludes that the effectiveness of public service digitalization policies in promoting social inclusion can be categorized as moderate but uneven. On one hand, digitalization has successfully improved the efficiency, speed, and convenience of public service delivery, particularly for citizens who have adequate access to technology and sufficient digital skills. On the other hand, its impact on social inclusion remains limited, as significant disparities persist among different population groups. While digital platforms have expanded service reach, they have not yet fully ensured equitable access and participation for all citizens. Several key factors are identified as influencing the effectiveness of these policies. First, digital literacy plays a crucial role in determining whether individuals can effectively use digital services. Without the necessary skills, access alone is insufficient. Second, infrastructure availability, particularly reliable internet connectivity, significantly affects accessibility, especially in rural and remote areas. Third, affordability of internet access and digital devices remains a barrier for low-income populations. Fourth, government support, including training programs, user assistance, and inclusive policy design, is essential in bridging gaps in access and usage. Finally, the quality of system design, including usability and accessibility features, directly impacts user experience and overall adoption. Based on these findings, several recommendations are proposed to enhance the effectiveness and inclusiveness of public service digitalization policies. First, governments should prioritize the development and expansion of digital literacy programs, particularly targeting vulnerable groups such as the elderly, rural communities, and low-income populations. These programs should focus not only on basic technical skills but also on building confidence and trust in digital systems. Second, expanding internet access and improving infrastructure in underserved areas must become a central policy priority. Investments in broadband networks, public internet facilities, and affordable connectivity programs are necessary to reduce geographic disparities and ensure equal access to digital services. Third, digital platforms should be designed with inclusivity in mind. This includes developing user-friendly interfaces, providing multilingual options, and incorporating accessibility features for people with disabilities. Systems should be simple, intuitive, and adaptable to the needs of diverse users to maximize usability and participation. Fourth, governments should maintain and strengthen offline service alternatives alongside digital platforms. A hybrid approach ensures that individuals who are unable or unwilling to use digital systems are not excluded from essential public services. This approach is particularly important during the transition period toward full digitalization. While public service digitalization holds great potential to transform governance and improve service delivery, its success ultimately depends on its inclusiveness. Effective policies must go beyond technological advancement and address the social, economic, and structural barriers that hinder equal access. By adopting inclusive strategies and targeted interventions, governments can ensure that digital transformation contributes not only to efficiency but also to greater social equity.

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