



# Municipal E-Governance in Lambayeque: Systematic review, 2024

Merly Nevado Chauca\*

*Cesar Vallejo University, Lambayeque region of Peru*

## Abstract

This study aimed to analyze scientific papers published between 2020–2025 in the Scopus and SciELO platforms focused on electronic governance in municipal management. A total of 10 articles from these databases were selected and reviewed. It was found that the SciELO database contains few studies specifically addressing municipal e-governance in local Peruvian contexts, although it offers relevant insights that reflect the challenges and opportunities of Latin American municipalities. On the other hand, Scopus presents broader coverage and a greater number of publications, which highlights its international scope and the diversity of approaches that contribute to a more comprehensive understanding of digital governance processes at the municipal level. In conclusion, the evidence underscores the importance of strengthening electronic governance mechanisms in local governments, emphasizing technological infrastructure, digital inclusion, and institutional capacity. This requires an interdisciplinary and context-sensitive approach that can address technical, social, and political barriers, thereby fostering transparency, citizen participation, and efficiency in municipal management.

**Keywords:** Municipal E-Governance, Systematic review

## Introduction

Electronic governance, understood as the integration of information and communication technologies (ICTs) into public management processes to enhance transparency, efficiency, and citizen participation, has become a central axis in the modernization of public administration worldwide (1). Within this framework, municipal governments play a particularly relevant role, as they represent the closest level of the State to citizens and are directly responsible for providing basic services, facilitating public participation, and promoting local development (2). Their ability to implement electronic governance tools determines the extent to which local populations access digital services, exercise their right to information, and participate in decision-making processes (3).

In the Latin American context, the discussion on electronic governance has gained prominence due to persistent challenges such as bureaucratic inefficiency, corruption, and limited citizen trust in government institutions (4). Countries like Peru have advanced decentralization policies and initiatives aimed at strengthening digital public services and municipal transparency (5). However, results remain

uneven: while certain urban municipalities have successfully implemented electronic platforms for citizen services, participatory budgeting, and fiscal transparency, many rural and peripheral districts continue to face structural limitations related to weak institutional capacity, low levels of digital literacy, and insufficient technological infrastructure (6). These disparities highlight the urgent need to analyze e-governance as a determinant of equity, legitimacy, and sustainable local development (7).

The relevance of municipal electronic governance is not only reinforced by international commitments such as the Sustainable Development Goals (SDGs), particularly Goal 16 on strong institutions, transparency, and access to justice, but also by the growing social demand for more open, accessible, and efficient governments (8). Initiatives such as online citizen service platforms, digital transparency portals, and e-participation mechanisms are increasingly valued as instruments that democratize local governance and reduce barriers between authorities and citizens (9). Nevertheless, the persistence of digital divides, inadequate regulatory frameworks, and financial limitations continue to hinder the consolidation of electronic governance at the municipal level (10).

Despite notable progress in the institutionalization of ICT-based initiatives, multiple barriers prevent the full realization of electronic governance in municipalities (11). Among the most pressing are the unequal distribution of technological resources, the lack of specialized training for local officials, sociocultural resistance to digital platforms, and deficiencies in monitoring and evaluation systems. Moreover, the absence of integrated technological infrastructures weakens coordination between government levels and reduces the effectiveness of public policies. These challenges reveal that e-governance is not merely a technical process, but a multidimensional phenomenon that directly impacts legitimacy, trust, and the quality of democracy at the local level (12).

Given this scenario, it is essential to conduct a systematic review of the literature that explores the current state of electronic governance in municipal governments, with particular attention to the Peruvian context. Such a review allows the identification of theoretical contributions, practical experiences, and institutional barriers that shape the effectiveness of e-governance initiatives in local contexts. Furthermore, it contributes to highlighting best practices and replicable models that can guide policymakers, local authorities, and civil society in strengthening more efficient, transparent, and participatory municipal management (13).

The methodology adopted for this review consists of the analysis of scientific studies published between 2020 and 2025 in indexed databases such as Scopus and SciELO, complemented by reports from international organizations specialized in governance, technology, and public administration. The integration of these sources provides a comprehensive vision that combines conceptual frameworks with empirical evidence from case studies and municipal practices. This diversity ensures a contextualized understanding of electronic governance as a key determinant of democratic quality and local development.

Aligned with this purpose, the research was guided by the question of what studies have been published between 2020 and 2025 on electronic governance in municipal governments. The review focused on identifying conceptual frameworks, assessing

methodological approaches, and extracting conclusions relevant to policymaking and municipal practice. By limiting the scope to recent publications indexed in Scopus and SciELO, the review ensures updated and contextually pertinent evidence for the Latin American and Peruvian reality.

Finally, rigorous selection criteria were established to guarantee methodological robustness. Only studies directly related to municipal electronic governance, with empirical support and methodological quality, were included. In contrast, publications lacking relevance or empirical grounding were excluded. This careful selection ensures that conclusions are drawn from reliable and contextually significant evidence, offering valuable insights for the ongoing debate on strengthening e-governance in local governments.

## Methods

The review was conducted using academic databases such as SciELO and Scopus, which provide access to a wide range of updated and relevant scientific information. SciELO was particularly important for identifying Latin American research, offering studies contextualized to the realities of municipal governance and public administration. In contrast, Scopus provided access to a broader set of international publications, allowing the identification of theoretical and methodological frameworks applicable to the study of electronic governance in municipal governments.

To optimize the search process, specific inclusion and exclusion criteria were established. Articles published between 2020 and 2025 were selected, focusing on studies related to electronic governance, municipal governments, digital inclusion, public administration, and local development. Only articles with methodological rigor, empirical evidence, and clear relevance to the research objective were included, while those lacking scientific quality or disconnected from the variable of interest were excluded.

In order to facilitate the search and organization of the information, a set of keywords was defined and systematically applied in both databases. The main terms used included *“Electronic governance”*,

*“Municipal governments”, “Digital inclusion”, “Public administration”, and “Local development”*. In addition, tables were created to record the identified studies, coding the keywords for easier management and classification of the retrieved information.

## Results

The systematic review carried out through SciELO and Scopus revealed significant disparities in the availability of research across the two databases, reflecting differences in coverage, thematic scope, and geographical focus of scientific production. SciELO, with its emphasis on Latin America, provided more context-specific contributions relevant to the realities of municipal electronic governance, particularly in Peruvian and other regional local government settings. Conversely, Scopus offered a substantially larger number of documents, which highlights its global scope and broader research perspectives on e-governance, digital public administration, and citizen participation.

The differences were particularly evident in terms such as *“Electronic governance”* and *“Municipal governments”*, where Scopus presented more than triple the number of publications compared to SciELO. This underscores the central role of global repositories in conducting comprehensive reviews while confirming the complementary value of regional databases for capturing locally relevant insights. The results also show that while Latin American production on municipal e-governance is advancing, it remains relatively limited compared to the international literature, especially regarding the design and evaluation of ICT-based governance models adapted to local contexts.

Another relevant finding was the growing academic interest in the intersection between e-governance, digital inclusion, and local development. Studies published in Scopus demonstrated broader analyses of technological infrastructures, transparency mechanisms, and their impact on citizen trust and municipal efficiency, while SciELO emphasized barriers specific to Latin America, such as institutional fragility, lack of digital literacy, limited technological resources, and inequalities in access to internet connectivity. This contrast highlights the need to strengthen academic production in Peru to

generate governance models adapted to regional and municipal realities, rather than relying predominantly on frameworks developed in other sociopolitical contexts.

When analyzing recurring themes across studies, one of the most prominent findings related to *“Citizen participation”*. Several works emphasized that electronic governance is not only determined by the existence of digital platforms or regulatory frameworks but also by the effectiveness of mechanisms that allow real involvement of diverse social groups in decision-making. Inequities in access to technology, particularly between urban and rural populations, condition the effectiveness of local e-participation policies and programs. Therefore, digital inclusion emerges as a critical dimension of e-governance to ensure that policies are representative, transparent, and transformative.

Organizational capacity and institutional coordination were also recurrently identified as determining factors in the effectiveness of municipal electronic governance. Local governments with strong leadership, sustained political will, and intersectoral collaboration tended to achieve better outcomes in implementing digital transparency portals, online services, and participatory budgeting platforms. By contrast, municipalities characterized by scarce financial resources, fragmented coordination, or weak digital infrastructures often faced greater difficulties in sustaining and scaling e-governance initiatives.

Finally, the systematic review underscores persistent gaps in *“Public administration”* and *“Local development”*. Limitations such as insufficient human resources trained in ICT, lack of continuous professional development for municipal officials, cultural resistance to digital tools, and the absence of robust monitoring and evaluation systems directly hinder the quality of e-governance practices at the municipal level. The unequal distribution of technological infrastructure and connectivity between urban and rural areas further exacerbates inequities, reinforcing digital divides as structural barriers to inclusive e-governance. These findings highlight that, although legal frameworks and digital platforms exist, their effectiveness depends on parallel investments in institutional capacity,

political commitment, and inclusive digital policies transparency, citizen engagement, and sustainable that ensure municipal governments contribute to local development.

**Table 1.**

Author(s)	Country	Definition	Dimensions	Results / Conclusions
(14)	Mexico	Inclusive governance as citizen trust and satisfaction in e-government through information quality, usability, and service reliability.	Information quality, system quality, service quality, ease of use, citizen trust	Information quality and ease of use strongly build citizen trust. Security enhances confidence. Findings show the need to strengthen digital government systems.
(15)	Ecuador	Inclusive governance is optimizing public service delivery through digitalization and e-government policies.	Process efficiency, automation, ICT infrastructure, organizational policies	Identified inefficiencies: obsolete infrastructure, lack of automation, absence of policies. Proposed e-government model validated by experts as feasible and practical.
(16)	Peru	Inclusive governance as interaction between e-government, public management, and citizen satisfaction.	E-government services, citizen satisfaction, public management	Found strong positive correlation ( $\rho=0.840$ ) between e-government and citizen satisfaction. Efficient e-services improve trust and modernize public management.
(17)	Peru	Inclusive governance is modernization of public management through transparency, open government, and e-government.	Public management tools, innovation, ICT use, service orientation	Key tools: results-based management, objectives, open government, e-government. Challenges: ICT adoption, service culture, and citizen orientation.
(18)	Peru	Inclusive governance is a digital governance model that fosters active citizen participation in municipal decision-making.	Citizen participation, ICT tools, governance models	Low citizen participation: 41% never participate, only 4% frequent. Proposed digital governance model to enhance democratic engagement and municipal efficiency.
(19)	Peru	Inclusive governance as electronic governance for administrative efficiency and citizen equity.	Local government efficiency, ICT tools, administrative structure	E-governance crucial for efficiency and equitable participation. Emphasizes need for effective resource management and adaptive practices.
(20)	Cuba	Inclusive governance defined as digital governance improving public administration through metric analysis.	Conceptual approaches to governance, digital governance, metric perspective	Highlights importance of digital governance metrics to evaluate government evolution and citizen impact. Suggests integrating governance studies with information metrics.
(21)	Peru	Inclusive governance as digital transformation improving transparency, efficiency, and citizen participation.	Policy effectiveness, interoperability, digital culture, organizational redesign	Digital transformation enhanced transparency and efficiency. Requires strategic plans, cultural change, and monitoring systems. Recommends deeper citizen-centered innovation.
(22)	Peru	Inclusive governance is integration of e-government	Telemedicine, ICT adoption, health	E-government improved access and efficiency in healthcare.

		in telemedicine to ensure equity and access.	governance	Challenges: digital divide, resistance, weak infrastructure. Training and adapted strategies are key.
(23)	Venezuela	Inclusive governance as collaborative governance supported by participatory mechanisms and social networks.	Participation, social networks, collaborative decision-making	Social networks enable inclusive deliberation and stakeholder involvement. Promotes ethical, participatory, and sustainable governance models.

**Source:** Own elaboration

## Discussion

In a recent analysis of electronic municipal governance, studies published between 2021 and 2025 across Latin America reveal a diverse and evolving understanding of how technology transforms public management and citizen relations. The findings highlight that electronic governance is not a uniform or static model but rather a multidimensional process shaped by institutional capacities, digital infrastructure, citizen trust, and local contextual realities. While some studies emphasize transparency and citizen participation as central pillars [14,15], others underscore efficiency in service delivery [16], digital inclusion [17], or the challenges of bridging urban–rural gaps [18,19].

Table 2, which synthesizes the selected documents, illustrates this diversity of perspectives. In Mexico, one study conceptualizes e-government as a mechanism for strengthening citizen trust, showing that information quality and ease of use are critical for legitimacy in tax collection platforms [14]. In Peru, evidence emphasizes satisfaction and service efficiency in Lima, underscoring how user experience directly conditions perceptions of public management [15].

From Ecuador, researchers propose an electronic governance model to enhance administrative management in decentralized governments, stressing the role of system integration and interoperability in overcoming fragmentation [16]. In contrast, municipal contexts in Peru and Venezuela highlight that digital participation models and online platforms expand citizen involvement but remain constrained by institutional fragility and limited local resources [17,18].

Broader regional perspectives also emerge. In Cuba, a

metric-based analysis of digital governance shows how indicators allow monitoring of institutional performance and transparency [19]. Another Peruvian study links digital transformation and governance reforms, emphasizing the need for political will and intergovernmental coordination to achieve sustainability [20]. Similarly, collaborative governance through social networks has been conceptualized, noting their growing role in shaping citizen–government interaction in Latin America [21].

Cross-sectoral applications were also identified. In Peru, e-government has been connected to telemedicine, analyzing how digital health initiatives raise challenges of equity and access [22]. Meanwhile, another contribution focuses on public management modernization, pointing out that electronic tools alone are insufficient without training, accountability mechanisms, and long-term institutional commitment [23].

Overall, the systematic review indicates that citizen trust, participation, and institutional capacity are transversal elements across all studies. However, persistent barriers remain: unequal access to technology between urban and rural areas, weak institutional frameworks in some municipalities, and cultural resistance to digital adoption. Compared to international debates, Latin American production still shows heterogeneity and contextual gaps, especially regarding models adapted to rural and marginalized territories.

In summary, electronic municipal governance in Latin America should be understood as a multidimensional construct integrating technology, participation, and institutional strengthening. Successful experiences articulate digital innovation with citizen inclusion and adapt to local realities,

ensuring that governance not only modernizes administrative processes but also contributes to equity, democratic legitimacy, and sustainable development.

## Conclusion

The review of electronic municipal governance in Latin America demonstrates that its effectiveness depends not only on the incorporation of technological tools but also on institutional capacities, citizen trust, and contextual adaptation. Evidence shows that digital platforms can strengthen transparency, efficiency, and participation; however, persistent barriers such as urban-rural inequality, weak institutional frameworks, and cultural resistance limit their potential. Therefore, sustainable progress requires articulating digital innovation with citizen inclusion, training of public officials, and long-term institutional commitment, ensuring that electronic governance contributes both to administrative modernization and to democratic legitimacy and equity.

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