

A Bibliometric Analysis of Digital Transformation in Local Governments: Trends, Themes, and SDG Perspectives (2015–2025)

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Abstract

Digital transformation at the subnational level is essential for improving public services and supporting SDGs. Yet it still faces constraints, including infrastructure gaps, limited digital capacity, and weak intergovernmental coordination. This study conducts a bibliometric analysis of 106 Scopus-indexed

articles published between 2015 and 2025 using PRISMA and Bibliometrix (RStudio) to map research development, citation trends, and major thematic clusters. Results show a 39.55% annual growth rate, involvement of 420 authors, 62 publication sources, and 20.75% international collaboration. The dominant keyword clusters include digital transformation, local government, e-government, digital readiness, and SDGs. Although global research increasingly links digitalization with sustainability goals, policy fragmentation and unequal technological preparedness remain significant barriers. The study emphasizes the need for coordinated, capacity-building, and inclusive digital governance strategies to strengthen the impact of digital transformation on regional sustainable development.

Keyword: *Digital Transformation; Digital Readiness; Subnational Government; Sustainable Development Goals (SDGs)*

1. Introduction

Digital transformation has become a strategic priority for governments worldwide, including at the subnational level, where local governments are responsible for delivering public services and implementing development policies directly affecting citizens. The increasing adoption of digital technologies has transformed how governments design policies, manage administrative processes, and engage with communities. In local government settings, digital transformation is expected to improve service efficiency, transparency, accountability, and citizen participation while supporting broader sustainable development objectives (Kayyali, 2025; Latupeirissa et al., 2024; Papandreou et al., 2024). As digital technologies continue to evolve, local governments are increasingly required to develop adaptive governance models capable of responding to complex social, economic, and environmental challenges.

Digital transformation refers to the integration of digital technologies into organizational structures, administrative processes, and public service delivery systems to create public value and improve governance performance (Pittaway & Montazemi, 2020; Tangi et al., 2021). Within this context, digital readiness can be understood as the extent to which local governments possess the technological infrastructure, human resource capabilities, institutional arrangements, and organizational culture necessary to successfully implement digital transformation initiatives (Papandreou et al., 2024; Van Impe & Danneels, 2024). Digital readiness is therefore not limited to technological availability but also encompasses leadership capacity, regulatory support, innovation culture, and stakeholder collaboration.

Despite its potential benefits, digital transformation in local governments continues to face significant challenges. Previous studies

have identified several barriers, including fragmented coordination across levels of government, disparities in digital infrastructure, limited financial and human resources, organizational resistance to change, and the persistence of incompatible legacy systems (Bonduki & Cunha, 2022; Irani et al., 2023). Furthermore, uneven digital readiness among regions often creates disparities in service quality and technological adoption, particularly between urban and rural areas (Kuzmak et al., 2025; Zou et al., 2023). These challenges demonstrate that digital transformation is not merely a technological issue but also an institutional and governance challenge requiring integrated strategies and cross-level coordination.

Previous studies emphasize different dimensions of digital transformation. Atar et al (2025) highlight the role of digital innovation in improving public service responsiveness, whereas Kuhlmann and Heuberger (2023) focus on organizational adaptation and governance transformation. Similarly, Papandreou et al (2024) argue that institutional readiness and digital capacity are critical determinants of successful implementation. These studies collectively demonstrate that digital transformation extends beyond technological adoption and involves broader institutional, organizational, and governance changes within local governments.

The growing importance of digital governance has generated substantial academic interest in understanding how local governments adopt and implement digital transformation. Existing studies have examined various dimensions of this phenomenon, including digital infrastructure, digital literacy, public participation, e-government quality, and governance innovation (Atar et al., 2025; Atnan & Sembada, 2025; Kuhlmann & Heuberger, 2023; Özbey, 2024). However, the literature remains fragmented across different thematic areas and geographical contexts. Most studies focus on specific countries, regions, or institutional cases, making it difficult to obtain a comprehensive understanding of how digital transformation research has evolved globally and how it contributes to sustainable development goals.

Table 1 explains that previous research on digital transformation in local government still has various limitations, such as a focus on local cases, narrow methodological approaches, and a lack of integration with sustainability and SDGs perspectives. These limitations open up opportunities for future research to map trends more comprehensively, identify thematic gaps, and explain how digital transformation at the subnational level can contribute to achieving sustainable development goals.

Table 1. Research Gap Analysis

Authors	Research Focus	Main Findings	Limitations	Gap Addressed in This Study
(Atar et al., 2025)	Digital infrastructure and digital literacy in local governance	Digital readiness is essential for improving public services	Limited empirical scope and sustainability analysis	Provides a broader global mapping of digital transformation and sustainability themes
(Kuhlman & Heuberger, 2023)	Digital transformation impacts on local governance	DT affects employees, citizens, and governance processes	Focused on Germany	Expands analysis beyond a single-country context
(Özbey, 2024)	Evaluation of local e-government quality	E-government improves accessibility and service delivery	Limited discussion of long-term governance impacts	Examines broader conceptual relationships among DT, governance, and SDGs
(Atnan & Sembada, 2025)	Digital participation through social media	Digital platforms strengthen citizen engagement	Focuses primarily on social media	Maps wider digital governance and transformation themes
(Prabawati et al., 2025)	Digital transformation and organizational performance	DT improves efficiency and accountability	Not specific to subnational governments	Focuses specifically on local and subnational government contexts

The limitations identified in previous studies indicate the need for a more comprehensive assessment of the intellectual structure and

thematic evolution of research on digital transformation in local governments. While numerous studies have examined digital governance from specific perspectives, relatively limited attention has been devoted to mapping the broader knowledge landscape, identifying dominant research themes, and understanding how digital transformation is linked to the achievement of the Sustainable Development Goals (SDGs). Consequently, important questions remain regarding the evolution of research trends, conceptual relationships among key themes, and future research directions.

To address these gaps, this study employs a bibliometric approach to analyze global research on digital transformation in local governments indexed in Scopus between 2015 and 2025. By utilizing PRISMA procedures and Bibliometrix analysis, the study maps publication trends, influential authors and countries, citation structures, and thematic developments. More importantly, the study examines how digital transformation, digital readiness, local governance, and e-government are interconnected within the broader sustainability agenda.

To answer various challenges, digital capacity gaps, and policy fragmentation that still hinder digital transformation in local governments, this study formulates three main questions. *RQ1*: What are the publication trends and global research structures related to digital transformation in local governments during the period 2015–2025? *RQ2*: What are the dominant themes and conceptual clusters that characterize the literature on digital transformation, digital readiness, local governance, and e-government? *RQ3*: How do bibliometric findings explain the contribution of digital transformation in local governments to the achievement of the Sustainable Development Goals (SDGs), and what research gaps remain for future investigation?

2. Method

In this study, we use a bibliometric review to analyze the knowledge base on digital transformation in local government. The methodology section describes the steps to identify the source and the data analysis method used.

This study uses a qualitative approach, with bibliometric methods, to review the development of research on digital transformation in local governments (subnational governments). Primary data are obtained from the Scopus database, using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure a systematic data search and screening process. Data were collected from the Scopus database using the Advanced Search feature. The search query was

designed to capture studies related to digital transformation in local and subnational governments. The search string was as follows:

TITLE-ABS-KEY ("digital transformation" OR "digital government" OR "e-government") AND TITLE-ABS-KEY ("local government" OR "subnational government") AND PUBYEAR > 2014 AND PUBYEAR < 2026 AND LIMIT-TO (SUBJAREA, "SOCI") AND LIMIT-TO (DOCTYPE, "ar") AND LIMIT-TO (SRCTYPE, "j") AND LIMIT-TO (LANGUAGE, "English") The search was limited to the Social Sciences (SOCI) subject area because the study focuses on governance, public administration, public policy, and institutional dimensions of digital transformation rather than technical or engineering aspects. English-language publications were selected because English is the dominant language in international scholarly communication and allows for greater comparability across studies from different countries. Data collection was conducted in January 2026 and included publications indexed in Scopus between 2015 and 2025.

Following the search process, the retrieved records were screened using the PRISMA framework. The identification, screening, eligibility, and inclusion stages are presented in Figure 1.

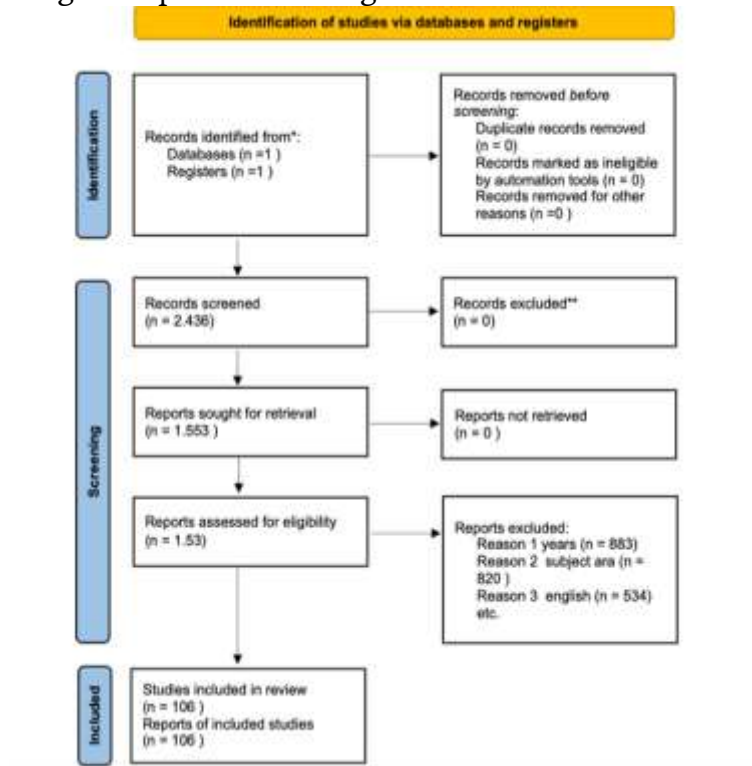


Figure 1: The PRISMA chart
Source: processed by author, 2026

Following the PRISMA procedure, an initial search identified 2,436 records in the Scopus database. After the initial screening process, 1,553 records were retained for further assessment and eligibility review. Subsequently, records that did not meet the inclusion criteria were excluded, including publications outside the selected year range (n = 883), studies from non-relevant subject areas (n = 820), and non-English publications (n = 534). After applying all screening and eligibility criteria, a final dataset of 106 documents was included in the bibliometric analysis. Inclusion criteria comprised journal articles and review articles published in English between 2015 and 2025 and focused on digital transformation, digital government, e-government, local government, or subnational governance. Conference papers, book chapters, editorials, non-English publications, and studies unrelated to public-sector digital transformation were excluded.

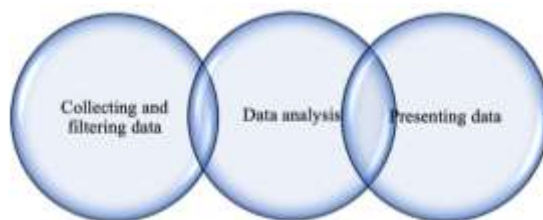


Figure 2. Research Steps
Source: Process by author 2026

Figure 2 outlines the research stages. The image systematically includes the processes of collecting, filtering, analyzing, and presenting data.

After the screening process, 106 relevant documents were exported from the Scopus database in CSV format, containing bibliographic data such as author names, affiliations, titles, keywords, and citation counts. The data is then uploaded and analyzed in RStudio using the Bibliometrix package and the Bibliometrix interface, which is widely used in various studies to perform comprehensive bibliometric analysis.

In the initial stage, a descriptive analysis was conducted to provide a general overview of research on digital transformation in local government, including publication trends, author distribution, institutional affiliations, and the countries of origin. Furthermore, advanced bibliometric analysis was carried out, including citation analysis, co-citation analysis, and keyword co-occurrence analysis, to identify patterns of author relationships, collaboration between countries, and the most dominant research themes.

The results of this analysis provide a comprehensive overview of how the concept of digital transformation at the local government level is developing in the academic literature and the direction of future research trends.

3. Results

3.1. Publication Trends

Findings on publication trends show that research on digital transformation in subnational governments experienced very significant growth during 2015–2025. The increase from 1 document in 2015 to 29 in 2025 reflects the growing urgency of digitalization issues at the local government level. The period after 2020 was a critical point that marked an acceleration of research, in line with the digital transformation triggered by the COVID-19 pandemic. The surge in publications in 2021–2025 not only illustrates the growing need for digital-based public services, but also shows a shift in academic focus from mere technology adoption to issues.

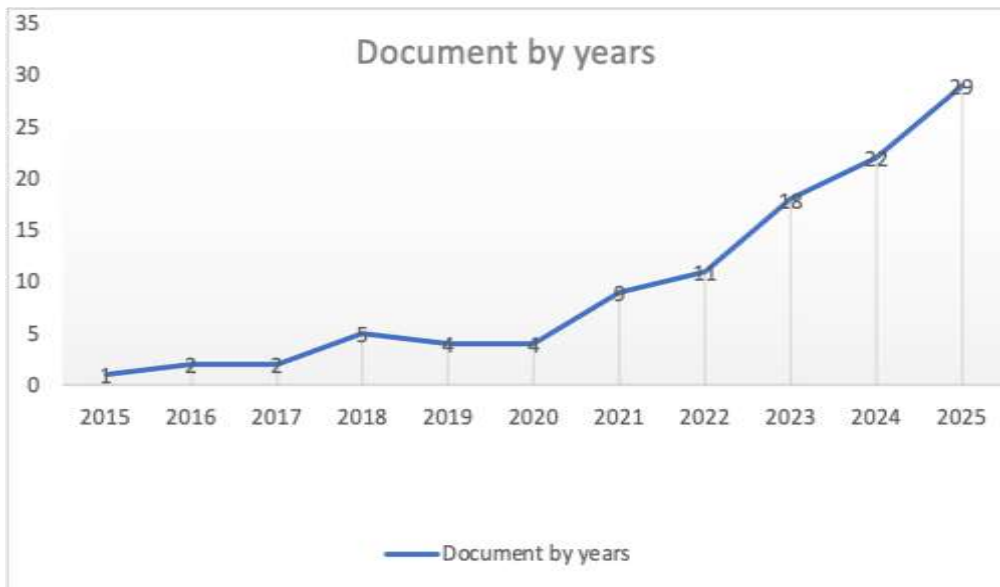


Figure 3: Number of Documents by Years
Source: Authors' elaboration from the Scopus database

The publication trends in Figure 3 show that research on digital transformation in subnational governments has increased significantly during the period 2015–2025. At the beginning of the period, interest in this theme was still limited; only 1 publication was recorded in 2015, before gradually increasing to 5 publications in 2018. Although it had stagnated

in 2019–2020, research growth has increased sharply since 2021, with 9 publications in 2021 and 29 by 2025.

3.2. Author Productivity

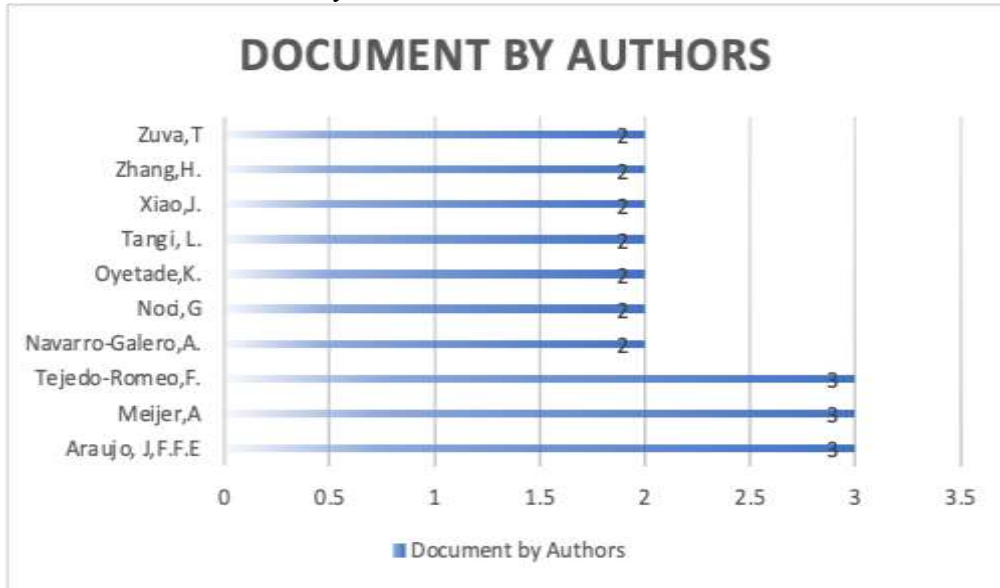


Figure 4 . Number of Documents by authors
Source: Authors' elaboration from the Scopus database

Figure 4 shows the distribution of publications by authors contributing to the field of digital transformation in subnational governments. The most productive authors are Araujo, J.F.F.E., Meijer, A., and Tejedo-Romeo, F., each with three publications. Several other authors, including Zuva, T., Zhang, H., Xiao, J., Tangi, L., Oyetade, K., Noci, G., and Navarro-Galero, A., contributed two publications each.

The authorship pattern indicates a fragmented research structure, as no individual author contributed more than three publications out of the total 106 documents analyzed. This distribution demonstrates that scholarly contributions are dispersed across a relatively large number of researchers rather than concentrated within a small group of highly productive authors. Furthermore, Figure 4 shows that most contributors published only one article during the study period. The relatively even distribution of publication output among authors indicates broad participation in this research area.

In addition, there is a group of authors with two publications, including Zuva, T., Zhang, H., Xiao, J., Tangi, L., Oyetade, K., Noci, G., and Navarro-Galero, A. This group of authors indicates that a single individual or region does not dominate the topic of digital transformation

at the subnational level, but rather that it develops within a geographically and methodologically diverse academic community.

The author's productivity distribution indicates that this research domain is still in its early stages but has strong potential for cross-country and cross-disciplinary collaboration. The active spread of authors also indicates global interest in the digitalization of local government, particularly regarding implementation challenges, technological readiness, and governance innovation.

3.3. Country Contributions

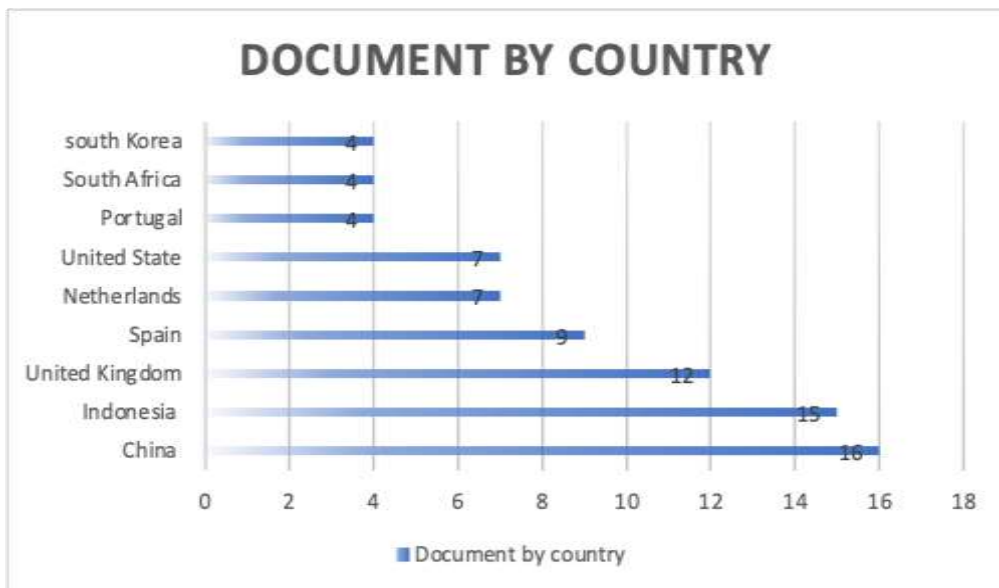


Figure 5. Distribution of Documents by Country
Source: Authors' elaboration from the Scopus database

Figure 5 presents the distribution of publications by country contributing to research on digital transformation in subnational governments. The results show that China, Indonesia, and the United Kingdom are the leading contributors, followed by Spain, the Netherlands, the United States, Portugal, South Africa, and South Korea. This distribution highlights the international nature of research on digital transformation in local governments.

In proportional terms, China contributed 16 publications (15.1%) of the total dataset, followed by Indonesia with 15 publications (14.2%) and the United Kingdom with 12 publications (11.3%). Spain accounted for 9 publications (8.5%), while the Netherlands and the United States each contributed 7 publications (6.6%). Portugal, South Africa, and South

Korea each accounted for 4 publications (3.8%) of the total publications analyzed.

Overall, the findings indicate that research output is concentrated in a limited number of countries, although contributions remain geographically diverse across Asia, Europe, Africa, and North America.

The distribution demonstrates the growing global interest in digital transformation at the local government level and reflects the participation of countries with varying administrative, technological, and governance contexts.

3.4. Most Influential Documents

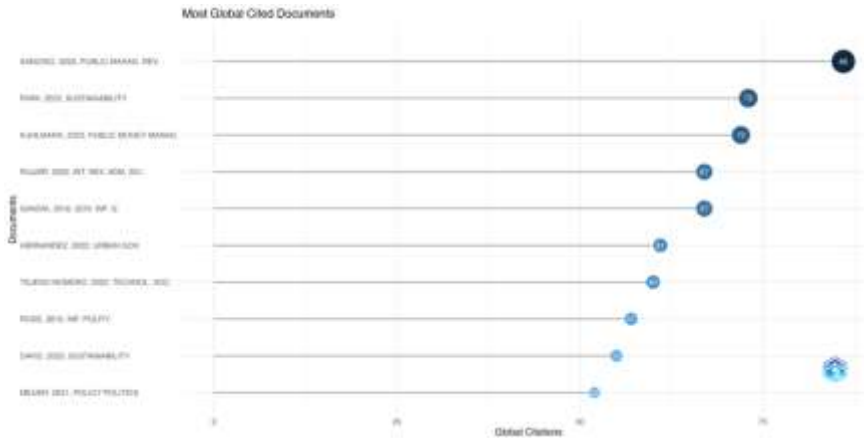


Figure 6. Most Global Cited Documents in Digital Transformation in Subnational Government

Source: Authors' elaboration from the Scopus database

Figure 6 presents the ten most globally cited publications in the field of digital transformation in subnational governments. The results show that Sancino (2020) received the highest number of citations (86 citations), followed by Park (2022) with 73 citations and Kuhlmann (2023) with 72 citations. Other highly cited publications include Ruijer (2020) and Gandia (2016), each with 67 citations, as well as Hernandez (2022) and Tejedor-Romero (2022) with 61 and 60 citations, respectively.

Table 2. Most Global Cite Document *Source: Application by RStudio*

Paper	Two	Total Citations	TC/Year	Normalized TC
Sancino, (2020). Public Manag. Rev.	10.1080/14719037.20 20.1718189	86	14.33	1.71

Park (2022). Sustainability	10.3390/SU14010579	73	18.25	2.53
Kuhlmann, (2023). Public Money Management.	10.1080/09540962.20 21.1939584	72	24.00	4.70
Ruijter, (2020). Int. Rev. Adm. Sci.	10.1177/00208523177 53068	67	11.17	1.33
Gandía, (2016). Gov. Inf. Q.	10.1016/j.giq.2015.12. 004	67	6.70	1.58
Hernandez (2022). Urban Gov.	10.1016/j.ugj.2022.09. 005	61	15.25	2.11
Tejedo-Romero, 2022, Technol. Soc.	10.1016/j.techsoc.202 2.101978	60	15.00	2.08
Rose, (2015). Inf. Polity	10.3233/IP-150349	57	5.18	1.00
David (2023). Sustainability	10.3390/su15129645	55	18.33	3.50
Meijer, (2021). Policy Politics	10.1332/030557321X 16115951032181	52	10.40	2.46

Table 2 provides a more detailed picture by presenting total citations, citations per year (TC per year), and normalized total citations (normalized TC). From the perspective of normalized TC, Kuhlmann's (2023) work shows the strongest influence, with a value of 4.70, indicating a significant contribution to enriching the conceptual framework on bureaucratic adaptation, workload, and digital implementation challenges at the local level. Meanwhile, Park (2022) reported the highest TC per year at 18.25, underscoring the growing global academic attention to integrating sustainability themes into the public sector's digital transformation.

The work of Hernandez (2022) and Tejedo-Romeo (2022) also reported TCs per year above 15, reflecting the high relevance of urban governance and technology and society topics in contemporary academic discourse. In addition, publications by David (2023) and Meijer (2021) further affirm the close interconnectedness between public policy, digital innovation, and sustainable development goals.

Overall, the findings from Figure 5 and Table 2 show that the scientific basis of research on digital transformation in local government is built on works that focus not only on technological aspects but also on governance dynamics, policy formulation, institutional readiness, and sustainability. This pattern suggests that digital transformation at the subnational level is understood as a multidimensional phenomenon that

combines technology, socio-political contexts, and long-term development orientations.

3.5. Keyword and Thematic Analysis

3.5.1 Word Cloud and Keyword Frequency



Figure 7. Word Cloud of digital transformation in subnational
Source: Authors' elaboration from Scopus database

Figure 7 shows a word cloud of keyword frequency in the literature on digital transformation in subnational governments. The largest visualized terms, namely "local government," "digital transformation," and "e-government," indicate that these three terms are the focus of global research. This dominance reflects the fact that digital transformation at the local level is mainly understood through interactions among local government actors, digital change frameworks, and the implementation of technology-based public services.

Table 3. Most Frequent Keywords and Their Relative Occurrence in the Literature

Keyword	Frequency	Percentage (%)
Local Government	71	31.98
Digital Transformation	51	22.97
E-Government	36	16.22
China	11	4.95
Digitization	11	4.95
Public Service	9	4.05
Sustainability	9	4.05
Innovation	8	3.60

Keyword	Frequency	Percentage (%)
Internet	8	3.60
Sustainable Development	8	3.60
Total	222	100.00

Source: Authors' elaboration from the Scopus database

The results of this visualization are supported by the data presented in Table 3. The keyword “local government” accounts for 31.98% of the total keyword occurrences, followed by “digital transformation” (22.97%) and “e-government” (16.22%). Together, these three keywords represent more than 70% of the most frequently occurring terms, indicating that the literature is primarily concentrated on governance actors, digital transformation processes, and technology-enabled public service delivery. In contrast, keywords directly associated with sustainability, such as “sustainability” (4.05%) and “sustainable development” (3.60%), appear less frequently, suggesting that SDG-related discussions remain a secondary theme within the broader digital transformation literature. The relatively low occurrence of sustainability-related keywords compared with “local government” and “digital transformation” suggests that the integration of digital transformation research with SDG-oriented discussions remains limited, highlighting an important gap for future research.

3.5.2 Thematic Distribution



Figure 8. Tree map of digital transformation in subnational
Source: Authors' elaboration from the Scopus database

Figure 8 presents a tree map illustrating the distribution of major themes in the literature. The largest theme is “local government” (19%), followed by “digital transformation” (13%) and “e-government” (9%).

Other themes occupy relatively smaller proportions, indicating a concentration of research around governance institutions, digital transformation processes, and public service delivery.

The visualization demonstrates that a limited number of themes dominate the literature, while several emerging topics remain less represented. The distribution highlights the central role of local government institutions in shaping the development of digital transformation research.

3.5.3 Co-occurrence Network

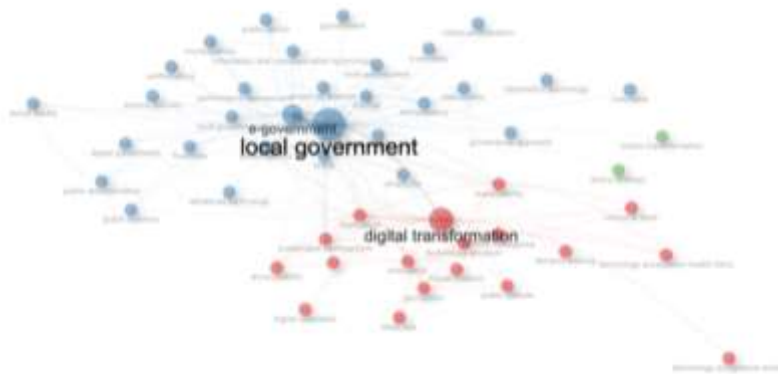


Figure 9: Co-Occurrence network of digital transformation in subnational

Source: Authors' elaboration from the Scopus database

Figure 9 presents a co-occurrence network of keywords appearing in the analyzed publications. The network is organized into three major clusters that illustrate the conceptual structure of the field.

The first cluster is centered on “local government” and “e-government,” and is linked with terms such as “public administration,” “service delivery,” “stakeholder,” and “transparency.” The second cluster revolves around “digital transformation” and includes related terms such as “technology adoption,” “innovation,” “sustainability,” “artificial intelligence,” and “decision making.” The third cluster is comparatively smaller and connects themes related to “policy implementation” and “policy strategy.”

The network structure indicates that digital transformation research in local governments is organized around interconnected themes of governance, technological change, and policy implementation. The presence of multiple clusters suggests the multidimensional nature of the

field and the interaction among institutional, technological, and policy-related topics.

4 Discussion

4.1 Implications for Digital Transformation in Local Government

The bibliometric findings demonstrate a substantial increase in scholarly attention to digital transformation in local governments during the period 2015–2025. The sharp growth in publications after 2020 suggests that digitalization has become an increasingly important topic within public administration and governance research. This trend is closely associated with the growing demand for digital public services, administrative modernization, and technology-enabled governance systems. Previous studies have emphasized that digital innovation plays a critical role in improving government responsiveness, efficiency, and service quality (Atar et al., 2025; Gumilang et al., 2024; Latupeirissa et al., 2024).

The fragmented authorship structure identified in this study indicates that digital transformation in local government remains an evolving and multidisciplinary field. The absence of highly dominant authors suggests that knowledge production is distributed across a broad network of scholars and institutions, reflecting the diversity of perspectives involved in digital governance research. This pattern also demonstrates that the field continues to attract contributions from researchers across public administration, information systems, policy studies, and sustainability-related disciplines.

The country distribution analysis highlights the global nature of the field. The leading contributions from China, Indonesia, and the United Kingdom suggest that research activity is particularly strong in countries that have actively pursued public-sector modernization and digital governance reforms. The prominence of these countries may be associated with the increasing importance of digital infrastructure, data governance, and innovation ecosystems in supporting local government transformation (Belli et al., 2024; Lin & Yaakop, 2024; Maulana et al., 2024).

Citation and keyword analyses further reveal that the intellectual foundation of this research area is built upon themes of governance innovation, institutional adaptation, digital leadership, and public-sector modernization. The dominance of keywords such as *local government*, *digital transformation*, and *e-government*, together with the thematic clusters identified in the co-occurrence network, indicates that digital transformation is increasingly understood as a multidimensional governance challenge rather than merely a technological issue. These findings underscore the importance of institutional readiness, leadership

capacity, organizational adaptation, and policy coordination in supporting successful digital transformation initiatives at the subnational level.

4.2 Contribution to Sustainable Development Goals (SDGs)

The bibliometric analysis also demonstrates a growing connection between digital transformation and the Sustainable Development Goals (SDGs). This relationship is reflected in the appearance of keywords such as *sustainability*, *sustainable development*, *innovation*, and *public service* within the thematic structure of the literature. Although these terms occur less frequently than governance-oriented keywords, their presence indicates increasing scholarly interest in linking digitalization with sustainable development outcomes.

From an SDG perspective, the findings suggest that digital transformation contributes most directly to SDG 16 (Peace, Justice, and Strong Institutions) through improvements in transparency, accountability, and public service delivery. The prominence of keywords related to e-government, public administration, and service delivery supports this interpretation. In addition, themes associated with innovation, digital infrastructure, and technology adoption reflect potential contributions to SDG 9 (Industry, Innovation, and Infrastructure). The emphasis on local governance and public services also aligns with SDG 11 (Sustainable Cities and Communities), particularly regarding the development of responsive and inclusive local institutions.

The findings, therefore, indicate that digital transformation is increasingly positioned as an enabling mechanism for sustainable governance. However, the relatively limited frequency of sustainability-related keywords suggests that the integration of digital transformation research with SDG-oriented analysis remains less developed than research focused on governance and technological implementation.

4.3 Emerging Research Gaps and Future Research Directions

Despite the rapid growth of research on digital transformation in local governments, several important gaps remain. The keyword analysis reveals that *local government* (31.98%), *digital transformation* (22.97%), and *e-government* (16.22%) dominate the literature, whereas *sustainability* (4.05%) and *sustainable development* (3.60%) appear much less frequently. This imbalance suggests that existing studies continue to prioritize governance and technological implementation over the direct assessment of sustainability outcomes. Although recent studies have increasingly linked digital transformation with sustainable development objectives, empirical evidence examining these relationships remains limited (Papandreou et al., 2024; Prabawati et al., 2025; Sigurjonsson et al., 2024).

Furthermore, the co-occurrence network indicates that themes related to policy implementation, digital readiness, and governance capacity remain

relatively less developed compared to broader discussions of digital transformation. This finding highlights the need for more empirical investigations into how institutional readiness, leadership capacity, and policy coordination influence digital transformation outcomes at the subnational level. Previous studies have emphasized that organizational capacity, digital leadership, and governance arrangements are critical determinants of successful digital transformation, yet these dimensions remain unevenly explored across different regional contexts (Kuhlmann & Heuberger, 2023; Pittaway & Montazemi, 2020; Van Impe & Danneels, 2024).

Another important gap concerns the limited evaluation of the actual impacts of digital transformation on SDG achievement. While many studies discuss the potential benefits of digitalization, relatively few provide systematic measurements of its effects on service inclusion, citizen participation, resource efficiency, or sustainable development performance. Existing research tends to focus on digital service implementation and governance innovation rather than measurable sustainability outcomes (Latupeirissa et al., 2024; Özbey, 2024; Weixelbraun et al., 2024). Future research should therefore prioritize comparative cross-regional studies, impact assessments, and data-driven evaluations capable of demonstrating how digital transformation contributes to tangible and measurable sustainable development outcomes. From a theoretical perspective, the study suggests that digital transformation in local governments can be conceptualized as the intersection of three interconnected dimensions: governance modernization, digital readiness, and sustainability orientation. The bibliometric mapping demonstrates that these dimensions collectively shape the evolution of research in the field and provide a framework for understanding how local governments navigate technological and institutional change.

5 Conclusion

This study demonstrates that research on digital transformation in local governments has grown substantially during the period 2015–2025, reflecting increasing global attention to digital governance, public service innovation, and administrative modernization. The bibliometric findings reveal that the literature is primarily structured around three dominant themes: local government, digital transformation, and e-government, which form the intellectual foundation of this research field. The results also indicate a growing connection between digital transformation and sustainable development, although sustainability-related themes remain less prominent than governance- and technology-oriented topics.

The findings offer several practical implications for policymakers and local government practitioners. Successful digital transformation requires not only investments in digital infrastructure but also improvements in institutional readiness, leadership capacity, and intergovernmental coordination. Local governments should prioritize digital capacity-building initiatives, strengthen data-driven governance, and develop integrated digital strategies that support inclusive, transparent, and citizen-centered public services. Future research should focus on evaluating the measurable impacts of digital transformation on SDG achievement, including service accessibility, citizen participation, transparency, and resource efficiency, as well as conducting comparative and longitudinal studies across different regional contexts.

This study has several limitations. First, the analysis relies exclusively on the Scopus database, which may not capture relevant publications indexed in other databases. Second, the bibliometric approach focuses on publication patterns, citation structures, and thematic developments rather than direct measurements of policy outcomes. Consequently, the findings identify research trends and knowledge structures but do not provide empirical evidence regarding the actual impact of digital transformation on SDG performance. Future studies should therefore combine bibliometric approaches with empirical case studies and impact-based evaluations to develop a more comprehensive understanding of digital transformation in local governments.

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