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MAPPING STUDIES ON GOOD GOVERNANCE AND E-GOVERNMENT IN DEVELOPING COUNTRIES: A BIBLIOMETRIC REVIEW

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ABSTRACT

Good governance and e-government have become essential pillars in improving public sector performance, enhancing transparency, and promoting sustainable development in developing countries. Over the past two decades, the growing adoption of digital technologies has transformed governance practices, creating new opportunities and challenges for public administration. This study aims to map the intellectual structure, research trends, thematic evolution, and publication patterns related to good governance and e-government in developing countries through a bibliometric review. The study employs a bibliometric approach by analyzing scientific publications indexed in international databases over a specified period. Data were examined using performance analysis and science mapping techniques to identify influential authors, institutions, countries, journals, and emerging research themes. The findings reveal a significant increase in scholarly interest in governance digitalization, public service innovation, transparency, accountability, citizen participation, and digital transformation. The results also indicate that developing countries increasingly utilize e-government initiatives to strengthen governance effectiveness and support sustainable development goals. Furthermore, recent research trends emphasize the integration of artificial intelligence, smart governance, digital inclusion, and open government frameworks. This study contributes to the literature by providing a comprehensive overview of the development of good governance and e-government research and identifying potential directions for future studies in developing-country contexts.

Keywords: good governance, e-government, digital governance, developing countries, bibliometric review, public administration.



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ABSTRAK

Good governance dan e-government telah menjadi pilar penting dalam meningkatkan kinerja sektor publik, memperkuat transparansi, serta mendorong pembangunan berkelanjutan di negara-negara berkembang. Dalam dua dekade terakhir, perkembangan teknologi digital telah mengubah praktik tata kelola pemerintahan dan menciptakan berbagai peluang maupun tantangan baru dalam administrasi publik. Penelitian ini bertujuan untuk memetakan struktur intelektual, tren penelitian, evolusi tema, dan pola publikasi terkait good governance dan e-government di negara-negara berkembang melalui pendekatan bibliometrik. Penelitian menggunakan metode bibliometric review dengan menganalisis publikasi ilmiah yang terindeks dalam basis data internasional pada periode tertentu. Data dianalisis menggunakan teknik analisis kinerja dan pemetaan sains untuk mengidentifikasi penulis, institusi, negara, jurnal, serta tema penelitian yang paling berpengaruh. Hasil penelitian menunjukkan adanya peningkatan signifikan dalam jumlah publikasi yang membahas digitalisasi tata kelola pemerintahan, inovasi pelayanan publik, transparansi, akuntabilitas, partisipasi masyarakat, dan transformasi digital. Temuan penelitian juga mengindikasikan bahwa negara-negara berkembang semakin memanfaatkan inisiatif e-government untuk meningkatkan efektivitas pemerintahan dan mendukung pencapaian tujuan pembangunan berkelanjutan. Selain itu, tren penelitian terkini menunjukkan meningkatnya perhatian terhadap integrasi kecerdasan buatan, smart governance, inklusi digital, dan open government. Penelitian ini memberikan kontribusi teoritis dengan menyajikan gambaran komprehensif mengenai perkembangan kajian good governance dan e-government serta mengidentifikasi peluang penelitian di masa depan dalam konteks negara berkembang.

Kata Kunci: good governance, e-government, tata kelola digital, negara berkembang, tinjauan bibliometrik, administrasi publik.

A.INTRODUCTION

The rapid advancement of information and communication technologies (ICTs) has fundamentally transformed public administration and governance systems worldwide. Governments increasingly rely on digital technologies to improve administrative efficiency, service delivery, transparency, and citizen engagement. In developing countries, the adoption of e-government has emerged as a strategic instrument for addressing governance challenges, reducing bureaucratic inefficiencies, and promoting inclusive development. The integration of digital technologies into public administration has reshaped traditional governance structures and created new opportunities for enhancing government performance and accountability. As a result, e-government has become closely associated with the broader concept of good governance, which

emphasizes transparency, participation, accountability, effectiveness, and responsiveness in public sector management (United Nations, 2022).

Good governance has gained significant attention among policymakers, international organizations, and scholars as a prerequisite for sustainable socioeconomic development. According to the World Bank (2020), good governance refers to the traditions and institutions through which authority is exercised in a country, including the processes by which governments are selected, monitored, and held accountable. Effective governance contributes to economic growth, political stability, and public trust in government institutions. In developing countries, however, governance systems often face challenges such as corruption, limited institutional capacity, bureaucratic inefficiency, and unequal access to public services. Consequently, governments have increasingly adopted digital governance initiatives to strengthen institutional performance and improve public service delivery.

The emergence of e-government has provided governments with innovative mechanisms to enhance governance quality and public sector effectiveness. E-government refers to the use of information and communication technologies by government agencies to provide services, exchange information, and facilitate interactions among citizens, businesses, and governmental institutions. According to Fang (2002), e-government enables governments to improve operational efficiency, increase transparency, and enhance citizen participation in governance processes. The implementation of e-government initiatives has therefore become an important component of public sector reforms in many developing countries seeking to modernize administrative systems and strengthen democratic governance.

The relationship between good governance and e-government has attracted substantial academic interest over the past two decades. Scholars argue that digital technologies can support governance reforms by improving transparency, reducing opportunities for corruption, and increasing citizen access to government information and services (Heeks, 2006). Furthermore, e-government platforms facilitate communication between governments and citizens, thereby promoting greater public participation in policy-making processes. As governments continue to invest in digital transformation initiatives, understanding the evolving relationship between

governance quality and technological innovation has become increasingly important for both researchers and practitioners.

In recent years, the global digital transformation agenda has accelerated significantly, particularly following the widespread adoption of mobile technologies, cloud computing, artificial intelligence, and big data analytics. These technological developments have expanded the scope of e-government beyond basic online services toward more sophisticated forms of digital governance and smart government systems. According to the Organisation for Economic Co-operation and Development (2020), digital government strategies are increasingly focused on creating data-driven, citizen-centered, and integrated public services. Such developments have encouraged researchers to explore new dimensions of governance, including digital inclusion, open government, smart governance, and digital citizenship, particularly within developing-country contexts.

Despite the growing body of literature on good governance and e-government, research in this field remains fragmented across disciplines, regions, and thematic areas. Existing studies have examined various topics, including digital public services, anti-corruption initiatives, citizen participation, institutional performance, and technology adoption. However, limited efforts have been made to systematically map the intellectual structure and evolution of research concerning good governance and e-government in developing countries. Bibliometric analysis provides an effective methodological approach for identifying research trends, influential publications, collaboration networks, and emerging themes within a specific field of study (Donthu et al., 2021). Therefore, a comprehensive bibliometric review is necessary to synthesize the growing body of knowledge and identify future research directions.

Bibliometric studies have become increasingly popular in social sciences and public administration because they offer quantitative insights into the development of scientific knowledge. Through citation analysis, co-authorship analysis, keyword co-occurrence mapping, and thematic evolution analysis, researchers can identify dominant research streams and emerging topics within a discipline (Aria & Cuccurullo, 2017). In the context of governance and digital transformation, bibliometric analysis can reveal how scholarly attention has shifted over time and which themes have gained prominence in response to technological and institutional changes. Such

insights are valuable for policymakers, academics, and practitioners seeking to understand the current state of knowledge and future opportunities in governance research.

Given the increasing importance of digital governance for sustainable development in developing countries, a comprehensive examination of the academic literature is both timely and necessary. This study aims to map the intellectual structure, publication trends, thematic evolution, and collaborative networks related to good governance and e-government in developing countries through a bibliometric review. By identifying influential authors, institutions, journals, countries, and research themes, this study contributes to a deeper understanding of how governance and digital transformation have evolved within the scholarly literature. Furthermore, the findings are expected to provide valuable insights for future research and policy development aimed at strengthening governance systems and promoting digital transformation in developing-country contexts.

B. RESEARCH METHOD

This study employed a bibliometric review approach to systematically map and analyze the development of research on good governance and e-government in developing countries. Bibliometric analysis is a quantitative research method used to evaluate scientific publications and identify patterns, trends, intellectual structures, and research networks within a specific field of study. This approach enables researchers to examine the evolution of scholarly knowledge by analyzing publication outputs, citation patterns, authorship collaborations, and thematic developments. According to Donthu et al. (2021), bibliometric analysis provides a comprehensive framework for understanding the growth and direction of academic research while identifying influential publications, authors, institutions, and emerging research themes.

The data for this study were collected from the Scopus database, which is recognized as one of the largest and most reliable sources of peer-reviewed scientific literature. The search process was conducted using the keywords “*good governance*” & “*e-government*” & “*developing countries*” within article titles, abstracts, and keywords. Only journal articles written in English and published within the selected time frame were included in the analysis. After applying inclusion and exclusion criteria, the retrieved records were exported in CSV format for further

analysis. Bibliographic information such as authors, affiliations, publication years, citations, keywords, and source titles was extracted to facilitate performance analysis and science mapping.

Data analysis was conducted using Bibliometrix in R Studio and VOSviewer software. Bibliometrix was utilized to perform descriptive analyses, including annual publication trends, most productive authors, institutions, countries, journals, and citation performance. Meanwhile, VOSviewer was employed to visualize co-authorship networks, co-citation relationships, keyword co-occurrence patterns, and thematic clusters within the research field. The findings were interpreted through performance analysis and science mapping techniques to identify the intellectual structure and thematic evolution of good governance and e-government studies in developing countries. This methodological approach provides a comprehensive overview of the existing literature and offers insights into future research directions in the field of digital governance and public administration.

C. RESEARCH RESULTS AND DISCUSSION

➤ Research Results

The network visualization generated using VOSviewer in the study entitled “*Mapping Studies on Good Governance and E-Government in Developing Countries: A Bibliometric Review*” reveals a comprehensive structure of relationships among keywords within the field of governance and digital government research. The analysis identifies two dominant clusters interconnected through several bridging keywords, particularly “governance,” “e-government,” and “developing countries,” which serve as central nodes connecting traditional governance concepts with emerging digital transformation themes. On the left side of the network, a red cluster is dominated by keywords such as “good governance,” “transparency,” “accountability,” “public administration,” “public service,” and “institutional capacity.” These keywords are closely interconnected, indicating strong co-occurrence patterns and reflecting the traditional focus of governance studies on administrative effectiveness, democratic accountability, transparency, and public sector performance. The density and proximity of these keywords suggest a mature and well-established body of literature emphasizing governance reforms as a foundation for sustainable development in developing countries.

Conversely, the right side of the network is characterized by a green cluster that includes keywords such as “e-government,” “digital governance,” “ICT,” “digital transformation,” “smart governance,” and “citizen participation.” This cluster reflects the growing scholarly interest in the role of digital technologies in improving governance processes and public service delivery. Compared to the traditional governance cluster, the nodes within this group appear more dispersed, suggesting that these themes represent relatively recent but rapidly expanding areas of research. The connections between the governance and digital governance clusters are moderately strong, indicating increasing integration between institutional governance principles and technological innovation. This pattern demonstrates that contemporary governance research is moving beyond conventional administrative frameworks toward technology-enabled governance systems that prioritize efficiency, transparency, and citizen engagement. Overall, the network visualization illustrates a significant transition from governance-centered studies toward integrated approaches combining governance reforms and digital innovation.

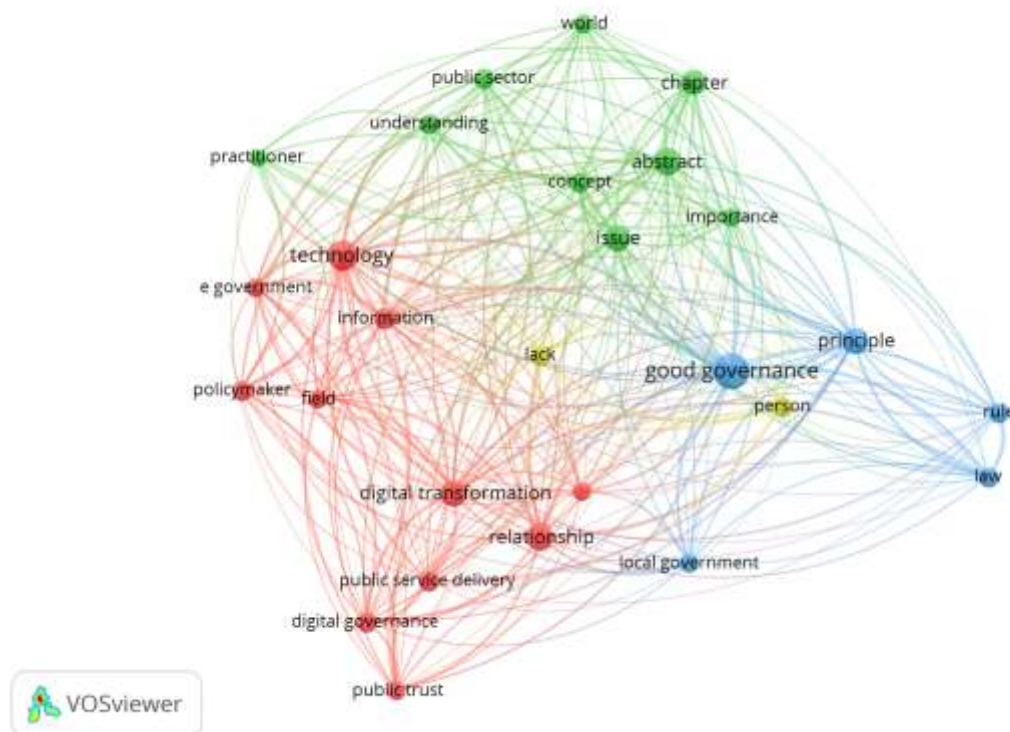


Figure 2 Network Visualization of Research Themes on Good Governance and Digital Transformation Using VOSviewer

Figure 2 presents the network visualization generated using VOSviewer, illustrating the relationships among the dominant keywords identified in the selected literature. The visualization reveals several thematic clusters that represent the conceptual structure of research on good governance and digital transformation. The blue cluster is centered on the keyword *good governance*, which is strongly connected with concepts such as *principle*, *law*, *rule*, and *local government*, indicating that governance research is primarily associated with legal frameworks, institutional arrangements, and public administration. The red cluster focuses on *technology*, *digital transformation*, *digital governance*, *public trust*, *public service delivery*, and *e-government*, highlighting the growing importance of digital innovation in improving government performance and public services. Meanwhile, the green cluster includes keywords such as *public sector*, *understanding*, *concept*, *chapter*, *abstract*, and *issue*, reflecting the theoretical and conceptual development of governance studies. The numerous interconnections among these clusters indicate that governance, digital transformation, and technological innovation have become increasingly integrated research domains, emphasizing the multidisciplinary nature of contemporary public administration studies.

The network structure also demonstrates that good governance and technology function as the most influential and highly connected nodes within the bibliometric map, signifying their central roles in the existing body of knowledge. Strong linkages between *technology*, *digital governance*, *e-government*, and *public service delivery* suggest that digital transformation has become an essential strategy for enhancing transparency, accountability, efficiency, and citizen-centered public services. Similarly, the close association between *good governance* and institutional concepts such as *law*, *rule*, and *local government* underscores the importance of regulatory frameworks and governance principles in supporting digital innovation within the public sector. Overall, this visualization demonstrates that recent scholarly discussions increasingly emphasize the integration of governance principles with digital technologies to improve public sector performance, strengthen public trust, and promote sustainable governance. Consequently, the bibliometric mapping provides valuable insights into current research trends while identifying potential directions for future studies on governance, digital transformation, and public administration.

Furthermore, the visualization identifies several emerging research opportunities that remain relatively underexplored within the existing literature. Keywords such as *public trust*, *digital governance*, *digital transformation*, and *public service delivery* are connected to the central concept of *good governance*, yet they appear with fewer and weaker link strengths than the dominant governance-related terms. This pattern suggests that empirical investigations examining the impact of digital transformation on governance outcomes, citizen participation, institutional performance, and public trust are still developing. The network also indicates that studies integrating technological innovation with governance principles at the local government level remain limited, particularly in developing countries. Consequently, future research should adopt interdisciplinary approaches that combine public administration, information technology, and governance theories to examine how digital innovation contributes to transparency, accountability, service quality, and sustainable public sector development. Such studies would enrich the current body of knowledge while providing practical recommendations for policymakers seeking to strengthen good governance through digital transformation.

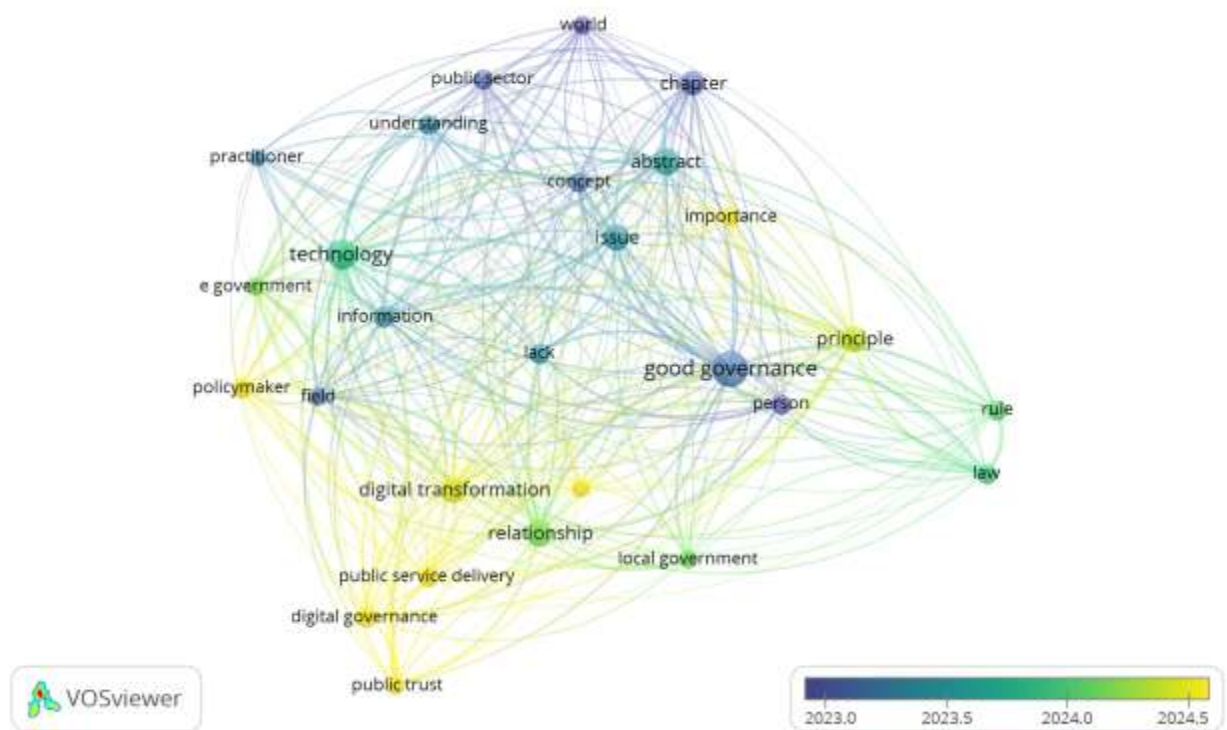


Figure 3 Overlay Visualization of Research Trends on Good Governance and Digital Transformation (2023–2024) Using VOSviewer

Figure 3 presents the overlay visualization generated using VOSviewer, illustrating the temporal evolution of research topics related to good governance and digital transformation between 2023 and 2024. Unlike the network visualization, the overlay map highlights the average publication year of each keyword using a color gradient ranging from dark blue (earlier studies, 2023) to yellow (more recent studies, 2024). The visualization demonstrates that the research field has evolved from emphasizing fundamental governance concepts toward exploring technology-driven governance and digital public administration. The keyword *good governance* remains the central node, maintaining strong connections with numerous related concepts, thereby confirming its role as the primary theoretical foundation of contemporary governance research. The dense interconnections among keywords indicate that governance studies increasingly adopt multidisciplinary perspectives by integrating public administration, digital innovation, information technology, and institutional development.

The overlay visualization further reveals a clear shift in scholarly attention toward digital transformation and citizen-oriented governance. Keywords such as *digital governance*, *digital transformation*, *public trust*, *public service delivery*, and *policymaker* appear in yellow, indicating that these topics have become the most recent and rapidly expanding areas of research during 2024. Their emergence reflects the growing academic interest in understanding how digital technologies improve government effectiveness, enhance transparency, strengthen accountability, and increase citizen participation in public administration. Meanwhile, keywords including *good governance*, *public sector*, *chapter*, *world*, and *concept* are displayed in shades of blue, suggesting that they represent earlier and well-established research themes that continue to provide the theoretical foundation for newer studies. The coexistence of mature governance concepts and emerging digital topics illustrates the dynamic evolution of governance research toward a more technology-oriented and innovation-driven paradigm.

Another important finding highlighted by the overlay visualization is the increasing integration between governance principles and technological innovation. The close relationships among *technology*, *e-government*, *digital governance*, *good governance*, *law*, *local government*, and *public trust* indicate that recent studies no longer examine these concepts independently but rather as interconnected dimensions of public sector transformation. This trend suggests that researchers increasingly recognize digital technology as a strategic instrument for improving

institutional performance, service quality, policy implementation, and sustainable governance. Furthermore, the visualization identifies several emerging opportunities for future research, particularly concerning the influence of digital transformation on governance effectiveness, citizen trust, regulatory adaptation, and innovation within local government institutions in developing countries. Overall, Figure 3 demonstrates that the current direction of governance research is progressively moving toward integrated, evidence-based, and technology-enabled governance models capable of addressing contemporary public sector challenges while supporting the achievement of sustainable development goals.

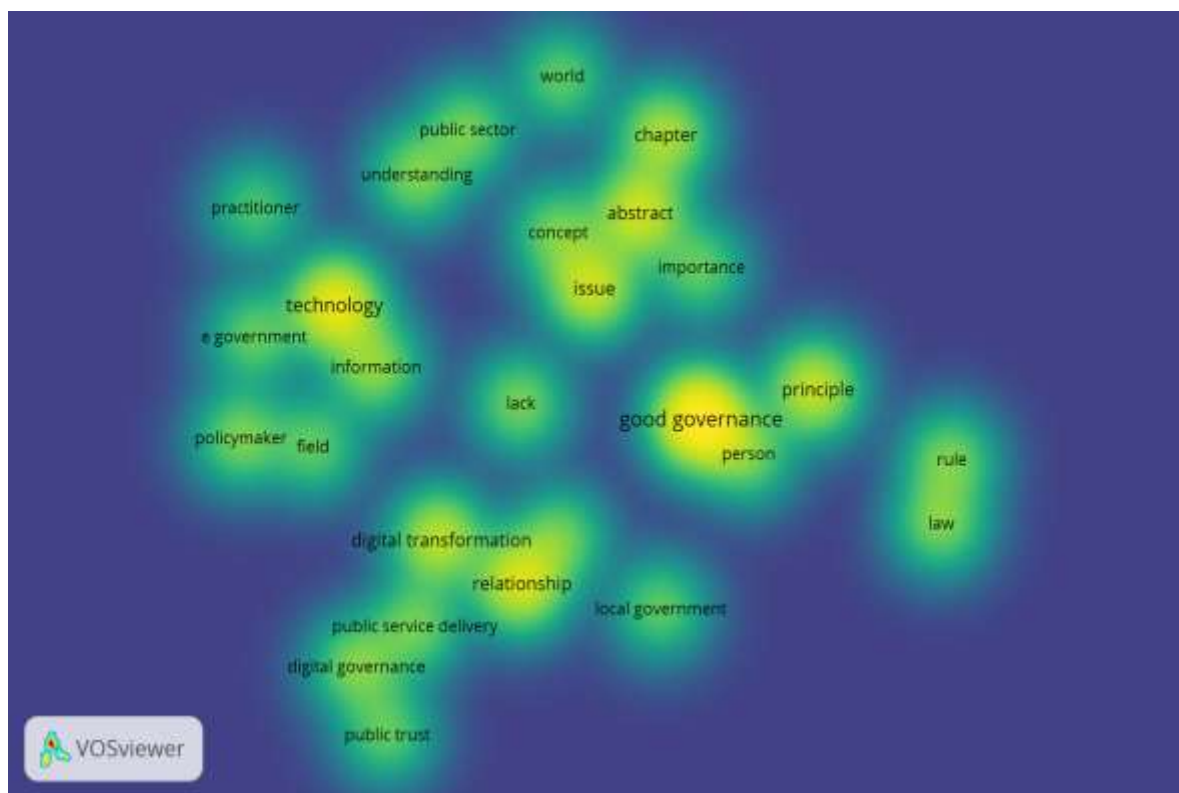


Figure 4 Density Visualization of Research Themes on Good Governance and Digital Transformation Using VOSviewer

Figure 4 presents the density visualization generated using VOSviewer, illustrating the concentration and research intensity of keywords related to good governance and digital transformation. In this visualization, the color gradient represents the frequency of keyword occurrence within the analyzed literature. Bright yellow areas indicate keywords with the highest

occurrence and strongest research attention, whereas green areas represent moderately studied topics, and blue areas indicate relatively less explored themes. The visualization clearly identifies *good governance*, *technology*, *principle*, *relationship*, *digital transformation*, *chapter*, and *abstract* as the most prominent research hotspots. These highly concentrated areas suggest that governance principles, technological innovation, and digital transformation have become the dominant themes in contemporary public administration research. The concentration of these keywords also reflects their substantial contribution to the theoretical and empirical development of governance studies.

The density map further demonstrates that research on digital governance has become increasingly interconnected with broader governance and public administration concepts. Keywords such as *digital governance*, *public service delivery*, *public trust*, *information*, *e-government*, and *policymaker* appear with moderate density, indicating that these topics have received considerable scholarly attention while continuing to expand. Their proximity to the central keyword *good governance* suggests that researchers frequently investigate digital technologies as instruments for enhancing transparency, accountability, service quality, and institutional effectiveness. In addition, the presence of keywords such as *law*, *rule*, and *local government* highlights the continuing importance of regulatory frameworks and institutional capacity in supporting successful digital transformation within the public sector. Overall, the visualization illustrates that governance research is evolving toward a more integrated perspective that combines legal, technological, managerial, and organizational dimensions.

The density visualization also provides valuable insights into future research opportunities by identifying themes with relatively lower research intensity. Keywords including *practitioner*, *world*, *understanding*, *concept*, *issue*, *importance*, and *local government* appear in green or light-green areas, suggesting that these topics remain relevant but have not yet received the same level of scholarly attention as the major research hotspots. This distribution indicates opportunities for future studies to examine how governance principles can be more effectively translated into practical implementation through digital innovation, stakeholder collaboration, and evidence-based policymaking. Furthermore, expanding empirical research on citizen participation, digital inclusion, public trust, and local government innovation—particularly in developing countries—would contribute to a more comprehensive understanding of technology-enabled governance.

Consequently, Figure 4 confirms that the research landscape is progressively shifting toward integrated governance models that emphasize digital transformation, institutional resilience, and sustainable public sector development.

➤ Discussion

The bibliometric analysis demonstrates that *good governance* remains the central concept in contemporary governance research, as evidenced by its position as the most interconnected keyword in the VOSviewer network, overlay, and density visualizations. This finding indicates that governance continues to serve as the primary theoretical foundation for studies examining public sector reform, institutional performance, and administrative effectiveness. The strong relationships between *good governance* and keywords such as *principle*, *law*, *rule*, and *local government* suggest that researchers consistently emphasize the importance of transparency, accountability, participation, and the rule of law in achieving effective governance. These findings are consistent with the governance framework proposed by Kaufmann et al. (2011), which argues that institutional quality and governance principles are essential determinants of sustainable public sector performance. The bibliometric evidence therefore confirms that governance research continues to evolve while maintaining its normative foundations.

Another significant finding is the increasing prominence of digital transformation and technological innovation within governance studies. The overlay visualization reveals that keywords such as *digital governance*, *digital transformation*, *public trust*, and *public service delivery* have emerged as recent research hotspots, particularly during 2024. This trend reflects the growing recognition that digital technologies have become strategic instruments for improving government efficiency, transparency, citizen participation, and service quality. The strong connections between *technology*, *e-government*, and *good governance* indicate that digital innovation is no longer viewed merely as an operational tool but as an integral component of governance reform. These findings support previous studies by Mergel et al. (2019) and Vial (2019), which argue that digital transformation fundamentally reshapes organizational processes, governance mechanisms, and public value creation within government institutions.

The density visualization further reveals that several governance-related topics continue to receive substantial scholarly attention while simultaneously opening opportunities for future research. Keywords such as *public trust*, *digital governance*, *public service delivery*, *policymaker*, and *information* exhibit moderate research density, indicating that these themes have developed considerably but remain less mature than the broader concept of *good governance*. This finding suggests that scholars increasingly recognize public trust as a critical outcome of successful digital governance initiatives. As governments expand the implementation of digital public services, issues related to cybersecurity, data privacy, digital inclusion, and citizen satisfaction are expected to become increasingly significant. Consequently, future governance research should further explore how technological innovation influences institutional legitimacy and citizens' confidence in government, particularly within developing countries where digital transformation remains uneven.

The bibliometric mapping also demonstrates the multidisciplinary nature of governance research. The coexistence of keywords representing public administration, information technology, legal studies, public policy, and organizational management illustrates that governance is no longer examined through a single disciplinary perspective. Instead, contemporary governance studies increasingly integrate technological, legal, managerial, and social dimensions to address complex public sector challenges. This interdisciplinary development aligns with current global governance trends emphasizing collaborative governance, digital ecosystems, evidence-based policymaking, and innovation-driven public management. Such integration enhances the capacity of governance research to provide comprehensive solutions for improving institutional effectiveness and sustainable public administration.

Finally, the overall bibliometric findings indicate that future research should focus on strengthening empirical investigations concerning the relationship between digital transformation and governance outcomes. Although concepts such as *good governance* and *technology* dominate the existing literature, relatively limited attention has been devoted to evaluating the long-term impacts of digital governance on institutional resilience, policy effectiveness, public participation, and sustainable development. Comparative studies across countries, particularly within developing

economies, remain scarce despite their importance for understanding contextual differences in governance implementation. Therefore, future studies should adopt interdisciplinary and evidence-based approaches that combine governance theory, digital innovation, public policy, and information systems to produce more comprehensive models capable of supporting effective, transparent, accountable, and citizen-centered governance in the digital era.

D.CONCLUSION AND RECOMMENDATIONS

➤ Conclusion

This bibliometric study demonstrates that research on good governance has evolved significantly through the integration of digital transformation, technological innovation, and public sector modernization. The VOSviewer network, overlay, and density visualizations reveal that *good governance* remains the central and most influential research theme, closely connected with concepts such as *technology*, *digital transformation*, *digital governance*, *public service delivery*, *public trust*, and *local government*. Furthermore, the temporal analysis indicates a growing scholarly interest in digital governance and technology-enabled public administration, reflecting the increasing importance of digital innovation in enhancing transparency, accountability, efficiency, and citizen participation. The findings also highlight the multidisciplinary nature of governance research and identify several emerging research opportunities, particularly concerning the impact of digital transformation on governance effectiveness, institutional resilience, and sustainable public sector development.

➤ Recommendations

Future studies should expand bibliometric analyses by incorporating larger datasets from multiple international databases, such as Scopus, Web of Science, and Dimensions, to provide a more comprehensive understanding of global research trends in governance and digital transformation. Researchers are also encouraged to conduct empirical studies that examine how digital governance initiatives influence public trust, policy implementation, service quality, and institutional performance, particularly in developing countries. For policymakers, the findings

emphasize the need to strengthen digital governance strategies through investment in digital infrastructure, regulatory reform, institutional capacity building, and human resource development. Such efforts will support the implementation of transparent, accountable, innovative, and citizen-centered governance systems capable of addressing the challenges of sustainable development in the digital era.

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