

The Scientific Structure of Good Governance and Digital Government Transformation: A Bibliometric Analysis

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Abstract: This study aims to analyze the scientific structure of research on good governance and digital government transformation using a bibliometric approach. The increasing integration of digital technologies in public administration has generated significant academic interest, necessitating a systematic mapping of the field. This study employs data retrieved from the Scopus database, covering 428 documents published between 1992 and 2026. The analysis is conducted using the Bibliometrix package in R, incorporating performance analysis and science mapping techniques, including co-authorship networks, country collaboration, thematic evolution, and keyword co-occurrence. The results indicate a steady growth of research with an annual growth rate of 8.07%, reflecting the rising importance of digital transformation in governance. The field is characterized by a decentralized structure, with contributions distributed across multiple journals, institutions, and countries. Leading contributors include the United Kingdom, China, South Africa, and the United States, while collaboration patterns show a dominance of single-country publications. Thematic analysis reveals a shift from foundational governance concepts toward sustainability, digital transformation, and sector-specific applications such as energy policy and smart cities. This study contributes to the literature by providing a comprehensive overview of the intellectual, social, and conceptual structure of the field. The findings offer valuable insights for researchers and policymakers in understanding emerging trends and guiding future research directions in digital governance.

INTRODUCTION

In recent years, the concept of good governance has become increasingly central to discussions in public administration, political science, and development studies. Good governance is commonly associated with principles such as transparency, accountability, efficiency, participation, and the rule of law, which collectively aim to ensure that public institutions serve citizens effectively and equitably (Yazzif et al. 2023). As governments face growing societal expectations and complex policy challenges, the demand for governance systems that are both responsive and inclusive has intensified. In this context, the integration of digital technologies into

governmental processes often referred to as government digital transformation has emerged as a critical pathway for enhancing governance quality and performance.

Government digital transformation refers to the adoption and integration of digital technologies, such as information and communication technologies (ICTs), big data, artificial intelligence, and cloud computing, into public sector operations and service delivery (Nilwana et al. 2025; Pariyasiri 2022). This transformation goes beyond the mere digitization of administrative processes; it involves a fundamental reconfiguration of how governments operate, make decisions, and interact with citizens. Digital government initiatives, including e-government platforms, online public services, and smart governance systems, have reshaped the relationship between the state and society by enabling more efficient, transparent, and participatory forms of governance (Piras 2025).

The linkage between good governance and digital transformation is particularly evident in the ways digital tools can enhance transparency and accountability. For instance, open data platforms and digital reporting systems allow citizens to access government information more easily, thereby reducing information asymmetry and increasing public oversight (Setyarto and Judijanto 2025). Similarly, digital technologies facilitate more efficient service delivery, minimizing bureaucratic inefficiencies and improving the accessibility of public services, especially in remote or underserved areas. Furthermore, digital platforms enable new forms of citizen engagement, such as e-participation and online consultations, which strengthen democratic processes and foster greater inclusiveness in policymaking (Siakwah and Lawer 2024).

Despite these advantages, the relationship between digital transformation and good governance is not without challenges. The adoption of digital technologies in the public sector often encounters issues related to digital divides, cybersecurity risks, institutional resistance, and unequal access to technological infrastructure (Handoko, Siregar, and Atthallah 2025). In many developing countries, limited technological capacity and governance constraints hinder the effective implementation of digital government initiatives. Moreover, the rapid pace of technological change raises concerns about data privacy, algorithmic bias, and the potential erosion of democratic accountability if digital systems are not properly regulated. These challenges highlight the need for a deeper understanding of how digital transformation interacts with governance principles across different contexts.

The growing academic interest in this intersection has led to a substantial body of literature examining various aspects of digital government and governance. Scholars have explored topics such as e-government adoption, digital public service innovation, smart city governance, and the role of emerging technologies in policymaking. For example, studies have emphasized the importance of digital transformation in improving public sector performance and fostering innovation (Passaris 2008), while others have focused on its implications for citizen participation and democratic engagement (Williamson, Sithole, and Todes 2007). Additionally, research on smart governance highlights how data-driven decision-making and interconnected systems can enhance policy effectiveness and urban management (Evans and Barakat 2012).

However, despite the rapid expansion of this research field, the literature remains fragmented across multiple disciplines, including public administration, information systems, political science, and development studies. Different studies often employ diverse conceptual frameworks and methodologies, leading to inconsistencies in how key concepts such as digital governance, e-government, and good governance are defined and operationalized. This fragmentation poses significant challenges for scholars and practitioners seeking to develop a comprehensive understanding of the field. Without a systematic synthesis of existing research, it becomes difficult to identify dominant themes, emerging trends, and potential research gaps.

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In this regard, bibliometric analysis offers a valuable methodological approach to mapping the intellectual structure and evolution of a research field. Bibliometrics involves the quantitative analysis of academic publications, enabling researchers to identify patterns in authorship, citation networks, keyword co-occurrence, and thematic development (Berg-Schlusser 2025). Unlike traditional literature reviews, which rely on subjective interpretation, bibliometric methods provide a data-driven and systematic means of analyzing large volumes of scholarly work. This allows for a more comprehensive and objective understanding of how a field is structured and how it evolves over time.

Bibliometric studies have been widely applied in various domains, including management, environmental studies, and information systems, to uncover intellectual trends and research frontiers (Adekunle 2021; Herdiansyah 2025; Puteh Salin and Ali 2025). In the context of digital government and governance, bibliometric analysis can reveal the most influential authors, journals, and countries contributing to the field, as well as the key themes and conceptual clusters that define ongoing scholarly debates. Moreover, it can help identify emerging areas of research, such as the role of artificial intelligence in governance, digital inclusion, and the ethical implications of data-driven policymaking.

Given the increasing importance of digital transformation in shaping governance practices, there is a pressing need to systematically map the scholarly landscape of research on good governance and digital government transformation. While previous studies have examined specific aspects of this relationship, such as e-government adoption or digital service delivery, there remains a lack of comprehensive bibliometric analyses that integrate these perspectives into a unified framework. Addressing this gap is essential for advancing both academic knowledge and practical policymaking.

Therefore, this study aims to conduct a comprehensive bibliometric analysis of research on good governance and government digital transformation over the period 2014–2025. Specifically, the study seeks to (1) analyze the growth and performance of the research field, (2) identify the most influential authors, journals, and countries, and (3) map the intellectual and thematic structures that characterize the field. By doing so, this study contributes to the literature in several ways. First, it provides a systematic overview of the evolution of research on digital governance and good governance. Second, it highlights key trends and emerging themes that can guide future research. Third, it offers insights for policymakers and practitioners on how digital transformation can be leveraged to enhance governance outcomes.

In conclusion, the intersection of good governance and digital government transformation represents a dynamic and rapidly evolving area of research with significant implications for both theory and practice. As governments continue to navigate the challenges and opportunities of the digital age, understanding the intellectual structure and development of this field becomes increasingly important. Through a comprehensive bibliometric approach, this study seeks to shed light on the patterns, trends, and future directions of research in this critical domain.

LITERATURE REVIEW

Good Governance as a Normative and Institutional Framework.

The concept of good governance has become a central pillar in contemporary public administration and development discourse. It is generally understood as a framework that emphasizes the effective, transparent, accountable, and participatory management of public resources and institutions (Aristovnik, Ravšelj, and Murko 2025; Kostecki 2021). International organizations such as the World Bank and the United Nations have promoted good governance as a prerequisite for sustainable development, arguing that strong institutions and inclusive decision-making processes are essential for achieving long-term socio-economic progress.

At its core, good governance is characterized by several key principles. Transparency refers to the openness of government actions and the accessibility of information to the public, enabling citizens to monitor and evaluate government performance. Accountability involves mechanisms through which public officials are held responsible for their actions, ensuring that power is exercised in the public interest. Participation emphasizes the inclusion of citizens and stakeholders in decision-making processes, thereby enhancing the legitimacy and responsiveness of governance systems. Additionally, the rule of law ensures that legal frameworks are applied fairly and consistently, protecting the rights of individuals and maintaining institutional integrity (Sever, Rakar, and Kovač 2014).

Scholars have also highlighted the institutional dimensions of good governance, particularly the role of administrative capacity, policy coherence, and inter-organizational coordination. Effective governance requires not only normative principles but also the institutional mechanisms necessary to implement them. For instance, public sector reforms aimed at improving bureaucratic efficiency and reducing corruption are often framed within the broader agenda of good governance (Aspizain et al. 2025). These reforms seek to strengthen state capacity while promoting ethical standards and professionalization within public administration.

However, the concept of good governance is not without critique. Some scholars argue that it is often applied as a universal model without sufficient consideration of local contexts and political realities (Addaney, Boshoff, and Nyarko 2019). In developing countries, governance reforms may face structural constraints such as weak institutions, limited resources, and socio-political instability. As a result, the implementation of good governance principles can vary significantly across different regions and governance systems. Despite these challenges, the concept remains a foundational framework for analyzing and improving public sector performance.

Government Digital Transformation

Government digital transformation represents a paradigm shift in the way public institutions operate and deliver services. Unlike traditional e-government initiatives, which primarily focus on digitizing existing processes, digital transformation involves a more profound restructuring of organizational practices, service models, and governance mechanisms (Barzylovyh et al. 2020). It encompasses the integration of advanced technologies such as artificial intelligence, big data analytics, cloud computing, and the Internet of Things into public administration.

One of the primary objectives of digital transformation in government is to enhance efficiency and service quality. Digital platforms enable governments to streamline administrative procedures, reduce processing times, and minimize bureaucratic redundancies. For example, online service portals allow citizens to access government services remotely, eliminating the need for physical interactions and improving accessibility. This is particularly significant in the context of the COVID-19 pandemic, which accelerated the adoption of digital solutions in public service delivery.

In addition to efficiency gains, digital transformation also fosters innovation within the public sector. Governments are increasingly adopting data-driven approaches to policymaking, using real-time data to inform decisions and evaluate policy outcomes (Siakwah and Lawer 2024). This shift toward evidence-based governance enhances the ability of public institutions to respond to complex and rapidly changing societal challenges. Furthermore, digital technologies facilitate inter-agency collaboration by enabling information sharing and coordination across different levels of government.

Despite its potential benefits, government digital transformation also presents several challenges. Issues related to digital inequality, cybersecurity, and data privacy remain significant concerns. Not all citizens have equal access to digital technologies, which can exacerbate existing

socio-economic disparities. Moreover, the increasing reliance on digital systems raises questions about data protection and the ethical use of technology in governance (Castro and Lopes 2022; Passaris 2006; Setyawan et al. 2025). These challenges highlight the need for comprehensive strategies that balance technological innovation with social inclusion and ethical considerations. Digital Governance and Public Value Creation.

The concept of digital governance extends beyond the use of technology in public administration to encompass the broader transformation of governance processes and relationships. Digital governance emphasizes the role of technology in enabling more inclusive, participatory, and responsive forms of governance. It is closely *طبترم* with the idea of public value, which refers to the benefits that government actions create for society, including improved services, enhanced trust, and increased citizen engagement (Setyarto and Judijanto 2025).

One of the key features of digital governance is the shift toward citizen-centric service delivery. Governments are increasingly designing digital services that prioritize user needs and experiences, ensuring that services are accessible, intuitive, and responsive. This approach reflects a broader transformation from a government-centric model to a citizen-centric model of governance. Digital platforms also enable new forms of citizen participation, such as online consultations, e-voting, and crowdsourcing of policy ideas. These mechanisms enhance democratic engagement by providing citizens with more opportunities to influence decision-making processes (Decker et al. 2014).

Another important aspect of digital governance is the use of data as a strategic resource. Open data initiatives allow governments to share datasets with the public, promoting transparency and enabling innovation by external stakeholders. For instance, developers and entrepreneurs can use open data to create applications that address societal challenges, thereby contributing to public value creation. Additionally, data analytics can help governments identify patterns, predict trends, and optimize resource allocation, leading to more effective and efficient policy outcomes.

However, the pursuit of digital governance also raises critical questions about power, control, and accountability. The use of algorithms and automated decision-making systems can introduce biases and reduce transparency if not properly managed. Furthermore, the concentration of data and technological capabilities within government institutions or private actors may create new forms of power asymmetry. Therefore, ensuring that digital governance aligns with democratic principles and ethical standards is essential for maintaining public trust and legitimacy.

Fragmentation of the Field and the Need for Bibliometric Analysis.

Despite the growing body of literature on good governance and digital transformation, the field remains highly fragmented. Research on this topic is distributed across multiple disciplines, including public administration, information systems, political science, and development studies. Each discipline brings its own theoretical perspectives, methodologies, and terminologies, resulting in a lack of conceptual coherence. For example, terms such as “e-government,” “digital government,” “smart governance,” and “digital transformation” are often used interchangeably, even though they may refer to different aspects of technological change in the public sector.

This fragmentation poses significant challenges for both researchers and practitioners. Without a clear understanding of the intellectual structure of the field, it is difficult to identify dominant themes, influential studies, and emerging research areas. Moreover, the absence of a comprehensive synthesis limits the ability to develop integrated theoretical frameworks and evidence-based policy recommendations. As a result, there is a need for systematic approaches that can map and organize the existing body of knowledge.

Bibliometric analysis offers a powerful tool for addressing this challenge. By analyzing large datasets of academic publications, bibliometric methods can reveal patterns in research

output, citation networks, and thematic development (Kuchar and Gläsel 2007). These methods enable researchers to identify key contributors, influential journals, and collaboration networks, as well as to visualize the intellectual and social structures of a research field. In addition, keyword co-occurrence analysis and thematic mapping can uncover the main topics and emerging trends within the literature.

Previous bibliometric studies have demonstrated the effectiveness of this approach in various domains, including management, sustainability, and information systems. Applying bibliometric analysis to the study of good governance and digital government transformation can provide valuable insights into how the field has evolved over time and where it is heading. It can also help identify gaps in the literature, such as underexplored regions, topics, or methodological approaches, thereby guiding future research efforts.

In light of these considerations, this study employs a bibliometric approach to systematically map the scientific structure of research on good governance and digital government transformation. By doing so, it aims to overcome the limitations of fragmented literature and contribute to a more integrated and comprehensive understanding of this rapidly evolving field.

METHODS

Database Selection

This study employs a bibliometric approach to systematically analyze the scientific structure of research on good governance and digital government transformation. The data were retrieved from the Scopus database, which is widely recognized as one of the most comprehensive and reliable sources of peer-reviewed academic literature. Scopus provides extensive coverage of journals across multiple disciplines, including public administration, information systems, and governance studies, making it particularly suitable for bibliometric analysis.

The selection of Scopus is based on several considerations. First, it offers high-quality metadata, including author information, abstracts, keywords, citations, and affiliations, which are essential for conducting both descriptive and network analyses. Second, its broad interdisciplinary coverage ensures that the dataset captures diverse perspectives on governance and digital transformation. Third, the compatibility of Scopus data formats with bibliometric software such as Bibliometrix facilitates efficient data processing and analysis.

The search was conducted using a combination of keywords related to governance and digital transformation. Boolean operators (AND, OR) were used to refine the search and ensure the inclusion of relevant publications. The search query was structured as follows:

("good governance" OR "public governance")

AND

("digital transformation" OR "digital government" OR "e-government")

The search was limited to journal articles published between 2014 and 2025 to capture recent developments and trends in the field. The focus on journal articles ensures the inclusion of peer-reviewed and high-quality research, while excluding other document types such as conference proceedings and book chapters that may vary in academic rigor.

Data Collection

The data collection process involved downloading bibliographic records from the Scopus database in compatible formats (e.g., CSV or BibTeX). The retrieved dataset includes essential metadata such as publication titles, abstracts, author names, keywords, citation counts, references, and institutional affiliations.

After the initial retrieval, the dataset was carefully screened to ensure relevance and consistency. Duplicate records were removed, and incomplete entries were excluded to maintain data quality. The final dataset represents a comprehensive collection of scholarly publications related to good governance and digital government transformation within the specified time frame.

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The dataset forms the basis for both descriptive and network analyses. Descriptive data provide insights into publication trends, citation patterns, and author productivity, while relational data enable the construction of networks such as co-authorship, keyword co-occurrence, and country collaboration. This dual approach allows for a more holistic understanding of the research field.

Bibliometric Indicators

To comprehensively evaluate the research landscape, this study employs three categories of bibliometric indicators: performance indicators, collaboration indicators, and impact indicators.

Performance indicators are used to assess the productivity and temporal development of the field. These include the annual number of publications, annual growth rate, average document age, and average citations per document. These metrics provide an overview of how the field has evolved over time and the extent to which it has gained scholarly attention.

Collaboration indicators focus on the patterns of cooperation among researchers, institutions, and countries. Key measures include the number of authors per document, the proportion of single-authored versus multi-authored publications, and the percentage of internationally co-authored documents. These indicators help to reveal the extent of collaboration and the degree of global integration within the research community.

Impact indicators are used to evaluate the academic influence of authors and sources. These include the h-index, g-index, and m-index, which measure both productivity and citation impact. The h-index reflects the number of publications that have received a certain number of citations, while the g-index gives more weight to highly cited works. The m-index normalizes the h-index by the number of years since the first publication, allowing for comparisons across different time spans.

Together, these indicators provide a multidimensional assessment of the field, capturing its productivity, collaboration dynamics, and scholarly impact.

Analytical Tools

The analysis was conducted using the Bibliometrix package in the R programming environment, along with its web-based interface, Biblioshiny. Bibliometrix is a widely used tool for bibliometric analysis, offering a comprehensive set of functions for data processing, statistical analysis, and visualization (Roschnik, Lomax, and Tennison 2019).

Biblioshiny provides a user-friendly interface that allows researchers to perform complex analyses without requiring advanced programming skills. Through this interface, various types of bibliometric analyses can be conducted, including descriptive statistics, co-authorship networks, keyword co-occurrence analysis, and thematic mapping.

The use of Bibliometrix and Biblioshiny enables the generation of visual outputs such as network diagrams, thematic maps, and trend graphs. These visualizations are essential for interpreting the structure and evolution of the research field. In addition, the software allows for reproducibility and transparency in the analytical process, which are important considerations in academic research.

Analytical Strategy

This study adopts a two-stage analytical strategy to provide a comprehensive understanding of the research field.

The first stage involves descriptive analysis, which focuses on the overall performance of the field. This includes examining publication trends over time, identifying the most productive authors and journals, and analyzing citation patterns. Descriptive analysis provides a foundational overview of the field's development and highlights key contributors and sources of knowledge.

The second stage involves network analysis, which aims to uncover the intellectual and social

structures underlying the research field. Several types of networks are constructed and analyzed:

- Co-authorship networks to examine collaboration patterns among authors, institutions, and countries.
- Keyword co-occurrence networks to identify thematic clusters and research topics.
- Thematic mapping to classify research themes into motor themes, basic themes, niche themes, and emerging or declining themes.
- Thematic evolution analysis to track changes in research topics over different time periods.

By integrating descriptive and network-based approaches, this study provides both a macro-level overview and a micro-level understanding of the field. This combined strategy enables the identification of dominant themes, influential actors, and emerging research directions, offering a comprehensive mapping of the scientific structure of good governance and digital government transformation.

RESULTS AND DISCUSSION

Main Data Overview

The bibliometric analysis of research on good governance and digital government transformation provides an overview of the structural and descriptive characteristics of the field based on data retrieved from the Scopus database. The dataset spans the period from 1992 to 2026, indicating that scholarly attention to the intersection of governance and digital transformation has developed over a relatively long temporal horizon.

The results reveal that the field has experienced a positive growth trajectory, as reflected in the annual growth rate indicator. This suggests that research on digital governance and transformation has gained increasing importance over time, particularly in response to global digitalization trends and the expansion of e-government initiatives. The sustained growth of publications indicates that the field is still evolving and has not yet reached a stage of saturation.

In terms of sources, the dataset includes publications distributed across a wide range of journals, books, and other academic outlets. This diversity reflects the interdisciplinary nature of the field, which draws contributions from public administration, information systems, political science, and development studies. The breadth of sources also indicates that the topic is relevant across multiple academic domains.

The analysis of document contents highlights a substantial volume of references, which represents the largest component within the dataset. This suggests that the field is supported by a strong and extensive knowledge base, with studies building upon a wide range of prior research. In contrast, the number of author keywords and Keywords Plus, while smaller in magnitude, still indicates a diverse and multifaceted conceptual structure. These keywords reflect the presence of various thematic areas, including digital governance, e-government, transparency, and innovation.

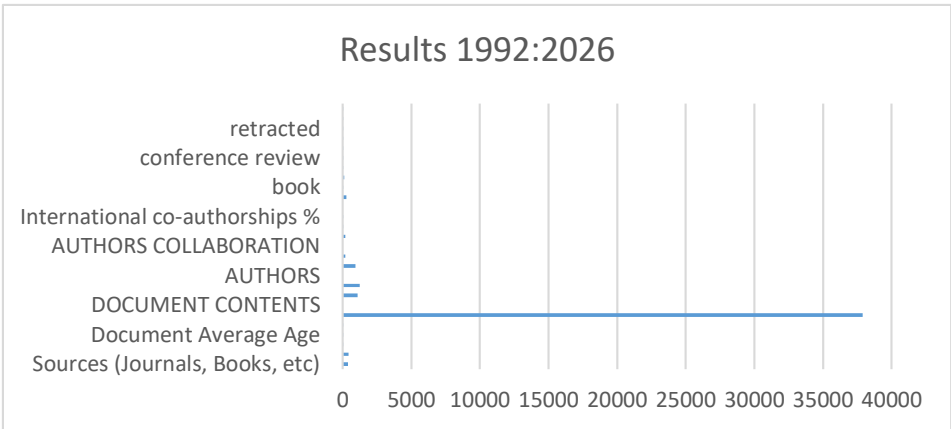
Authorship patterns demonstrate the presence of a moderately large research community. The number of contributing authors indicates that the field has attracted a wide range of scholars, although the level of collaboration remains moderate. The average number of co-authors per document suggests that research is typically conducted in small teams, which is characteristic of social science disciplines. At the same time, the presence of single-authored works indicates that individual scholarship continues to play an important role, particularly in theoretical and conceptual studies.

Collaboration indicators further show that international co-authorship exists but is not dominant. This suggests that while the field has a global dimension, a significant portion of research remains context-specific and grounded in national or regional governance systems. Such patterns are common in governance research, where institutional and socio-political differences influence both research focus and collaboration practices.

Regarding document types, the dataset includes a variety of publication formats, with journal articles representing the most prominent category, followed by book chapters, conference papers, and other types such as editorials and short surveys. This diversity indicates that knowledge dissemination in the field is not limited to traditional journal publications but also involves other academic formats that support broader scholarly communication.

Overall, the findings from the main data overview suggest that research on good governance and digital government transformation is characterized by steady growth, a strong foundational knowledge base, and a diverse yet moderately collaborative research community. The dominance of references within the dataset underscores the cumulative nature of the field, while the diversity of keywords and document types highlights its interdisciplinary scope. These characteristics collectively indicate that the field is both well-established and continuously evolving in response to technological and governance-related developments.

Table 1. Main Information About Data



The analysis of publication trends in the recent period (2021–2026) provides a clearer picture of the contemporary development of research on good governance and digital government transformation. As illustrated in the data, the number of publications demonstrates a fluctuating but generally upward trajectory before experiencing a sharp decline in the most recent year.

In 2021, the field recorded a moderate number of publications, indicating a stable level of scholarly activity. This was followed by an increase in 2022, suggesting a growing academic interest in digital governance themes, likely influenced by the continued expansion of digital public services and post-pandemic governance reforms. However, in 2023, the number of publications slightly declined, reflecting a temporary fluctuation rather than a structural decrease.

A more pronounced increase is observed in 2024, where publication output rises again, signaling renewed momentum in the field. This upward trend continues into 2025, which represents the peak of publication output within the observed period. The peak suggests that research on good governance and digital government transformation reached a high level of scholarly attention, potentially driven by advancements in technologies such as artificial intelligence, data-driven governance, and smart government initiatives.

However, in 2026, the number of publications drops significantly. This decline should be interpreted with caution, as it is likely influenced by incomplete indexing of recent publications rather than an actual decrease in research activity. In bibliometric studies, the most recent year often shows lower values due to the time lag in database updates and publication indexing.

Overall, the trend from 2021 to 2025 reflects a phase of strong growth and consolidation, with increasing academic engagement in the field. The temporary decline in 2026 does not undermine this trend but instead highlights the importance of considering data completeness in

recent periods. These findings indicate that research on good governance and digital government transformation remains active and continues to evolve in response to technological and institutional developments.

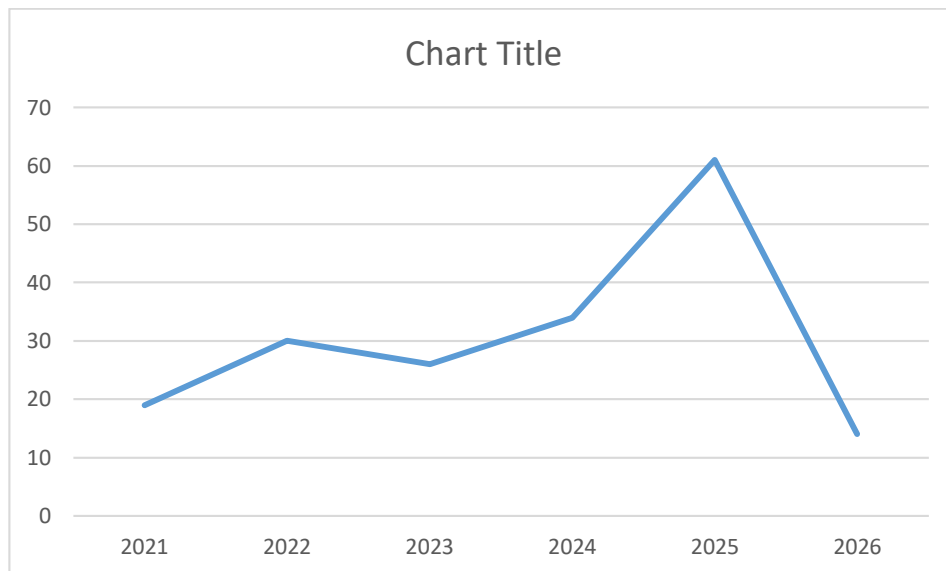


Figure 1. Publication Trends in Good Governance and Digital Government Transformation (2021–2026)

The analysis of publication and citation dynamics from 2015 to 2026 demonstrates a more developed and fluctuating phase of research on good governance and digital government transformation. Unlike the early period, which was characterized by minimal output, this stage reflects a significant expansion and diversification of scholarly activity.

The publication trend shows notable fluctuations over time. In 2015, the number of publications appears relatively high, followed by a decline in 2016. This decrease is then followed by a recovery in 2017 and a slight drop in 2018. A more substantial increase is observed in 2019, indicating a growing academic interest in digital governance. However, this upward trend is not linear, as publication output declines again after 2019 and continues to gradually decrease toward the later years, reaching its lowest levels around 2025–2026.

In contrast, the citation trend demonstrates a different pattern. Citations show a general upward trajectory, with a significant peak around 2025. This suggests that while the number of publications may fluctuate, the impact of research in this field continues to grow. The increase in citations indicates that existing studies are gaining recognition and are being widely referenced in subsequent research. This pattern is typical of a maturing field, where foundational works accumulate influence over time.

The divergence between publication output and citation impact is particularly noteworthy. While publication counts decline in the later years, citation levels reach their highest point before dropping again in 2026. This decline in the most recent year can be attributed to the citation lag effect, as newly published articles have not yet had sufficient time to accumulate citations.

Additional indicators, such as the average citations per document and annual growth rate, show a gradual decline over time. This suggests that while the field has experienced periods of rapid growth, it may be entering a phase of stabilization. Similarly, other minor indicators, including smaller publication categories or secondary metrics, remain relatively low and stable

throughout the period, indicating that they play a limited role in shaping the overall research landscape.

Overall, the period from 2015 to 2026 reflects a transition from expansion to consolidation. The field demonstrates strong scholarly impact, as evidenced by increasing citation trends, while the fluctuation in publication output suggests that research activity is becoming more selective and focused. These dynamics indicate that good governance and digital government transformation have evolved into a mature and influential area of academic inquiry.

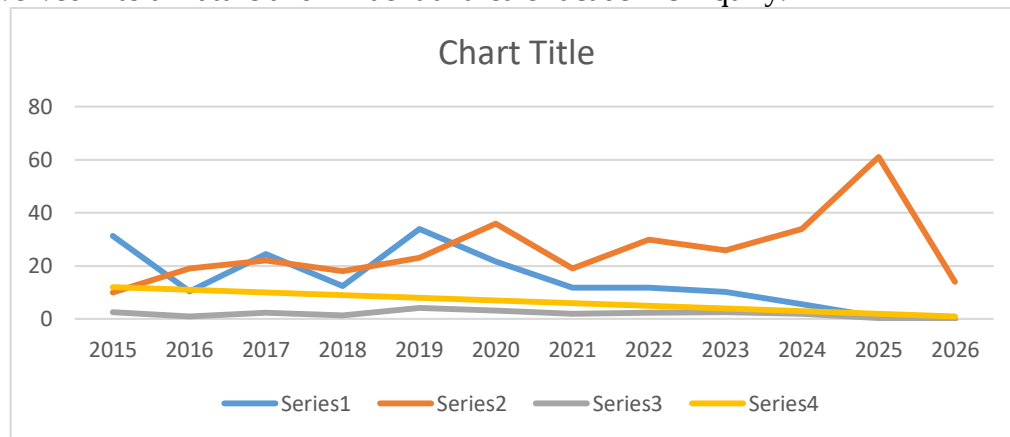


Figure 2. Annual Publication and Citation Trends (2015–2026)

4.2 Most Relevant and Cited Journals

The analysis of publication sources provides important insights into the journals that play a significant role in disseminating research on good governance and digital government transformation. Based on the dataset, the field is characterized by a relatively dispersed distribution of publications across multiple journals, indicating its interdisciplinary nature.

Among the most productive sources, *Sustainability (Switzerland)* emerges as the leading journal, with the highest number of publications in the dataset. This dominance reflects the strong connection between digital governance and sustainability-related issues, particularly in areas such as smart cities, environmental governance, and sustainable public service delivery. The prominence of this journal suggests that research on digital government transformation is increasingly linked to broader sustainability agendas.

Following this, journals such as *Third World Quarterly* and *Lecture Notes in Networks and Systems* show a moderate level of contribution. These outlets highlight two important dimensions of the field. *Third World Quarterly* reflects the relevance of digital governance in the context of development studies and governance challenges in the Global South, while *Lecture Notes in Networks and Systems* indicates the growing role of technological and computational approaches in governance research.

Several other journals demonstrate a similar level of productivity, each contributing a smaller but consistent number of publications. These include *Cities*, *Land Use Policy*, *Policy Studies*, *Electronic Journal of Information Systems*, *ACM International Conference Proceedings Series*, *Proceedings of the European Conference*, and *Review of International Studies*. The presence of these journals illustrates the multidisciplinary character of the field, spanning urban studies, public policy, information systems, and international relations.

The relatively even distribution of publications among many journals suggests that no single journal dominates the discourse. Instead, research on good governance and digital government transformation is disseminated across a network of specialized and interdisciplinary outlets. This pattern reflects the complexity of the field, which integrates technological,

institutional, and socio-political perspectives.

From a citation perspective, journals with higher publication frequency are likely to play a more influential role in shaping the academic discourse. In particular, *Sustainability (Switzerland)* and *Third World Quarterly* can be considered key sources, not only due to their productivity but also because of their broader visibility and relevance within the academic community. These journals contribute to the development of core themes such as governance innovation, digital transformation, and sustainable development.

Overall, the findings indicate that the research landscape is both diverse and decentralized. The combination of specialized governance journals and interdisciplinary outlets ensures that knowledge is disseminated across multiple academic domains. This diversity enhances the richness of the field but also highlights the need for greater integration to strengthen theoretical coherence and cumulative knowledge development.



Figure 3. Most Relevant Journals in Digital Government and Governance Studies

The analysis of local citations provides important insights into the most influential authors within the research field of good governance and digital government transformation. Unlike general citation metrics, local citations reflect the influence of authors within the specific dataset, highlighting those whose work has been most frequently referenced by other studies in the same field.

The results indicate a highly concentrated citation structure, with a small number of authors dominating the intellectual landscape. Among these, Ryder A and Warkotsch A emerge as the most influential contributors, each exhibiting significantly higher local citation counts compared to other authors. Their prominence suggests that their works serve as foundational references within the field, shaping key theoretical and empirical discussions related to governance and digital transformation.

A considerable gap exists between these leading authors and the rest of the contributors. Edmunds T, for example, shows a moderate level of local citations, but still remains far below the top two authors. Meanwhile, other authors such as Cash C, Khan MH, Williams D, Al-Hajaya K, Alassuli A, Alghraibeh K, and Amundsen I display relatively low citation counts, indicating a more limited influence within the dataset.

This uneven distribution reflects a common pattern in bibliometric studies, where a small number of highly cited authors play a central role in shaping the intellectual structure of a field, while the majority of contributors have more specialized or localized impact. The dominance of a

few key authors suggests that the field relies on a core set of influential studies that provide conceptual frameworks and empirical foundations.

Furthermore, the presence of both highly cited and minimally cited authors highlights the diversity of contributions within the field. While leading authors drive the main discourse, less-cited works may still contribute to niche areas or emerging topics that have not yet gained widespread recognition.

Overall, the local citation analysis demonstrates that the research field is structured around a limited number of influential scholars who act as intellectual anchors. At the same time, the broader community of researchers contributes to the expansion and diversification of the field, ensuring its continued development.

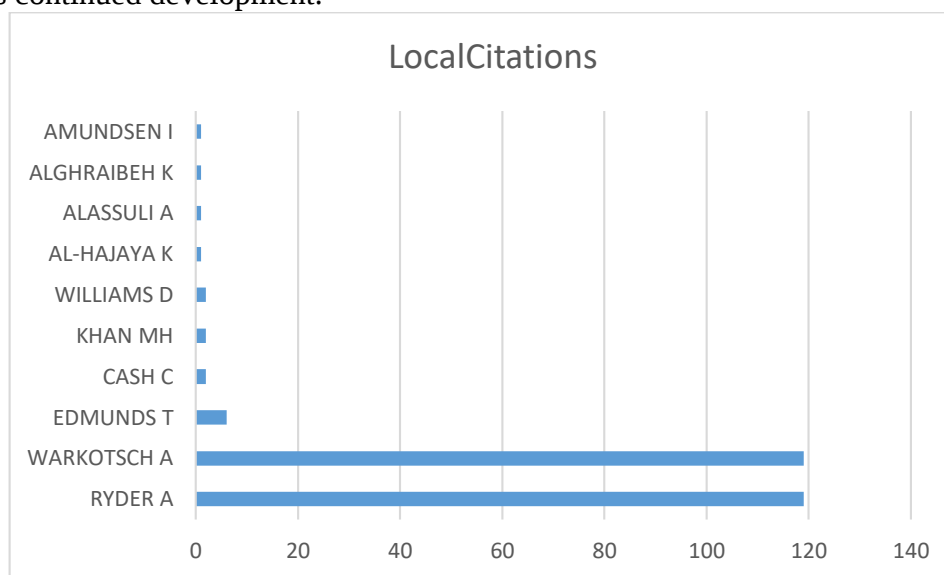


Figure 4. Most Influential Authors Based on Local Citations

4.3 Productive Countries and Affiliations

The analysis of institutional affiliations provides valuable insights into the distribution of research productivity in the field of good governance and digital government transformation. Based on the dataset, research output is distributed across a range of universities from different geographical regions, indicating the global nature of the field.

Among the most productive institutions, the University of Johannesburg and Zhejiang University emerge as the leading contributors, each demonstrating the highest number of publications in the dataset. Their prominence suggests a strong institutional focus on governance and digital transformation, particularly in regions where digital government initiatives and policy innovation have gained increasing importance.

Following these, institutions such as the University of Pretoria and the University of the Free State show a slightly lower but still significant level of productivity. The presence of multiple South African universities among the top contributors highlights the active role of this region in advancing research on governance and digital transformation, particularly in the context of development and public sector reform.

Several other institutions contribute a comparable number of publications, each with a moderate level of output. These include the University of Warmia and Mazury, the University of Oxford, the University of Canberra, Universitas Indonesia, Széchenyi István University, and Ateneo de Manila University. The relatively even distribution among these institutions suggests that research in this field is not dominated by a single academic center but is instead dispersed across multiple universities worldwide.

The geographical diversity of affiliations reflects the interdisciplinary and global relevance of the field. Institutions from Europe, Asia, Africa, and Oceania are all represented, indicating that issues related to good governance and digital transformation are of widespread academic and practical interest. This diversity also suggests that different regional contexts contribute unique perspectives, enriching the overall research landscape.

Overall, the findings indicate that research productivity at the institutional level is moderately distributed, with a few leading universities and several others contributing consistently. This pattern reflects a collaborative and decentralized research environment, where knowledge production is shared across various institutions rather than concentrated in a single dominant center.

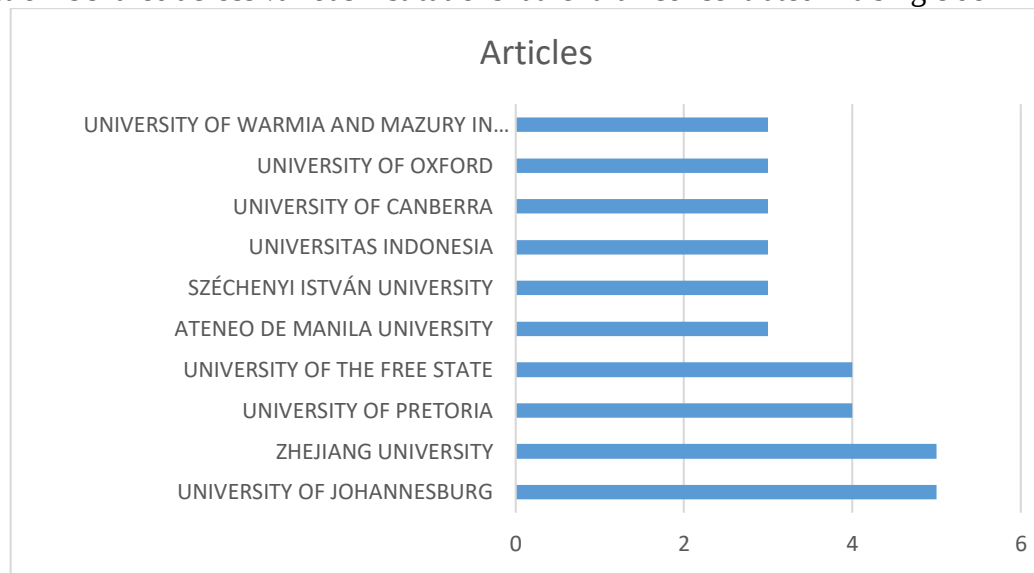


Figure 5. Productive Countries and Affiliations

The analysis of country-level contributions and collaboration patterns provides important insights into the geographical distribution of research on good governance and digital government transformation. Based on the dataset, several countries emerge as key contributors, reflecting the global relevance of the field.

Among the most productive countries, the United Kingdom occupies the leading position, followed by China, South Africa, and the United States. These countries demonstrate the highest number of publications, indicating strong research engagement in digital governance and public sector transformation. The prominence of these countries can be attributed to their advanced research infrastructure, policy interest in digital transformation, and active academic communities.

The collaboration pattern further distinguishes between single-country publications (SCP) and multiple-country publications (MCP). The results show that most countries are dominated by SCP, suggesting that a large proportion of research is conducted within national boundaries. For instance, countries such as China, South Africa, and the United States exhibit strong domestic research activity, with SCP clearly exceeding MCP. This pattern indicates that governance-related studies are often context-specific and grounded in national institutional frameworks.

However, certain countries demonstrate relatively higher levels of international collaboration. The United Kingdom, for example, shows a substantial proportion of MCP, indicating its role as a global hub for academic collaboration. Similarly, Australia, Canada, and several European countries such as Germany and Austria display notable levels of international co-authorship, reflecting their integration into global research networks.

Emerging contributors such as Indonesia, India, Malaysia, and Nigeria also show meaningful participation in the field, although their collaboration patterns tend to be more

domestically oriented. This suggests that while these countries are increasingly active in digital governance research, there remains potential to strengthen their involvement in international collaborations.

In addition, countries such as Brazil, Poland, Sweden, Hungary, Italy, Portugal, Spain, Thailand, and Turkey contribute smaller but consistent numbers of publications. These countries exhibit a mix of SCP and MCP, indicating varying degrees of engagement in global research networks.

Overall, the country collaboration analysis reveals a partially interconnected global research landscape. While several countries act as major contributors and collaboration hubs, the dominance of single-country publications suggests that the field is still influenced by national contexts. Strengthening international collaboration could enhance knowledge exchange, improve comparative research, and contribute to a more integrated understanding of digital government transformation across different regions.

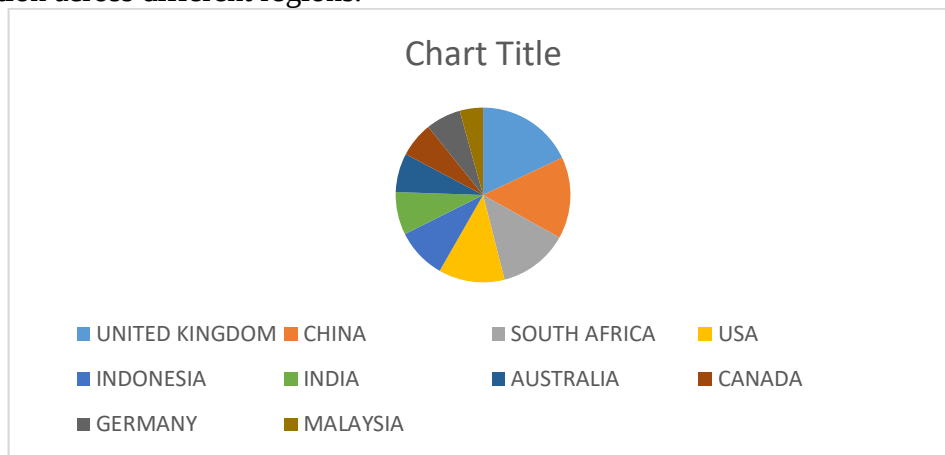


Figure 6. Country Collaboration Network

4.4 Productive Authors and Collaboration Network

The analysis of productive authors and their collaboration patterns provides important insights into the intellectual and social structure of research on good governance and digital government transformation. Based on the co-authorship network visualization, the field is characterized by a cluster-based collaboration pattern, with several distinct groups of authors connected through shared research activities.

The network reveals that collaboration is organized into multiple small clusters rather than a single, highly interconnected structure. One of the most prominent clusters is formed by authors such as Aristovnik A, Murko E, and Ravšelj D, who appear to maintain strong collaborative ties. The proximity and density of their connections suggest frequent co-authorship and a shared research focus, indicating that this group represents a cohesive and active research unit within the field.

Another notable cluster includes Klaas B, Opong R, and Abdul-Latif BL. Similar to the previous group, these authors exhibit close connections, suggesting consistent collaboration and potential alignment in research themes. Their position within the network indicates a stable and productive partnership that contributes to the development of specific areas within digital governance research.

Additional clusters are also observed, including smaller groups such as Barakat S and Evans M, as well as Frantzeskaki N and Harrison PA. These clusters, although smaller in size, demonstrate the presence of multiple independent collaboration groups within the field. Each group likely focuses on particular subtopics, contributing to the thematic diversity of the research domain.

At the periphery of the network, several authors such as Adam MF, Akbulut B, and Abubakar I appear to have limited or weaker connections. These authors may represent emerging researchers, occasional collaborators, or contributors working in more specialized or niche areas. Their position suggests that they are less integrated into the main collaboration clusters.

Overall, the co-authorship network indicates that the research field is decentralized and moderately fragmented. While collaboration exists, it is largely confined within specific groups rather than spanning across the entire network. This suggests that the field has not yet developed a fully integrated global collaboration structure. Strengthening connections between clusters could enhance interdisciplinary exchange and contribute to a more cohesive development of knowledge.

In addition, the presence of several distinct clusters highlights the diversity of research interests within the field. Different groups of authors may focus on varying aspects of good governance and digital transformation, such as public policy, sustainability, or technological innovation. This diversity contributes to the richness of the field but also underscores the importance of fostering greater collaboration across thematic boundaries.

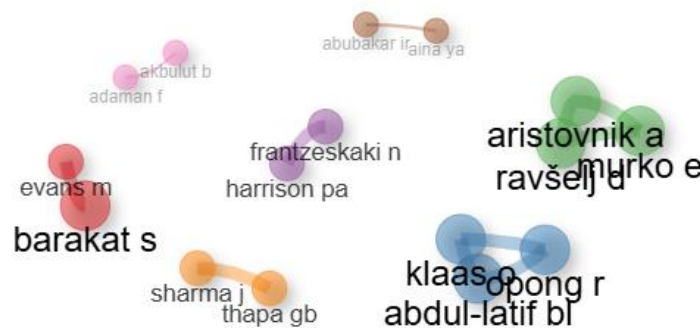


Figure 7. Author Collaboration Network

4.5 Thematic Evolution and Mapping

The thematic evolution analysis provides a comprehensive view of how research topics in good governance and digital government transformation have developed over time. By dividing the dataset into three periods (1992–2016, 2017–2022, and 2023–2026), the analysis reveals both continuity and transformation in the intellectual structure of the field.

In the earliest period (1992–2016), the research landscape is characterized by foundational themes such as *governance*, *governance approach*, and *democratization*. These themes indicate that early studies were primarily concerned with broad conceptual and institutional aspects of governance. Additionally, the presence of *e-government* and *good governance* suggests the initial emergence of digital-related discussions, although still limited and not yet dominant. The inclusion of terms such as *human* reflects a general focus on societal and participatory dimensions within governance discourse.

In the subsequent period (2017–2022), the thematic structure becomes more diversified and interconnected. The concept of *good governance* emerges more prominently, indicating a shift toward more specific and policy-oriented discussions. At the same time, new themes such as *economic transformation*, *digital transformation*, and *sustainability* gain importance, reflecting the growing integration of technological and developmental perspectives into governance research.

This period also shows the continuation of earlier themes such as *governance approach* and

sustainable development, suggesting a degree of conceptual continuity. However, the expansion of topics such as *climate change* and *environment* indicates that governance research is increasingly linked to global challenges. The emergence of *digital transformation* during this phase marks a significant transition, highlighting the rising importance of technology in shaping governance practices.

In the most recent period (2023–2026), the thematic structure becomes more specialized and application-oriented. The theme of *good governance* remains central, demonstrating strong continuity across all periods and reinforcing its role as the core concept of the field. However, the evolution of themes indicates a clear shift toward more applied and sector-specific topics.

New dominant themes such as *energy policy*, *sustainable development*, and *smart city* emerge, reflecting the practical implementation of governance principles in specific policy domains. The presence of *higher education* and *economic development* suggests that governance research is expanding into sectoral applications and institutional contexts. Additionally, the continued relevance of *sustainability* indicates that environmental and developmental concerns remain integral to the field.

The transition from broad theoretical concepts to more specialized and policy-driven themes illustrates the maturation of the research field. Early studies focused on defining governance frameworks, while more recent research emphasizes implementation, innovation, and real-world applications. The integration of digital transformation into governance discourse further highlights the dynamic and evolving nature of the field.

Overall, the thematic evolution analysis demonstrates a clear progression from foundational governance concepts to complex, interdisciplinary, and application-oriented research. The persistence of core themes such as good governance, combined with the emergence of new topics related to digital transformation and sustainability, indicates that the field continues to evolve in response to technological advancements and global policy challenges.

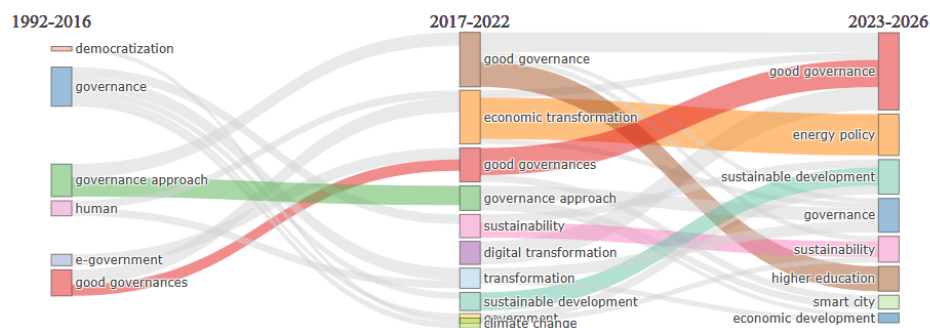


Figure 8. Thematic Evolution of Digital Government and Governance Research

The thematic map provides a structured overview of the conceptual organization of research on good governance and digital government transformation, based on two key dimensions: centrality (relevance) and density (development). The map categorizes themes into four quadrants: motor themes, basic themes, niche themes, and emerging or declining themes.

In the upper-right quadrant (motor themes), the cluster consisting of *sustainable development*, *sustainability*, and *transformation* is prominently positioned. This indicates that these themes are both highly developed and central to the research field. Their strong centrality suggests that sustainability-related issues are deeply integrated into discussions of governance and digital transformation. At the same time, their high density reflects a well-established and cohesive body

of research. This cluster can therefore be considered a driving force shaping the direction of the field.

At the center of the map, the cluster containing *good governance*, *good governances*, and *digital transformation* occupies a strategic position. This indicates that these themes are fundamental to the field, with moderate centrality and density. Their central placement reflects their role as core concepts that connect various research areas. However, the relatively balanced position suggests that while these themes are widely studied, there is still room for further theoretical development and integration.

In the lower-right quadrant (basic themes), the cluster including *governance*, *governance approach*, and *Africa* is identified as a foundational area of research. These themes exhibit high centrality but lower density, indicating that they are widely relevant but not yet fully developed in terms of internal cohesion. This suggests that governance-related studies, particularly those focusing on regional contexts such as Africa, serve as essential building blocks of the field but may require further conceptual refinement.

In the upper-left quadrant (niche themes), topics such as *central administrative bodies*, *decentralisation of public administration*, and *fundamental law* are observed. These themes are characterized by high density but low centrality, indicating that they are well-developed within specialized research communities but have limited influence on the broader field. These niche areas may represent highly focused studies with strong internal coherence but less integration into mainstream governance and digital transformation discourse.

Finally, in the lower-left quadrant (emerging or declining themes), the cluster comprising *European Union*, *human*, and *agriculture* is identified. These themes show both low centrality and low density, suggesting that they are either emerging areas of research or topics that are losing prominence. Their position indicates that they are not yet fully integrated into the core structure of the field but may evolve further depending on future research developments.

Overall, the thematic map illustrates a well-structured and evolving research field. Core themes such as good governance and digital transformation remain central, while sustainability-related topics act as major driving forces. At the same time, the presence of niche and emerging themes highlights the diversity and ongoing evolution of the field. This distribution suggests a dynamic balance between established knowledge and emerging research directions, reflecting the interdisciplinary and adaptive nature of governance studies in the digital era.

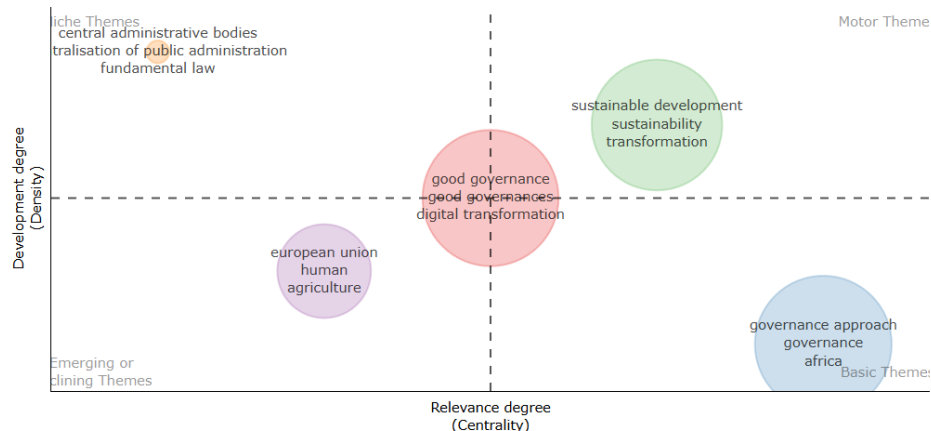


Figure 9. Thematic Map of Good Governance and Digital Government Transformation Research.

The keyword co-occurrence network provides further insights into the conceptual structure

of research on good governance and digital government transformation. By analyzing the relationships between frequently occurring keywords, the network reveals the main thematic clusters and their interconnections within the field.

The visualization demonstrates several prominent clusters, each representing a distinct but interconnected research theme. One of the most dominant clusters is centered around *good governance* and *governance approach*, which appear as large and highly connected nodes. This indicates that these concepts serve as the core foundation of the research field, linking various subtopics and thematic areas.

Another significant cluster is associated with *governance*, which is closely connected to themes such as political economy, development, and regional contexts such as Africa. This cluster reflects the broader theoretical and institutional discussions surrounding governance, highlighting its role as a fundamental concept that underpins multiple strands of research.

A third major cluster revolves around *sustainable development* and *sustainability*, which are strongly linked to transformation-related themes. The prominence of this cluster indicates that sustainability has become a central focus in governance research, particularly in relation to long-term development goals and environmental considerations. Its strong connections with other clusters suggest that sustainability is increasingly integrated into digital governance discourse.

In addition, a cluster centered on *good governance* and *digital transformation* highlights the technological dimension of the field. This cluster includes keywords related to service delivery, public policy, modernization, and economic transformation, indicating that digital technologies are playing a crucial role in reshaping governance processes. The connections between this cluster and others demonstrate the integration of technological innovation with traditional governance frameworks.

The network also reveals smaller, peripheral nodes such as *smart city*, *higher education*, *corporate governance*, and *innovation*. These nodes represent more specialized or emerging topics that are connected to the main clusters but have lower frequency and centrality. Their presence suggests that the field is expanding into new application areas and interdisciplinary domains.

Overall, the keyword co-occurrence network illustrates a highly interconnected and multidimensional research field. Core themes such as good governance and governance approach act as central hubs, while sustainability and digital transformation serve as major linking dimensions across different research areas. The presence of multiple clusters and interconnections reflects the complexity and interdisciplinary nature of the field, as well as its continuous evolution in response to technological and societal changes.

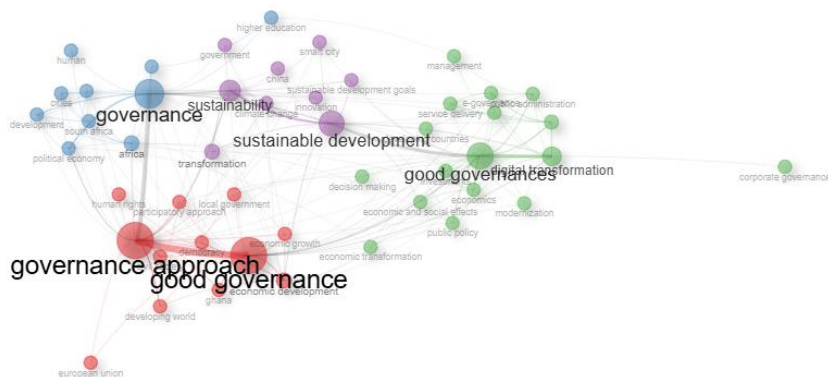


Figure 10. Keyword Co-occurrence Network

5. Conclusion

This study provides a comprehensive bibliometric analysis of research on good governance and

digital government transformation, highlighting the structural, intellectual, and thematic development of the field. The findings indicate that the research domain has experienced steady growth over time, with an annual growth rate of 8.07% and a total of 428 documents published across 373 sources. The increasing volume of publications, particularly in recent years, reflects the growing importance of digital transformation in enhancing governance practices. Despite fluctuations in publication output, the overall trend demonstrates that the field has evolved into a mature and impactful area of academic inquiry.

The results also reveal that the research landscape is characterized by a decentralized and interdisciplinary structure. Contributions are distributed across multiple journals, institutions, and countries, with no single dominant source or author. Leading journals such as *Sustainability (Switzerland)* and *Third World Quarterly* play important roles in shaping the discourse, while influential authors such as Ryder A and Warkotsch A act as key intellectual anchors within the field. At the institutional level, universities such as the University of Johannesburg and Zhejiang University emerge as major contributors, while geographically, countries such as the United Kingdom, China, South Africa, and the United States dominate research productivity. However, the prevalence of single-country publications (SCP) indicates that research remains largely context-specific, highlighting the need for stronger international collaboration.

From a thematic perspective, the study demonstrates a clear evolution of research topics over time. Early research focused on foundational governance concepts, while more recent studies increasingly emphasize digital transformation, sustainability, and sector-specific applications such as energy policy and smart cities. The thematic map further confirms that sustainability-related themes act as motor themes, driving the development of the field, while core concepts such as good governance and digital transformation remain central. The keyword co-occurrence network highlights a highly interconnected knowledge structure, indicating that the field is both multidisciplinary and continuously evolving in response to global technological and societal challenges.

Despite these contributions, this study has several limitations. The analysis is limited to the Scopus database, which may not capture all relevant publications from other indexing sources. Additionally, the results are influenced by the selected keywords and time frame, which may affect the scope of the dataset. Future research is encouraged to expand the analysis by incorporating multiple databases and refining search strategies. Furthermore, future studies should explore emerging topics such as artificial intelligence in governance, data-driven policymaking, and digital inclusion, particularly in developing countries. Strengthening international collaboration and adopting interdisciplinary approaches will be essential for advancing research and addressing the complex challenges of governance in the digital era.

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