

## Study Bibliometric to Electronic Government, an International Journal: Twenty Years Review

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### ABSTRACT

Electronic Government, an International Journal (EG), established in 2004, is a peer-reviewed journal that disseminates articles showcasing contemporary practices and research in the realm of electronic government. The bibliometric data set for EG articles and reviews published between 2004 and 2023 is examined in this study, using a variety of metrics including the yearly citation structure, the most referenced articles in EG, and the leading authors, institutions, and nations that have made significant contributions. The utilization of the VOSviewer software aids in visualizing bibliometric data, revealing patterns in co-citation, bibliographic coupling, and co-occurrences of authors, institutions, countries, and keywords featured in EG. The findings not only shed light on the journal's historical performance but also offer insights into potential future focal points based on bibliographic trends and the evolving online landscape. Notably, EG is found to perform favorably when contrasted with other prominent journals in this area.

**Keywords:** Bibliometric analysis; Electronic Government, International Journal; Scopus; VOSviewer.

### INTRODUCTION

Electronic Government, an International Journal (EG), is a fully refereed journal that publishes articles that present current practice and research in the sphere of electronic government. Since its establishment in 2004, EG has been committed to addressing issues related to the design, development, management, implementation, technology, and applications in e-government. The journal's mission is to assist professionals, academic educators, and policymakers in contributing, disseminating knowledge, and exchanging insights on cutting-edge e-government concepts. With an emphasis on the international dimension, EG seeks to transcend cultural and national barriers, addressing the evolving technological landscape and global economic shifts. It serves as an exceptional platform where e-government research can flourish, fostering collaboration and knowledge-sharing among institutions, governments, researchers, students, and industry stakeholders. At present, EG is indexed in Scopus (Elsevier). EG first came into existence in 2004 and has released four issues annually until 2022, and six releases annually beginning in 2023, along with a 2.7 citation score in 2022 (Electronic Government, an International Journal EG, 2023). The average time it takes the journal to make a first decision is fourteen days, which is rather fast when compared to other journals.

Historically, journals have commemorated specific milestones and anniversaries by organizing special activities, celebrating with events like special issue, editorial and review. Notably, bibliometric studies have gained popularity on such occasions, offering insights into the historical and current landscape of academic journals. Bibliometrics is a quantitative approach that is widely used in the "library and information sciences" (Broadus, 1987), has been extensively used in past research, often focusing on a particular journal. For example, Martínez-López et al. (2018) assessed the productivity of the "European Journal of Marketing" over 50 years, while a review of "Tourism Recreation Research" spanning 43 years was conducted by Vishwakarma and Mukherjee (2019). In 2020, Kabongo (2020) summarized the first two decades of the "Journal of African Business," Additionally, between 1990 and 2016, Akmal et al. (2018) investigated the field of production planning and control. A bibliometric technique has been used to assess journals in several research, including Trianni et al. (2018) for 10 years of "Energy Efficiency," Cancino et al. (2017) report that throughout the past four decades of "Computers & Industrial Engineering," For the past three decades, the "Journal of Business & Industrial Marketing," Valenzuela et al. (2017) have published a study and Cobo

et al. (2015) for "Knowledge-based Systems" that have been around for over 25 years. This pattern has been observed in more recent research, with Donthu et al. (2021) concentrating on the International Journal of Information Management from 1980 to 2019. A study conducted by Kumar et al. (2022) that looked at the Journal of Behavioral and Experimental Finance over a period of eight years, research by Dana et al. (2021) on the years 1996–2019 published in the Journal of Small Business Management, an analysis of technological forecasting and social change spanning 49 years is presented by Singh et al. (2020), and investigating 28 years of Environmental and Business Strategy (Farrukh et al., 2020).

Twenty years of EG have passed in 2023. The purpose of this bibliometric study is to examine the evolution of EG during the course of its 20-year. Additionally, there is not a single bibliometric study that has been discovered in this prestigious publication to evaluate its level of output. Therefore, it is essential to carry out such a study. As a result, the study divulges the publications and yearly citation structure, the papers that are most referenced, and the nations that are the most productive, authors, and universities/institutions that Had a significant impact through their published works between 2004 and 2023 (Knight et al., 2000). The data is also presented graphically in the work using VOSviewer (Van Eck, and Waltman, 2010). Our consideration of the indicators has been limited to graphical representation such as bibliographic coupling, co-occurrence, and co-citation of the terms included in the publications published from 2004 to 2023. In terms of evaluating the results of EG, it gives more insightful information. Additionally, the study contains the international partnership framework mentioned in the EG papers.

Scopus records 468 publications (articles and reviews) authored by EG as of 2023. Over the past decade (2012–2023), EG has published nearly 250 works, reflecting an almost 9% growth compared to the initial ten years (2004–2011). Consequently, a thorough investigation is warranted to assess EG's productivity. Employing bibliometric analysis, we scrutinized the articles and reviews published in EG over the last 20 years (2004–2023). Furthermore, the research takes into consideration the annual publishing patterns, the annual citation structure, in addition to the 30 most-cited papers inside EG, and the 20 most-cited papers overall. In addition, the study explores the top 15 most productive authors, nations, and institutions in EG publications, as well as the top 20 most influential and contributing organizations. In addition, it analyzes output according to authors, organizations, and nations, etc. To conduct this research, The software program VOSviewer, created by Van Eck and Waltman (2010), was used for bibliographic mapping, which included coupling nations' bibliographies, co-citing sources referenced in EG, and other tasks.

The current investigation holds several implications, including an exploration of (1) the citation and publication structure of EG on a yearly basis, (2) determining which EG papers have had the most impact and are most often referenced, (3) a review of EG's effectiveness in comparison to other prominent e-government journals, (4) an examination of the journals that cite EG articles most frequently, (5) the year-wise evolution of the citing patterns of journals and countries, (6) an analysis of contributing authors, institutions, and countries, and (7) the year-wise evolution of authors' keywords, shedding light on current research trends and areas that have received less attention in past years within EG. Consequently, this study adds to the existing body of knowledge by uncovering various patterns observed in EG publications.

## 2 METHOD

The Scopus database was applied in order to get the bibliometric data for the current study, which took into consideration the publications that were published in EG between the years 2004 and 2023. It is comprised of 34,346 journals that have been reviewed by other scholarly publications and come from a wide range of fields, such as the sciences, business management and accounting, health science, social science, and other sectors. Therefore, you may be sure that it has top-notch data standards. Our search term for extracting data from the Scopus database is "Electronic Government, an International Journal ". 468 search results (2004–2023) are obtained from the query result; this number is further decreased to 483 because the study just considered articles and reviews in the bibliometric analysis. This study provides a summary of EG's current productivity according to a number of metrics, some of which are subject to vary over time due to factors like the inclusion or exclusion of recent publications and changes in the structure of citations.

According to Bar-Ilan (2008), the bibliometric approach is the most popular for obtaining an overview of a journal and current research trends. Martínez-López, Merigó, Valenzuela-Nicolás, and Fernández (2018) have assessed the many facets of the European Journal of Marketing using bibliometric methods. Svensson (2010) lists the following as measures of production and influence: the EG annual citation summary, the most cited articles, prolific authors nations, and institutions that contribute to the journal.

In order to generate a visual representation of the bibliometric data, the research study utilized VOSviewer. This was done in order to gain further insights (Van Eck, and Waltman, 2010). Bibliographic coupling, citation, co-citation, and co-occurrences of authors' keywords are some of the VOSviewer signs that have been utilized in several past studies, etc., to visually examine the bibliographical information. A number of additional indicators are also included in this study, for example, bibliometric data analysis including publications referenced in EG papers, a period-wise examination of contributing nations and organizations, etc.

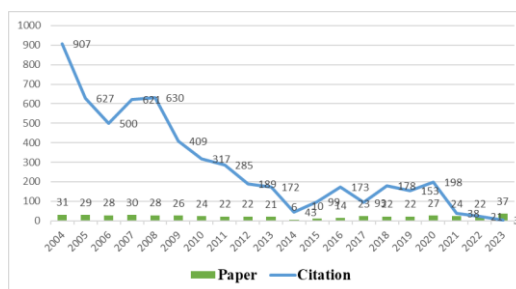
### 3 RESULTS

Since 2004 to 2023, EG has released a total of 483 documents. Following the consideration of articles and reviews, these numbers were decreased to 468 documents. Following the consideration of articles and reviews, these numbers were decreased to 468 documents. As of the year 2023, EG has been cited 5,656 times, and its h-index is 39. Till 2023, the average number of citations for EG papers was 12.09.

#### 3.1 Publication and citation structure of EG

Between 2004 and 2013, EG published more papers than in the preceding ten years (2014–2023). Between 2004 and 2013, EG published more papers than in the preceding ten years (2014–2023). Figure 1 displays the publication history in EG along with the citations for each year. Every year, on average, EG publishes 23 papers. Impressively, EG has published 37 articles in 2023, surpassing all previous years. This might be due to the fact that the EG has gone from four issues each year to six, perhaps as a result of the high volume of high-quality manuscripts submitted to the journal (Electronic Government, an International Journal EG, 2023). It indicates that the authors' would rather have their work published on a topic connected to e-government.

**Figure 1** Yearly count of published papers and an overview of citations in EG



The citation structure of EG is shown in Table 1 by year. It contains the various citation levels (for example, greater than equals 100, 50, 25, etc.). Citations to EG were higher in the first decade (2004–2013) than in the second decade (2014–2023). As evidence of the high quality of the documents that were published in the EG, about 79.83 percent of the documents were cited at least once. In addition to this, it demonstrates that the researchers looked at a significant number of EG archives. 2004 was the year that EG received the maximum number of citations in its whole existence, with a total of 907 citations.

**Table 1** Yearly citation pattern of publications in EG (2004–2023)

| Year | TP | NCP | TC  | C/P   | C/CP  | h  | g  | m    | ≥100 | ≥50 | ≥25 | ≥10 | ≥1 | =0 |
|------|----|-----|-----|-------|-------|----|----|------|------|-----|-----|-----|----|----|
| 2023 | 37 | 2   | 3   | 0.08  | 1.50  | 1  | 1  | 1.00 | 0    | 0   | 0   | 0   | 2  | 35 |
| 2022 | 22 | 13  | 21  | 0.95  | 1.62  | 3  | 3  | 1.50 | 0    | 0   | 0   | 0   | 13 | 9  |
| 2021 | 24 | 12  | 38  | 1.58  | 3.17  | 4  | 4  | 1.33 | 0    | 0   | 0   | 0   | 12 | 12 |
| 2020 | 27 | 23  | 198 | 7.33  | 8.61  | 6  | 13 | 1.50 | 0    | 2   | 0   | 3   | 18 | 4  |
| 2019 | 22 | 18  | 153 | 6.95  | 8.50  | 8  | 11 | 1.60 | 0    | 0   | 1   | 5   | 12 | 4  |
| 2018 | 22 | 20  | 178 | 8.09  | 8.90  | 8  | 12 | 1.33 | 0    | 0   | 1   | 6   | 13 | 2  |
| 2017 | 23 | 20  | 93  | 4.04  | 4.65  | 5  | 8  | 0.71 | 0    | 0   | 1   | 0   | 19 | 3  |
| 2016 | 14 | 13  | 173 | 12.36 | 13.31 | 8  | 11 | 1.00 | 0    | 1   | 0   | 5   | 7  | 1  |
| 2015 | 10 | 10  | 99  | 9.90  | 9.90  | 5  | 9  | 0.56 | 0    | 1   | 0   | 1   | 8  | 0  |
| 2014 | 6  | 6   | 43  | 7.17  | 7.17  | 3  | 6  | 0.30 | 0    | 0   | 0   | 2   | 4  | 0  |
| 2013 | 21 | 18  | 172 | 8.19  | 9.56  | 8  | 12 | 0.73 | 0    | 0   | 1   | 6   | 11 | 3  |
| 2012 | 22 | 19  | 189 | 8.59  | 9.95  | 8  | 13 | 0.67 | 0    | 1   | 0   | 6   | 12 | 3  |
| 2011 | 22 | 21  | 285 | 12.95 | 13.57 | 10 | 16 | 0.77 | 0    | 0   | 2   | 9   | 10 | 1  |
| 2010 | 24 | 23  | 317 | 13.21 | 13.78 | 12 | 17 | 0.86 | 0    | 0   | 5   | 8   | 10 | 1  |
| 2009 | 26 | 25  | 409 | 15.73 | 16.36 | 11 | 19 | 0.73 | 0    | 1   | 3   | 11  | 10 | 1  |
| 2008 | 28 | 27  | 630 | 22.50 | 23.33 | 16 | 24 | 1.00 | 0    | 5   | 4   | 9   | 9  | 1  |
| 2007 | 30 | 30  | 621 | 20.70 | 20.70 | 15 | 24 | 0.88 | 0    | 5   | 2   | 13  | 10 | 0  |
| 2006 | 28 | 28  | 500 | 17.86 | 17.86 | 14 | 21 | 0.78 | 0    | 0   | 8   | 11  | 9  | 0  |
| 2005 | 29 | 29  | 627 | 21.62 | 21.62 | 15 | 24 | 0.79 | 0    | 3   | 6   | 11  | 9  | 0  |
| 2004 | 31 | 31  | 907 | 29.26 | 29.26 | 18 | 30 | 0.90 | 1    | 5   | 7   | 12  | 6  | 0  |

**TP** = total publications; **NCP** = number of cited papers; **TC** = total citations; **C/P** = citation per paper; **C/CP** = citation per cited papers **h** = h-index; **g** = g-index; **m** = m-index

Following that, we conducted an analysis of the top thirty documents published in EG that were cited the most frequently, as determined by Scopus (Table 2). A comparison analysis is carried out with the help of the citation per year in this study. Banerjee and Chau's 2004 article, which has the most citations, suggests an evaluation methodology for assessing developing nations' e-government convergence capabilities and uses it to assess the likelihood of convergence in a small number of chosen developing nations. entitled "An evaluative framework for analysing e-government convergence capability in developing countries". It has obtained 109 citations till now. One article has received at least 100 citations. However, a paper authored by Eyob, E. in 2004 scrutinized a range of challenges faced by county and municipality governments in enhancing the efficiency and accuracy of their business processes, ultimately aiming to satisfy their clients, and it garnered a citations-per-year ratio of (5.21). Electronic governance, electronic voting, electronic payments, public procurement, electronic taxes, social exclusion, efficiency, effectiveness, transparency, security, trust, and rural applications were the primary foci of the most referenced research publications in (EG).

**Table 2** Documents with the highest number of citations in EG (2004–2023) as per Scopus.

| R  | Authors                                            | Title                                                                                                 | Year | Age | Scopus   |      |
|----|----------------------------------------------------|-------------------------------------------------------------------------------------------------------|------|-----|----------|------|
|    |                                                    |                                                                                                       |      |     | Cited by | C/Y  |
| 1  | Banerjee, P., Chau, P.Y.K.                         | An evaluative framework for analysing e-government convergence capability in developing countries     | 2004 | 19  | 106      | 5.58 |
| 2  | Eyob, E.                                           | E-government: breaking the frontiers of inefficiencies in the public sector                           | 2004 | 19  | 99       | 5.21 |
| 3  | Shareef, M.A., Kumar, U., Kumar, V., Dwivedi, Y.K. | Identifying critical factors for adoption of e-government                                             | 2009 | 14  | 83       | 5.93 |
| 4  | Al-Sebie, M., Irani, Z.                            | Technical and organisational challenges facing transactional e-government systems: an empirical study | 2005 | 18  | 76       | 4.22 |
| 5  | Gupta, K.P., Singh, S., Bhaskar, P.                | Citizen adoption of e-government: A literature review and conceptual framework                        | 2016 | 7   | 67       | 9.57 |
| 6  | Henriksson, A., Yi, Y., Frost, B., Middleton, M.   | Evaluation instrument for e-government websites                                                       | 2007 | 16  | 65       | 4.06 |
| 7  | Dwivedi, Y.K., Williams, M.D.                      | Demographic influence on UK citizens' e-government adoption                                           | 2008 | 15  | 63       | 4.20 |
| 8  | Liebowitz, J.                                      | Will knowledge management work in the government?                                                     | 2004 | 19  | 63       | 3.32 |
| 9  | Dwivedi, Y.K., Weerakkody, V.                      | Examining the factors affecting the adoption of broadband in the Kingdom of Saudi Arabia              | 2007 | 16  | 62       | 3.88 |
| 10 | Metaxiotis, K., Psarras, J.                        | E-government: new concept, big challenge, success stories                                             | 2004 | 19  | 61       | 3.21 |
| 11 | Chircu, A.M., Lee, D.H.-D.                         | E-government: key success factors for value discovery and realisation                                 | 2005 | 18  | 60       | 3.33 |
| 12 | Kalvet, T.                                         | Innovation: A factor explaining e-government success in Estonia                                       | 2012 | 11  | 58       | 5.27 |
| 13 | Chircu, A.M.                                       | E-government evaluation: Towards a multidimensional framework                                         | 2008 | 15  | 58       | 3.87 |
| 14 | Srivastava, S.C., Theo, T.S.H.                     | What facilitates e-government development? A cross-country analysis                                   | 2007 | 16  | 58       | 3.63 |

|    |                                                                                                  |                                                                                                                               |      |    |    |       |
|----|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------|----|----|-------|
| 15 | Ghapanchi, A., Albadvi, A., Zarei, B.                                                            | A framework for e-government planning and implementation                                                                      | 2008 | 15 | 56 | 3.73  |
| 16 | Klischewski, R., Scholl, H.J.                                                                    | Information quality as capstone in negotiating e-government integration, interoperation and information sharing               | 2008 | 15 | 55 | 3.67  |
| 17 | Dwivedi, Y.K., Khan, N., Papazafeiropoulou, A.                                                   | Consumer adoption and usage of broadband in Bangladesh                                                                        | 2007 | 16 | 55 | 3.44  |
| 18 | Ifinedo, P., Davidrajuh, R.                                                                      | Digital divide in Europe: assessing and comparing the e-readiness of a developed and an emerging economy in the Nordic region | 2005 | 18 | 55 | 3.06  |
| 19 | Sharma, S.K., Gupta, J.N.D.                                                                      | Web services architecture for m-government: issues and challenges                                                             | 2004 | 19 | 55 | 2.89  |
| 20 | Nagaraj, P., Deepalakshmi, P.                                                                    | A framework for e-healthcare management service using recommender system                                                      | 2020 | 3  | 53 | 17.67 |
| 21 | Sheng, H., Trimi, S.                                                                             | M-government: Technologies, applications and challenges                                                                       | 2008 | 15 | 52 | 3.47  |
| 22 | Almaiah, M.A., Nasereddin, Y.                                                                    | Factors influencing the adoption of e-government services among Jordanian citizens                                            | 2020 | 3  | 51 | 17.00 |
| 23 | Abu-Shanab, E., Haider, S. Weerakkody, V., Dwivedi, Y.K., Brooks, L., Williams, M.D., Mwange, A. | Major factors influencing the adoption of m-government in Jordan                                                              | 2015 | 8  | 50 | 6.25  |
| 24 |                                                                                                  | E-government implementation in Zambia: Contributing factors                                                                   | 2007 | 16 | 50 | 3.13  |
| 25 | Sharma, S.K.                                                                                     | Assessing e-government implementations                                                                                        | 2004 | 19 | 50 | 2.63  |
| 26 | Van Veenstra, A.F., Klievink, B., Janssen, M.                                                    | Barriers and impediments to transformational government: Insights from literature and practice                                | 2011 | 12 | 49 | 4.08  |
| 27 | Lee, S.M., Tan, X., Trimi, S.                                                                    | M-government, from rhetoric to reality: Learning from leading countries                                                       | 2006 | 17 | 48 | 2.82  |
| 28 | Gotoh, R.                                                                                        | Critical factors increasing user satisfaction with e-government services                                                      | 2009 | 14 | 46 | 3.29  |
| 29 | Chiang, L.                                                                                       | Trust and security in the e-voting system                                                                                     | 2009 | 14 | 46 | 3.29  |
| 30 | Byun, D.-H., Finnie, G.                                                                          | Evaluating usability, user satisfaction and intention to revisit for successful e-government websites                         | 2011 | 12 | 44 | 3.67  |

R = rank; C/Y: citation per year.

Moreover, it is intriguing to examine the leading 20 articles with the highest citations in EG. Table 3 displays these top-cited documents throughout EG's entire trajectory, highlighting the more influential works within the journal. The most frequently cited document (25 citations) in the Journal of Government Information Quarterly was penned by Layne and Lee in 2001. Additionally, other highly cited documents originate from journals such as "The Journal of Strategic Information Systems," "MIS Quarterly," "Government Information Quarterly," "Information Systems



Journal," and others. This suggests that articles published in EG frequently reference materials from the broader field of information technology, indicating their engagement with influential journals in the domain.

**Table 3** Most cited documents in EG (2004–2023)

| Y<br>R<br>e<br>a<br>r | Authors                                                  | Title                                                                                      | C<br>i<br>t<br>s | T<br>o<br>t<br>a<br>l | Journal                                         | Cite<br>score<br>2022 | SJ<br>R<br>20<br>22 | SN<br>IP<br>20<br>22 |
|-----------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------|-----------------------|-------------------------------------------------|-----------------------|---------------------|----------------------|
| 2010                  | Layne, K., Lee, J.                                       | Developing fully functional E-government: A four stage model                               | 25               | 62                    | Government Information Quarterly                | 17.3                  | 2.3<br>21           | 3.3<br>09            |
| 2005                  | Ebrahim, Z., Irani                                       | E-government adoption: architecture and barriers                                           | 21               | 30                    | Business Process Management Journal             | 8                     | 0.9<br>18           | 1.4<br>51            |
| 2005                  | Carter, L., Bélanger, F.                                 | The utilization of e-government services: citizen trust, innovation and acceptance factors | 20               | 58                    | Information Systems Journal                     | 16.3                  | 2.7<br>48           | 3.1<br>89            |
| 2009                  | Davis, F. D.                                             | Perceived usefulness, perceived ease of use, and user acceptance of information technology | 16               | 42                    | MIS Quarterly                                   | 18.7                  | 3.7<br>93           | 4.6<br>12            |
| 2008                  | Ghapanchi, A., Albadvi, A., Zarei, B.                    | A framework for e-government planning and implementation                                   | 15               | 13                    | Electronic Government, An International Journal | 2.7                   | 0.3<br>51           | 0.5<br>99            |
| 2005                  | Gil-García, J. R., Pardo, T. A                           | E-government success factors: Mapping practical tools to theoretical foundations           | 15               | 27                    | Government Information Quarterly                | 17.3                  | 2.3<br>21           | 3.3<br>09            |
| 2007                  | Venkatesh, V., Morris, M. G., Davis, G. B., Davis, F. D. | User acceptance of information technology: Toward a unified view                           | 14               | 43                    | MIS Quarterly                                   | 18.7                  | 3.7<br>93           | 4.6<br>12            |
| 2008                  | Bélanger, F., Carter, L                                  | Trust and risk in e-government adoption                                                    | 13               | 49                    | The journal of Strategic Information Systems    | 31                    | 4.0<br>11           | 5.8<br>18            |
| 2008                  | Carter, L., Weerakkody, V.                               | E-government adoption: A cultural comparison                                               | 12               | 48                    | Information Systems Frontiers                   | 11.1                  | 1.4<br>24           | 2.1<br>64            |
| 2009                  | Davis, F. D., Bagozzi, R. P., Warshaw, P. R              | User acceptance of computer technology: A comparison of two theoretical models.            | 12               | 46                    | Management Science                              | 7.9                   | 5.3<br>22           | 3.2<br>84            |
| 2010                  | Moon, M. J.                                              | The evolution of e-government among municipalities: rhetoric or reality?.                  | 12               | 22                    | Public Administration Review                    | 12.2                  | 3.3<br>11           | 3.2<br>33            |
| 2011                  | Fornell, C., Larcker, D. F.                              | Evaluating structural equation models with unobservable variables and measurement error.   | 11               | 19                    | Journal of Marketing Research                   | 11.2                  | 7.4<br>15           | 2.9<br>94            |



**Table 4** Citing EG articles: Authors, University, Country (2004–2023)

| R  | Authors              | TP | University                                     | TP  | Country        | TP  |
|----|----------------------|----|------------------------------------------------|-----|----------------|-----|
| 1  | Dwivedi, Y.K.        | 81 | Brunel University London                       | 121 | United States  | 431 |
| 2  | Weerakkody, V.       | 54 | Swansea University                             | 62  | India          | 389 |
| 3  | Gottschalk, P.       | 48 | Kalasalingam Academy of Research and Education | 49  | United Kingdom | 388 |
| 4  | Nagaraj, P.          | 48 | Brunel Business School                         | 49  | Australia      | 190 |
| 5  | Muneeswaran, V.      | 39 | Handelsøyskolen BI                             | 48  | China          | 182 |
| 6  | Rana, N.P.           | 33 | Qatar University                               | 44  | Malaysia       | 148 |
| 7  | Williams, M.D.       | 31 | School of Management                           | 39  | Greece         | 124 |
| 8  | Irani, Z.            | 22 | Tallinna Tehnikakool                           | 38  | Germany        | 115 |
| 9  | Mensah, I.K.         | 21 | National Technical University of Athens        | 33  | Indonesia      | 110 |
| 10 | Phusavat, K.         | 21 | Universiti Utara Malaysia                      | 32  | Italy          | 108 |
| 11 | Almaiah, M.A.        | 20 | Delft University of Technology                 | 30  | Saudi Arabia   | 100 |
| 12 | Janssen, M.          | 20 | National University of Singapore               | 27  | Norway         | 98  |
| 13 | Smith, A.D.          | 18 | Indian Institute of Technology Delhi           | 27  | Taiwan         | 98  |
| 14 | Gil-Garcia, J.R.     | 17 | RMIT University                                | 24  | Jordan         | 97  |
| 15 | Shareef, M.A.        | 17 | Kasetsart University                           | 24  | Canada         | 89  |
| 16 | Bannister, F.        | 16 | King Faisal University                         | 24  | Spain          | 84  |
| 17 | Joia, L.A.           | 16 | University of Macedonia                        | 23  | Portugal       | 73  |
| 18 | Anussornnitisarn, P. | 15 | Universitas Indonesia                          | 23  | Brazil         | 65  |
| 19 | Choudrie, J.         | 15 | UNSW Sydney                                    | 22  | South Africa   | 62  |
| 20 | Dias, G.P.           | 15 | Symbiosis International Deemed University      | 22  | Netherlands    | 61  |

**R** = rank; **TP** = total papers.

To further evaluate the efficacy of the EG and its performance among the journals, the research also looked at the bibliometric results of the top ten e-government journals. Table 5 displays the results of the analysis from 2004 to 2023. Interestingly, among journals ranked by h-index, "Government Information Quarterly" has consistently ranked first. With an h-index of 39, EG has achieved the eighth position among all of the reputable journals in the field. Table 5 shows that majority of the journals are consulting top journals, which is important to notice. The results allow us to conclude that EG has an outstanding track record in its field and might one day rival other leading journals.

**Table 5** Prominent Journals in the E-Government Field (2004–2023)

| R  | Journal                                                           | TP   | NCP  | TC    | C/P   | C/CP  | h   | g   | m    | ≥100 | ≥50 | ≥25 | ≥1   | =0  |
|----|-------------------------------------------------------------------|------|------|-------|-------|-------|-----|-----|------|------|-----|-----|------|-----|
| 1  | International Journal of Public Administration                    | 1798 | 1576 | 19437 | 10.81 | 12.33 | 49  | 83  | 2.45 | 20   | 29  | 129 | 1398 | 222 |
| 2  | Government Information Quarterly                                  | 1144 | 1096 | 67020 | 58.58 | 61.15 | 127 | 205 | 6.35 | 179  | 199 | 233 | 485  | 48  |
| 3  | Social Science Computer Review                                    | 1003 | 905  | 26971 | 26.89 | 29.80 | 78  | 118 | 3.90 | 56   | 109 | 150 | 590  | 98  |
| 4  | Electronic Journal of Information Systems in Developing Countries | 724  | 636  | 10675 | 14.74 | 16.78 | 45  | 74  | 2.25 | 10   | 26  | 68  | 532  | 88  |
| 5  | Transforming Government People Process and Policy                 | 482  | 426  | 8902  | 18.47 | 20.90 | 47  | 68  | 2.76 | 6    | 40  | 66  | 314  | 56  |
| 6  | Electronic Government, an International Journal                   | 468  | 388  | 5656  | 12.09 | 14.58 | 39  | 50  | 1.95 | 1    | 24  | 41  | 322  | 80  |
| 7  | Journal of Information Technology & Politics                      | 452  | 402  | 9590  | 21.22 | 23.86 | 50  | 77  | 3.13 | 11   | 39  | 62  | 290  | 50  |
| 8  | Information Polity                                                | 422  | 388  | 8394  | 19.89 | 21.63 | 41  | 75  | 2.05 | 19   | 13  | 51  | 305  | 34  |
| 9  | International Journal of Electronic Government Research           | 383  | 344  | 4734  | 12.36 | 13.76 | 35  | 50  | 1.84 | 4    | 15  | 32  | 293  | 39  |
| 10 | International Journal of Electronic Governance                    | 246  | 192  | 1678  | 6.82  | 8.74  | 22  | 30  | 1.29 | 0    | 4   | 13  | 175  | 54  |



Another intriguing aspect to explore is the journals that reference the publications in EG. The table below showcases the top 20 journals, with many esteemed journals from the e-government field making the list, including EG. Additionally, renowned journals like "Government Information Quarterly," "Transforming Government: People, Process and Policy," and "International Journal of Information Management" are among the top 20. This underscores the significance and pertinence of the research published in EG for these journals. EG focuses on disseminating mresearch on e-government and its application in business, establishing a common thematic link between EG and these journals.

**Table 6** Journals citing the documents of EG (2004–2023)

| R  | Journal name                                                      | TP  | Publisher                                             | Cite score<br>2022 | SJR<br>2022     | SNIP<br>2022 |
|----|-------------------------------------------------------------------|-----|-------------------------------------------------------|--------------------|-----------------|--------------|
| 1  | Electronic Government, an International Journal                   | 307 | Inderscience Publishers                               | 2.7                | 0.351           | 0.599        |
| 2  | Government Information Quarterly                                  | 118 | Elsevier                                              | 17.3               | 2.321           | 3.309        |
| 3  | Transforming Government People Process and Policy                 | 69  | Emerald Publishing                                    | 5                  | 0.585           | 0.953        |
| 4  | International Journal of Electronic Government Research           | 65  | IGI Global Publishing                                 | 2.2                | 0.272           | 0.667        |
| 5  | International Journal of Electronic Governance                    | 35  | Inderscience Publishers                               | 1.3                | 0.321           | 0.478        |
| 7  | Sustainability                                                    | 31  | Multidisciplinary Digital Publishing Institute (MDPI) | 5.8                | 0.664           | 1.198        |
| 6  | International Journal of Information Management                   | 30  | Elsevier                                              | 41.9               | 4.906           | 5.266        |
| 8  | Information Systems Frontiers                                     | 22  | Springer Nature                                       | 11.1               | 1.424           | 2.164        |
| 9  | Information Polity                                                | 22  | IOS Press                                             | 2.7                | 0.501           | 0.777        |
| 10 | Electronic Journal of Information Systems in Developing Countries | 19  | Wiley-Blackwell                                       | 4.2                | 0.455           | 0.922        |
| 11 | International Journal of Business Information Systems             | 19  | Inderscience Publishers                               | 1.9                | 0.349           | 0.574        |
| 12 | International Journal of Public Administration                    | 18  | Taylor & Francis                                      | 4.4                | 0.691           | 1.186        |
| 13 | International Journal of Management and Enterprise Development    | 16  | Inderscience Publishers                               | 1.3                | 0.178           | 0.345        |
| 14 | Information Technology and People                                 | 16  | Emerald Publishing                                    | 7.6                | 1.08            | 1.446        |
| 15 | International Journal of Mobile Communications                    | 16  | Inderscience Publishers                               | 3.2<br>(2017)      | 0.555<br>(2019) | 0.641        |
| 16 | International Journal of Innovation and Learning                  | 16  | Inderscience Publishers                               | 1.4                | 0.226           | 0.394        |
| 17 | International Journal of Services and Standards                   | 15  | Inderscience Publishers                               | 1.5<br>(2020)      | 0.111           | 0.053        |
| 18 | Technological Forecasting and Social Change                       | 13  | Elsevier                                              | 17.2               | 2.644           | 3.008        |
| 19 | International Journal of Electronic Finance                       | 13  | Inderscience Publishers                               | 0.9                | 0.15            | 0.359        |
| 20 | Journal of Theoretical and Applied Information Technology         | 12  | Little Lion Scientific                                | 1                  | 0.165           | 0.298        |

## 3.2 Prominent Contributors in EG: Authors, Institutions, and Countries

This section delves into an examination of the most prolific and impactful authors, institutions, and countries that have contributed documents to EG since 2004. Additionally, we have assessed authors' productivity specifically concerning EG, highlighting those who have contributed the most articles to the journal. Table 7 provides a concise overview of the top 20 authors who have made significant contributions to EG. Notably, Dwivedi, Y.K leads the list with 12 published articles in EG and maintains a consistent presence in the journal. Remarkably, Dwivedi has garnered the highest number of citations, totaling 462 (refer to Table 7). Notably, of the five papers written by Weerakkody, V. for EG between 2007 and 2011, the one with the highest average amount of citations is the one that they published in 2011. underscoring the relevance of the work, as evidenced by its frequent citation by fellow researchers.

**Table 7** Most productive authors in EG (2004–2023)

| R  | Authors             | TP | NCP | TC  | C/P   | C/CP  | h  | g  | m    | ≥100 | ≥50 | ≥25 | ≥1 | =0 |
|----|---------------------|----|-----|-----|-------|-------|----|----|------|------|-----|-----|----|----|
| 1  | Dwivedi, Y.K.       | 12 | 12  | 462 | 38.50 | 38.50 | 10 | 12 | 0.56 | 0    | 5   | 3   | 4  | 0  |
| 2  | Phusavat, K.        | 9  | 7   | 39  | 4.33  | 5.57  | 4  | 6  | 0.24 | 0    | 0   | 0   | 7  | 2  |
| 3  | Choudrie, J.        | 8  | 8   | 133 | 16.63 | 16.63 | 6  | 8  | 0.32 | 0    | 0   | 3   | 5  | 0  |
| 4  | Smith, A.D.         | 8  | 7   | 72  | 9.00  | 10.29 | 5  | 8  | 0.26 | 0    | 0   | 0   | 7  | 1  |
| 5  | Anussornnitisam, P. | 7  | 7   | 39  | 5.57  | 5.57  | 4  | 6  | 0.24 | 0    | 0   | 0   | 7  | 0  |
| 6  | Lin, B.             | 6  | 5   | 41  | 6.83  | 8.20  | 3  | 6  | 0.15 | 0    | 0   | 0   | 5  | 1  |
| 9  | Abu-Shanab, E.      | 6  | 6   | 137 | 22.83 | 22.83 | 5  | 6  | 0.38 | 0    | 1   | 1   | 4  | 0  |
| 7  | Gottschalk, P.      | 5  | 4   | 60  | 12.00 | 15.00 | 4  | 5  | 0.21 | 0    | 0   | 0   | 4  | 1  |
| 8  | Weerakkody, V.      | 5  | 5   | 201 | 40.20 | 40.20 | 5  | 5  | 0.29 | 0    | 2   | 2   | 1  | 0  |
| 11 | Williams, M.D.      | 5  | 5   | 135 | 27.00 | 27.00 | 4  | 5  | 0.24 | 0    | 2   | 0   | 3  | 0  |
| 10 | Hidayanto, A.N.     | 4  | 3   | 34  | 8.50  | 11.33 | 2  | 4  | 0.25 | 0    | 0   | 0   | 3  | 1  |
| 12 | Kolsaker, A.        | 4  | 4   | 113 | 28.25 | 28.25 | 4  | 4  | 0.20 | 0    | 0   | 3   | 1  | 0  |
| 13 | Moynihnan, G.P.     | 4  | 4   | 13  | 3.25  | 3.25  | 2  | 3  | 0.11 | 0    | 0   | 0   | 4  | 0  |
| 14 | Al-Sebie, M.        | 3  | 3   | 97  | 32.33 | 32.33 | 3  | 3  | 0.16 | 0    | 1   | 0   | 2  | 0  |
| 15 | Al-Swidi, A.K.      | 3  | 3   | 36  | 12.00 | 12.00 | 3  | 3  | 0.27 | 0    | 0   | 0   | 3  | 0  |

Looking at the top institutions that are making contributions to EG is another appealing part. The top 20 universities with the most publications published in EG are shown in Table 8. Brunel University London was the topmost productive institution in EG, publishing 16 papers and receiving 501 citations. Further, Vellore Institute of Technology and Swansea University each have published thirteen and eleven papers; Nevertheless, Swansea University has garnered a higher number of citations per paper and a citation per document score (39.18), indicating the significance of the research published by the institution for other researchers. On the other hand, some institutions like Kasetsart University and the National Technical University of Athens consistently regard EG as a platform for their research, demonstrating the ongoing contributions of these institutions to the journal.

**Table 8** Leading 20 institutions with the highest productivity in EG (2004–2023)

| R  | Institutions                            | T<br>P | NC<br>P | TC  | C/P   | C/C<br>P | h  | g  | m    | ≥10<br>0 | ≥5<br>0 | ≥2<br>5 | ≥<br>1 | =<br>0 |
|----|-----------------------------------------|--------|---------|-----|-------|----------|----|----|------|----------|---------|---------|--------|--------|
| 1  | Brunel University London                | 16     | 15      | 501 | 31.31 | 33.40    | 13 | 16 | 0.68 | 0        | 4       | 5       | 6      | 1      |
| 2  | Vellore Institute of Technology         | 13     | 12      | 48  | 3.69  | 4.00     | 4  | 6  | 0.57 | 0        | 0       | 0       | 12     | 1      |
| 3  | Swansea University                      | 11     | 11      | 431 | 39.18 | 39.18    | 10 | 11 | 0.56 | 0        | 5       | 2       | 4      | 0      |
| 4  | Kasetsart University                    | 9      | 7       | 39  | 4.33  | 5.57     | 4  | 6  | 0.24 | 0        | 0       | 0       | 7      | 2      |
| 5  | National Technical University of Athens | 8      | 7       | 159 | 19.88 | 22.71    | 6  | 8  | 0.30 | 0        | 1       | 1       | 5      | 1      |
| 6  | Robert Morris University                | 8      | 7       | 72  | 9.00  | 10.29    | 5  | 8  | 0.26 | 0        | 0       | 0       | 7      | 1      |
| 7  | Handelshøyskolen BI                     | 6      | 5       | 90  | 15.00 | 18.00    | 5  | 6  | 0.26 | 0        | 0       | 1       | 4      | 1      |
| 8  | Louisiana State University              | 6      | 5       | 41  | 6.83  | 8.20     | 3  | 6  | 0.15 | 0        | 0       | 0       | 5      | 1      |
| 9  | Kuwait University                       | 6      | 2       | 28  | 4.67  | 14.00    | 2  | 5  | 0.14 | 0        | 0       | 0       | 2      | 4      |
| 10 | Universiti Teknologi MARA               | 5      | 4       | 16  | 3.20  | 4.00     | 2  | 4  | 0.15 | 0        | 0       | 0       | 4      | 1      |
| 11 | National Chengchi University            | 5      | 5       | 50  | 10.00 | 10.00    | 4  | 5  | 0.20 | 0        | 0       | 0       | 5      | 0      |
| 12 | Indian Institute of Technology Delhi    | 5      | 5       | 77  | 15.40 | 15.40    | 5  | 5  | 0.29 | 0        | 0       | 0       | 5      | 0      |
| 13 | University of Hertfordshire             | 5      | 5       | 60  | 12.00 | 12.00    | 3  | 5  | 0.18 | 0        | 0       | 1       | 4      | 0      |

|    |                                           |   |   |    |      |      |   |   |     |   |   |   |   |   |
|----|-------------------------------------------|---|---|----|------|------|---|---|-----|---|---|---|---|---|
| 1  | Yarmouk University                        | 5 | 5 | 12 | 25.8 | 25.8 | 4 | 5 | 0.3 | 0 | 1 | 1 | 3 | 0 |
| 4  |                                           |   |   | 9  | 0    | 0    |   |   | 1   |   |   |   |   |   |
| 1  | Universiti Sains Malaysia                 | 4 | 3 | 14 | 3.50 | 4.67 | 2 | 3 | 0.2 | 0 | 0 | 0 | 3 | 1 |
| 5  |                                           |   |   |    |      |      |   |   | 9   |   |   |   |   |   |
| 1  | University of Macedonia                   | 4 | 4 | 66 | 16.5 | 16.5 | 4 | 4 | 0.2 | 0 | 0 | 0 | 4 | 0 |
| 6  |                                           |   |   |    | 0    | 0    |   |   | 2   |   |   |   |   |   |
| 17 | Guru Gobind Singh Indraprastha University | 4 | 3 | 24 | 6.00 | 8.0  | 3 | 4 | 0.2 | 0 | 0 | 0 | 3 | 1 |
| 1  |                                           |   |   |    |      | 0    |   |   | 0   |   |   |   |   |   |
| 8  | SRM Institute of Science and Technology   | 4 | 2 | 7  | 1.75 | 3.50 | 1 | 2 | 0.1 | 0 | 0 | 0 | 2 | 2 |
| 1  |                                           |   |   |    |      |      |   |   | 4   |   |   |   |   |   |
| 9  | University of Surrey                      | 4 | 4 | 11 | 28.2 | 28.2 | 4 | 4 | 0.2 | 0 | 0 | 3 | 1 | 0 |
| 2  |                                           |   |   | 3  | 5    | 5    |   |   | 0   |   |   |   |   |   |
| 0  | Universidade de Aveiro                    | 4 | 3 | 45 | 11.2 | 15.0 | 3 | 4 | 0.2 | 0 | 0 | 1 | 2 | 1 |
|    |                                           |   |   | 5  | 0    | 0    |   |   | 7   |   |   |   |   |   |

Following that, we have encapsulated a list of the most industrious countries that have made contributions to EG over its existence, as delineated in Table 9. The United States has taken the lead in the number of documents published in EG, trailed by India, the United Kingdom, and Malaysia. Despite Canada securing the 13th position, it boasts the highest citation per paper (23.55), underscoring the pertinence and acclaim of the research produced by Canadian scholars in the field.

**Table 9** Top 15 productive countries in EG (2003–2023)

| R  | Country        | TP  | NCP | TC   | C/P   | C/CP  | h  | g  | m    | ≥100 | ≥50 | ≥25 | ≥1 | =0 |
|----|----------------|-----|-----|------|-------|-------|----|----|------|------|-----|-----|----|----|
| 1  | United States  | 104 | 96  | 1525 | 14.66 | 15.89 | 20 | 33 | 1    | 0    | 8   | 9   | 79 | 8  |
| 2  | India          | 76  | 58  | 499  | 6.57  | 8.60  | 13 | 19 | 0.65 | 0    | 2   | 2   | 54 | 18 |
| 3  | United Kingdom | 46  | 45  | 1073 | 23.33 | 23.84 | 20 | 31 | 1    | 0    | 6   | 10  | 29 | 1  |
| 4  | Malaysia       | 23  | 17  | 141  | 6.13  | 8.29  | 7  | 11 | 0.54 | 0    | 0   | 1   | 16 | 6  |
| 5  | Greece         | 21  | 20  | 415  | 19.76 | 20.75 | 12 | 20 | 0.60 | 0    | 1   | 5   | 14 | 1  |
| 6  | Indonesia      | 17  | 9   | 62   | 3.65  | 6.89  | 5  | 7  | 0.33 | 0    | 0   | 0   | 9  | 8  |
| 7  | Taiwan         | 16  | 14  | 173  | 10.81 | 12.36 | 8  | 13 | 0.40 | 0    | 0   | 1   | 13 | 2  |
| 8  | Norway         | 15  | 13  | 254  | 16.93 | 19.54 | 8  | 15 | 0.40 | 0    | 1   | 3   | 9  | 2  |
| 9  | Australia      | 12  | 11  | 249  | 20.75 | 22.64 | 10 | 12 | 0.56 | 0    | 1   | 2   | 8  | 1  |
| 10 | Germany        | 12  | 12  | 170  | 14.17 | 14.17 | 6  | 12 | 0.30 | 0    | 0   | 3   | 9  | 0  |
| 11 | Jordan         | 12  | 12  | 205  | 17.08 | 17.08 | 6  | 12 | 0.43 | 0    | 2   | 1   | 9  | 0  |
| 12 | Thailand       | 12  | 10  | 53   | 4.42  | 5.30  | 4  | 6  | 0.22 | 0    | 0   | 0   | 10 | 2  |
| 13 | Canada         | 11  | 11  | 259  | 23.55 | 23.55 | 8  | 11 | 0.40 | 0    | 1   | 3   | 7  | 0  |
| 14 | Spain          | 10  | 8   | 74   | 7.40  | 9.25  | 4  | 8  | 0.20 | 0    | 0   | 1   | 7  | 2  |
| 15 | Italy          | 9   | 7   | 70   | 7.78  | 10.00 | 5  | 8  | 0.28 | 0    | 0   | 0   | 7  | 2  |

### 3.3 Patterns of collaboration among countries

In the subsequent analysis, this investigation delved into the collaborative relationships between countries contributing papers to EG. The preeminent 15 collaborating nations are detailed in Table 10. Notably, the USA and the United Kingdom emerged as the foremost partnership, gauged by the frequency of papers published in EG. Of particular interest is the USA's extensive collaborations with other countries such as South Korea, Australia, Norway, among others, surpassing any other country among the top 15 collaborators in EG. This propensity may be attributed to the substantial volume of papers published by the USA in EG.

**Table 10** Top 15 countries collaborating in EG research

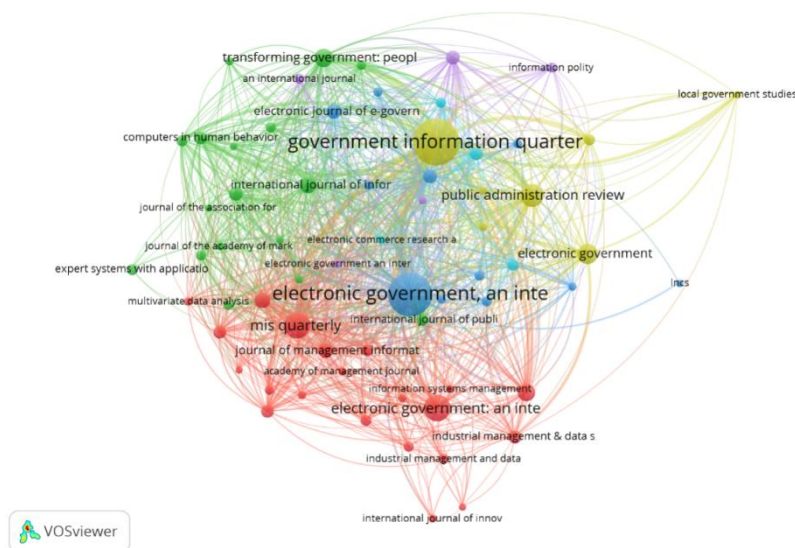
| R  | Collaborative Countries |                | Frequency |
|----|-------------------------|----------------|-----------|
| 1  | United States           | United Kingdom | 3         |
| 2  | United States           | South Korea    | 3         |
| 3  | United Kingdom          | Australia      | 3         |
| 4  | United Kingdom          | Norway         | 3         |
| 5  | Indonesia               | Taiwan         | 3         |
| 6  | Indonesia               | Thailand       | 3         |
| 7  | Germany                 | Greece         | 3         |
| 8  | United States           | Greece         | 2         |
| 9  | United States           | Taiwan         | 2         |
| 10 | United States           | China          | 2         |
| 11 | United States           | India          | 2         |
| 12 | United Kingdom          | Malaysia       | 2         |
| 13 | United Kingdom          | Greece         | 2         |
| 14 | India                   | Oman           | 2         |
| 15 | Malaysia                | Iraq           | 2         |
| 16 | Norway                  | Finland        | 2         |
| 17 | Australia               | South Korea    | 2         |
| 18 | Jordan                  | Saudi Arabia   | 2         |
| 19 | Brazil                  | Portugal       | 2         |
| 20 | Netherlands             | Belgium        | 1         |

R = rank

### 3.4 Visualization and analysis of EG through VOSviewer

The preceding section examined EG's bibliometric data using performance indicators. However, this segment focuses on visualizing EG's bibliometric data. The VOSviewer software package was employed for this purpose, specifically analyzing the cocitation structure of journals cited in EG since its inception. Co-citation occurs when two different sources (journals) are cited by a third common journal (Small, 1973). The EG co-citation network from 2004–2023, as shown graphically in Figure 2, constructed with 25 citation thresholds.

**Figure 2** Co-citation network of journals cited in EG



“Government Information Quarterly”, “Electronic Government, an International Journal”, “MIS Quarterly”, and “Public Administration Review” are the periodicals most referenced in EG papers, as seen in Figure 3. These findings

highlight that EG primarily cites papers from the field of e-government and information technology, aligning with the journal's aim and scope. The top 30 periodicals mentioned in EG papers are reported in Table 11, emphasizing EG's top-ranking position in citing its references. This underscores the quality and relevance of research published in EG. Additionally, Table 12 compares the journals referenced in EG during two time periods: the first, covering 2004–2013, and the second, covering 2014–2023. The increased citation trend in the latter interval may be attributed to researchers finding EG documents more compelling and suitable, indicative of the growing attention in the field of e-government.

**Table 11** Citing Journals in EG

| R  | Source                                                  | Citations |
|----|---------------------------------------------------------|-----------|
| 1  | Electronic Government, An International Journal         | 1274      |
| 2  | Government Information Quarterly                        | 882       |
| 3  | MIS Quarterly                                           | 274       |
| 4  | Public Administration Review                            | 208       |
| 5  | Transforming Government: People, Process and Policy     | 135       |
| 6  | Communications of the ACM                               | 131       |
| 7  | International Journal of Information Management         | 119       |
| 8  | Information Systems Research                            | 96        |
| 9  | Journal of Management Information Systems               | 90        |
| 10 | Electronic Journal of E-Government                      | 85        |
| 11 | Information Systems Journal                             | 82        |
| 12 | Information & Management                                | 78        |
| 13 | International Journal of Electronic Government Research | 75        |
| 14 | Industrial Management & Data Systems                    | 74        |
| 15 | Management Science                                      | 74        |
| 16 | Computers in Human Behavior                             | 72        |
| 17 | European Journal of Information Systems                 | 71        |
| 18 | Information and Management                              | 70        |
| 19 | Decision Support Systems                                | 58        |
| 20 | International Journal of Public Sector Management       | 57        |
| 21 | Business Process Management Journal                     | 54        |
| 22 | Expert Systems with Applications                        | 54        |
| 23 | Journal of Computer Information Systems                 | 51        |
| 24 | International Journal of Public Administration          | 50        |
| 25 | Telematics and Informatics                              | 50        |
| 26 | Journal of Public Administration Research and Theory    | 46        |
| 27 | Harvard Business Review                                 | 45        |
| 28 | Industrial Management and Data Systems                  | 45        |
| 29 | Journal of Marketing Research                           | 45        |



R = rank

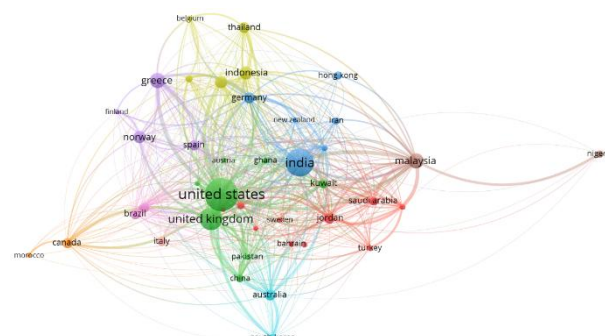
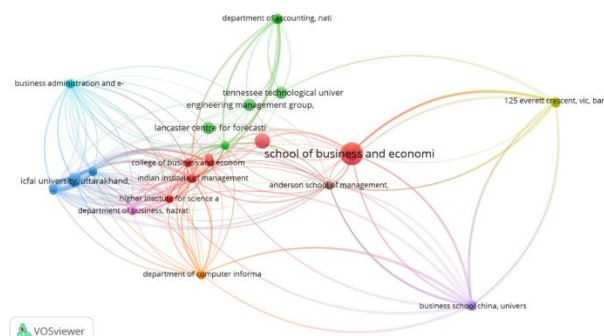
**Table 12** Most prominent journals cited in EG [(2004–2013) vs. (2014–2023)]

| R | Journal                                                 | (2004-2013) |         | Journal                                                 | (2014-2023) |         |
|---|---------------------------------------------------------|-------------|---------|---------------------------------------------------------|-------------|---------|
|   |                                                         | Cit         | CL<br>S |                                                         | Ci<br>t     | CL<br>S |
| 1 | Electronic Government, an International Journal         | 53          | 431     | Government Information Quarterly                        | 61          | 970     |
| 2 | Government Information Quarterly                        | 3           | 7       | Electronic Government, an International Journal         | 1           | 3       |
| 3 | MIS Quarterly                                           | 26          | 396     | MIS Quarterly                                           | 21          | 310     |
| 4 | Communications of the ACM                               | 8           | 7       | Transforming Government: People, Process and Policy     | 9           | 5       |
| 5 | Public Administration Review                            | 14          | 22      | Public Administration Review                            | 12          | 256     |
| 6 | Industrial Management & Data Systems                    | 5           | 89      | International Journal of Information Management         | 8           | 1       |
| 7 | Journal of Management Information Systems               | 11          | 145     | Computers in Human Behavior                             | 11          | 254     |
| 8 | Information Systems Research                            | 0           | 4       | Electronic Journal of E-Government                      | 6           | 1       |
| 9 | Information and Management                              | 10          | 173     | Information Systems Research                            | 10          | 225     |
| 1 | European Journal of Information Systems                 | 4           | 8       | Information & Management                                | 3           | 0       |
| 0 | Information Systems Journal                             | 53          | 644     | Telematics and Informatics                              | 78          | 172     |
| 1 | International Journal of Electronic Government Research | 48          | 114     | Journal of Management Information Systems               | 8           | 154     |
| 2 | Decision Support Systems                                | 1           | 83      | Expert Systems with Applications                        | 66          | 7       |
| 3 | Management Science                                      | 46          | 4       | Information Systems Journal                             | 58          | 113     |
| 4 | Industrial Management and Data Systems                  | 44          | 784     | International Journal of Electronic Government Research | 50          | 109     |
| 5 | Harvard Business Review                                 | 42          | 68      | International Journal of Public Sector Management       | 9           | 123     |
| 6 | International Journal of Information Management         | 3           | 80      | Management Science                                      | 45          | 2       |
| 7 | Information & Management                                | 42          | 5       | Information Systems Frontiers                           | 43          | 112     |
| 8 | Journal of Global Information Management                | 42          | 823     | International Journal of Electronic Governance          | 3           | 108     |
| 9 | Business Process Management Journal                     | 41          | 584     | International Journal of Public Administration          | 42          | 3       |
| 0 | International Journal of Innovation and Learning        | 40          | 2       | Information Technology for Development                  | 40          | 235     |
| 2 | Journal of Computer Information Systems                 | 41          | 80      | Information and Management                              | 39          | 910     |
| 2 | Journal of Marketing                                    | 2           | 506     | European Journal of Information Systems                 | 33          | 102     |
| 3 |                                                         | 40          | 506     | Information Systems Journal                             | 7           | 102     |
|   |                                                         | 39          | 496     | International Journal of Electronic Government Research | 32          | 88      |
|   |                                                         | 38          | 653     | International Journal of Public Sector Management       | 0           | 672     |
|   |                                                         | 32          | 532     | Information Systems Frontiers                           | 31          | 741     |
|   |                                                         | 32          | 576     | International Journal of Electronic Governance          | 30          | 519     |
|   |                                                         | 31          | 60      | International Journal of Public Administration          | 29          | 746     |
|   |                                                         | 31          | 279     | European Journal of Information Systems                 | 28          | 790     |
|   |                                                         | 30          | 46      | Information Technology for Development                  | 27          | 709     |
|   |                                                         | 29          | 42      | Information and Management                              | 26          | 655     |
|   |                                                         | 8           | 8       |                                                         |             |         |

Furthermore, we investigated the correlations between co-citations made by the most prominent EG authors. Utilizing a threshold of 40 citations and identifying the top 50 influential connections, we constructed a co-citation structure. Figure 3 illustrates that prominent figure in the e-government field, such as Dwivedi, Y.K., Phusavat, K., and Choudrie, J., emerged as the most influential researchers based on their co-citation connections.

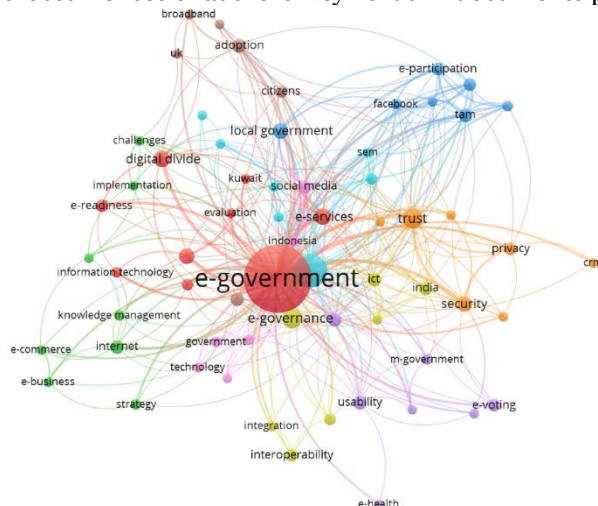
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**Figure 5** Bibliographic connections among countries in EG (2004–2023)



Moreover, Figure 6 illustrates the co-occurrence of authors' keywords, presenting an analysis based on their frequency in EG's published documents. The size of each circle represents the significance of keywords within EG. Notably, 'E-government' emerges as the most influential keyword, forming a robust network spanning the years 2004 to 2023. Additional influential keywords include 'electronic government,' 'trust,' 'e-governance,' 'digital divide,' 'e-services,' and 'security.' The majority of keywords identified in EG publications are centered around topics related to e-government, with peripheral keywords reflecting emerging themes. These findings align with the information provided in Table 13. Furthermore, it is noteworthy that a considerable number of EG documents focus on topics such as adoption, social media, and the internet, as highlighted in Table 13. A significant observation is the substantial number of EG publications dedicated to the study of millennials. Additionally, it is important to highlight the absence of papers addressing 'online auctions,' 'e-tailing,' and 'supply chain management.' Moreover, a limited number of articles address topics such as E-voting, E-readiness, and Privacy in the context of e-government.

**Figure 6** Co-occurrences of authors' keywords in documents published in EG



**Table 13** Key terms with the greatest impact in EG (2004–2023)

| R | Keywords     | TP      | NC<br>P | TC       | C/P   | C/C<br>P | h      | g      | m    | ≥10<br>0 | ≥5<br>0 | ≥2<br>5 | ≥1<br>0 | =<br>0 |
|---|--------------|---------|---------|----------|-------|----------|--------|--------|------|----------|---------|---------|---------|--------|
| 1 | E-government | 24<br>6 | 224     | 385<br>4 | 15.67 | 17.21    | 3<br>3 | 4<br>5 | 1.65 | 0        | 18      | 32      | 17<br>4 | 22     |

|    |                               |    |    |     |       |       |    |    |      |   |   |   |    |    |
|----|-------------------------------|----|----|-----|-------|-------|----|----|------|---|---|---|----|----|
| 2  | Electronic Government         | 59 | 48 | 571 | 9.68  | 11.90 | 14 | 2  | 0.7  | 0 | 1 | 6 | 41 | 11 |
| 3  | Trust                         | 23 | 19 | 314 | 13.65 | 16.5  | 9  | 17 | 0.4  | 0 | 1 | 3 | 15 | 4  |
| 4  | E-governance                  | 21 | 18 | 162 | 7.71  | 9.00  | 8  | 1  | 0.4  | 0 | 0 | 1 | 17 | 3  |
| 5  | Digital Divide                | 16 | 15 | 273 | 17.06 | 18.2  | 9  | 1  | 0.4  | 0 | 2 | 1 | 12 | 1  |
| 6  | E-services                    | 16 | 13 | 22  | 1.38  | 1.69  | 8  | 1  | 0.4  | 0 | 1 | 3 | 9  | 3  |
| 7  | Security                      | 14 | 13 | 220 | 15.71 | 16.9  | 8  | 1  | 0.4  | 0 | 1 | 2 | 10 | 1  |
| 8  | Local Government              | 13 | 12 | 170 | 13.0  | 14.17 | 8  | 13 | 0.4  | 0 | 0 | 2 | 10 | 1  |
| 9  | Public Sector                 | 13 | 11 | 217 | 16.69 | 19.73 | 8  | 13 | 0.4  | 0 | 1 | 2 | 8  | 2  |
| 10 | Developing Countries          | 11 | 11 | 259 | 23.5  | 23.5  | 8  | 11 | 0.4  | 0 | 1 | 3 | 7  | 0  |
| 11 | ICT                           | 11 | 9  | 215 | 19.55 | 23.8  | 5  | 11 | 0.2  | 0 | 2 | 2 | 5  | 2  |
| 12 | Social Media                  | 11 | 8  | 73  | 6.64  | 9.13  | 4  | 8  | 0.4  | 0 | 0 | 1 | 7  | 3  |
| 13 | Usability                     | 11 | 10 | 168 | 15.27 | 16.8  | 8  | 11 | 0.4  | 0 | 0 | 2 | 8  | 1  |
| 14 | Adoption                      | 10 | 8  | 280 | 28.0  | 35.0  | 6  | 1  | 0.3  | 0 | 3 | 1 | 4  | 2  |
| 15 | India                         | 10 | 8  | 143 | 14.3  | 17.8  | 5  | 1  | 0.2  | 0 | 1 | 1 | 6  | 2  |
| 16 | Internet                      | 10 | 10 | 211 | 21.10 | 21.10 | 7  | 1  | 0.3  | 0 | 1 | 2 | 7  | 0  |
| 17 | Jordan                        | 10 | 10 | 227 | 22.7  | 22.7  | 8  | 1  | 0.5  | 0 | 2 | 1 | 7  | 0  |
| 18 | TAM                           | 10 | 7  | 36  | 3.60  | 5.14  | 4  | 5  | 0.3  | 0 | 0 | 0 | 7  | 3  |
| 19 | E-readiness                   | 9  | 8  | 180 | 20.0  | 22.5  | 6  | 9  | 0.3  | 0 | 1 | 2 | 5  | 1  |
| 20 | E-voting                      | 9  | 8  | 105 | 11.67 | 13.13 | 5  | 9  | 0.2  | 0 | 1 | 0 | 7  | 1  |
| 21 | Interoperability              | 9  | 7  | 55  | 6.11  | 7.86  | 5  | 7  | 0.2  | 0 | 0 | 0 | 7  | 2  |
| 22 | Privacy                       | 9  | 9  | 104 | 11.56 | 11.56 | 6  | 9  | 0.3  | 0 | 0 | 1 | 8  | 0  |
| 23 | Technology Acceptance Model   | 9  | 7  | 36  | 4.00  | 5.14  | 4  | 5  | 0.3  | 0 | 0 | 0 | 7  | 2  |
| 24 | Case Study                    | 8  | 7  | 57  | 7.13  | 8.14  | 4  | 7  | 0.2  | 0 | 0 | 0 | 7  | 1  |
| 25 | Citizens                      | 8  | 6  | 150 | 18.75 | 25.0  | 6  | 8  | 0.3  | 0 | 0 | 3 | 3  | 2  |
| 26 | E-participation               | 8  | 7  | 95  | 11.88 | 13.57 | 5  | 8  | 0.3  | 0 | 0 | 2 | 5  | 1  |
| 27 | Public Administration         | 8  | 5  | 92  | 11.50 | 18.4  | 3  | 8  | 0.15 | 0 | 1 | 0 | 4  | 3  |
| 28 | Structural Equation Modelling | 8  | 5  | 96  | 12.0  | 19.2  | 4  | 8  | 0.2  | 0 | 1 | 0 | 4  | 3  |



|   |             |   |   |    |       |      |   |   |     |   |   |   |   |   |
|---|-------------|---|---|----|-------|------|---|---|-----|---|---|---|---|---|
| 2 | E-democracy | 7 | 7 | 87 | 12.43 | 12.4 | 5 | 7 | 0.2 | 0 | 0 | 1 | 6 | 0 |
| 9 |             |   |   |    |       | 3    |   |   | 8   |   |   |   |   |   |
| 3 | Facebook    | 7 | 5 | 47 | 6.71  | 9.40 | 3 | 6 | 0.2 | 0 | 0 | 1 | 4 | 2 |
| 0 |             |   |   |    |       |      |   |   | 7   |   |   |   |   |   |

## 4. CONCLUSION

Academic articles have been published in the Electronic Government, an International Journal since its establishment in 2004. Digital divide, socioeconomic exclusion, rural applications, efficiency, effectiveness, transparency, security, and trust difficulties in e-government are the primary areas of attention for EG. This study summarised EG from the last 20 years and identified current journal trends using a variety of measures. Factors included in the bibliometric study were yearly citations and publications, papers with a high number of citations, nations and institutions included in EG, and the most prolific and prominent authors., contributing to the creation of a bibliographic overview. In line with other prior investigations (Martínez-López et al., 2018; Vishwakarma and Mukherjee, 2019; Valenzuela et al., 2017). The journal and its readers get new knowledge from this study. According to the research's findings aid both the researchers and readers in comprehending the nature of the e-government research papers published by EG.

According to the findings of the investigation, USA is the nation that has made the most contributions, and a significant number of influential and productive authors are linked with the colleges that are located within the region. USA is home to the vast majority of the producing institutions. On the other hand, the most impactful articles were those that were published by scholars from Canada. In addition, Brunel University London, which is located in the United Kingdom, is the university that has the most articles published in EG above any other university. On the other hand, the documents that were published by Swansea University received a greater number of citations for each paper, which demonstrates the significance and effect of the study. However, it is clear that the majority of the institutions that contribute to EG are located in UK. And yet, as the citation count has been falling since 2018, special issues of the journal can be introduced to address current topics in the field of e-government, It can increase the number of researchers who submit their work to EG and the number of people who read the work that is published there. This will allow EG to receive a greater number of citations, which will ultimately lead to an improvement in the journal ranking. As a result, EG has the ability to publish a special issue that will concentrate on developing issues in the field of e-government., like augmented reality and artificial intelligence in the realm of electronic government applications.

Moreover, the quantity of publications in the initial decade is notably higher compared to the subsequent decade, possibly influenced by a higher rejection rate during the latter period or the volume of submissions received by the journal. Additionally, the study observed a significant interest in articles published in EG from other prominent journals such as "Government Information Quarterly," "International Journal of Information Management," "Technological Forecasting and Social Change," "Information Systems Frontiers," and "Electronic Government, an International Journal." These journals are frequently referenced by EG, indicating the journal's impact on the e-government field. The graphical analysis using VOSviewer provided additional insights, encompassing citation, bibliographic, co-occurrences, and co-citation analyses of EG's bibliographic data. The findings aligned with the results presented in the tables.

On the other hand, the study offers a summary of research documents that have been published in EG ever since the publication's establishment. Additionally, it is subject to certain limitations. On the basis of the Scopus database, the study offers a summary of the research trend as well as a number of other factors. On the basis of the Scopus database, the study offers a summary of the research trend as well as a number of other indicators. Nevertheless, the findings of the study are highly subjective and subject to change over the course of time as a consequence of the growing number of citations of recently released works. As time passes, certain subjects can either continue to increase or see a decrease. As time passes, certain subjects can either continue to increase or see a decrease. Other limitation of this study is that it only looked at articles and review articles.

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