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G20 Countries' Global Library and Information Science Footprint (2015–2024): A Scientometric Evaluation Using Web of Science

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Abstract

Using Web of Science data, this study provides a thorough scientometric analysis of Library and Information Science (LIS) research contributions from G20 countries between 2015 and 2024. The study investigates publication trends, the influence of citations, global networks of collaboration, and new research topics using thorough bibliometric data. Results show that the United States and China are the two main donors to the G20, with notable differences in research output and impact. The analysis pinpoints important clusters of collaboration and theme development in LIS research over the course of ten years. These observations offer insightful guidance for the creation of research policies and strategic global cooperation in LIS. Implications for enhancing research capabilities and filling up knowledge gaps within the G20 framework are discussed in the paper's conclusion.

Keywords: Web of Science, Bibliometrics, G20 Countries, Library and Information Science, Citation Analysis, Research Impact, Scientometrics.

1. Overview

The field of library and information science (LIS) has changed significantly in response to shifting information environments and technology breakthroughs. Understanding the global research output in LIS is crucial for strategic planning and policy development as digital transformation changes the ways that information is created, shared, and preserved. The G20 forum, which consists of 19 nations and the European Union, accounts for over 75% of global trade, two-thirds of the world's population, and more than 80% of worldwide economic production (G20, 2023). The G20 is a perfect lens through which to study global trends in LIS research because of its economic and political relevance.

G20 countries' academic contributions to LIS research are indicative of larger trends in knowledge creation and sharing that call for careful examination. Prior research has looked at LIS research production in a number of different geographical areas (Tripathi et al., 2018; Mokhtarpour & Khasseh, 2020), but there hasn't been a thorough examination that focuses just on G20 countries in the last ten years. This research gap offers the chance to evaluate the contributions made by significant economic powers to the body of knowledge in LIS, possibly exposing links between scholarly effect and economic influence.

Data from the Web of Science (WoS) database, which is widely acknowledged as a comprehensive source for high-quality scientific papers, is analysed in this work using scientometric techniques. We

make sure that our analysis includes peer-reviewed research with global visibility and impact by concentrating on WoS data. The 2015–2024 timeframe was chosen because it gives us enough citation data for a meaningful effect assessment while enabling us to look at current trends.

2. Objectives:

a) Examine research productivity and publication patterns in LIS among G20 countries between 2015 and 2024.
b) Analyse the scholarly influence and citation impact of G20 contributions to LIS research.
c) Map the G20 countries' international partnership networks for LIS research.
d) Determine new areas of knowledge and study in LIS across G20 countries.
e) Examine how these findings may affect research policies and LIS's future directions.

By tackling these objectives, this study advances our knowledge of the worldwide LIS research environment and offers insightful information to funding agencies, research institutions, and politicians in G20 countries.

3. Review of Literature

3.1 Library and Information Science Scientometric Research

A potent method for analysing research trends, patterns of collaboration, and the influence of citations across fields is scientometric analysis. This approach has been used in LIS in a variety of research settings, providing insightful information about the development and intellectual framework of the field.

A thorough bibliometric examination of LIS research from 1995 to 2014 was carried out by Chang et al. (2015), who found that the field's focus shifted significantly from traditional library science to information science and digital technologies. Their research revealed new topics like knowledge management, information retrieval, and bibliometrics, demonstrating how adaptable the area is to new technology.

By combining an examination of collaboration networks, citation trends, and publishing metrics, Mokhtarpour and Khasseh (2020) looked at academic influence in LIS. They developed a multifaceted methodology for assessing research impact that goes beyond conventional citation counts in their study, "Who is who in library and information science research?" This strategy aligns with the thorough evaluation of G20 contributions to LIS research in our study.

Boopathi and Gomathi (2019) used Web of Science data from 2008 to 2017 to perform a significant scientometric analysis of global LIS research. According to their data, LIS publications have been steadily increasing, with the US, China, and the UK making significant contributions. Knowledge management, information behaviour, and a notable movement towards digital technology were found to be the study's main research issues. Our current examination of the contributions made by G20 countries to LIS research benefits greatly from their methodological approach, especially the use of Web of Science as a key data source for scientometric analysis.

3.2 International Comparative Research in LIS

In order to provide useful methodological antecedents for our analysis of G20 countries, a number of studies have looked at LIS research output across various geographic regions. A bibliometric study of LIS research among the BRICS (Brazil, Russia, India, China, and South Africa) nations was carried out by Tripathi et al. (2018), who found notable differences in publication production and citation impact. In contrast to the other BRICS countries' more modest contributions, their findings demonstrated China's

explosive development in research production and effect.

Similar to this, Safón and Docampo (2023) found notable differences in institutional and country representation when they examined publishing trends in prestigious LIS journals. Their research raised concerns over diversity and representation in the discipline by exposing the predominance of Western European and North American institutions in high-impact LIS publications.

Using the Web of Science and Scopus databases, Wodeyar and Mulla (2022) conducted a thorough comparative study of LIS research conducted in India between 1989 and 2020. Their analysis showed that although LIS research in India has increased significantly over the years, there are still notable differences with respect to research giants throughout the world. They emphasized the increasing international collaboration patterns of Indian scholars and identified important institutional contributions in India. In contrast to global trends that place a greater emphasis on information retrieval, knowledge management, and data science applications, the study also showed that Indian LIS research has different thematic emphases, with a greater emphasis on bibliometric studies, library management, and digital library initiatives. Their dual-database methodology offered insightful methodological information for our G20-focused analysis, highlighting the difficulties of thorough research evaluation and the significance of database selection in scientometric investigations.

3.3 Scientometric Analysis Methodological Approaches

As researchers use more advanced tools and procedures, the methodological landscape of scientometric analysis has changed dramatically. The adaptability of this methodology across fields was proved by Wang et al. (2022), who applied scientometric approaches to Analyse research trends in gene expression. To map the field's intellectual structure, their study used co-citation analysis, bibliographic coupling, and keyword co-occurrence analysis.

Similar approaches were used by Li and Xu (2021) to investigate research trends in financial innovation, emphasizing the importance of combining several analytical approaches for a thorough evaluation. To find important research clusters and evolution patterns, their study integrated network analysis with conventional bibliometric markers.

The Annals of Library and Information Studies (ALIS) during the years 2009–2013 were subjected to a scientometric study by Paliwal (2015), who offered insightful methodological information for journal-specific bibliometric analysis. The study looked at a number of factors, including as citation trends, authorship patterns, and geographic distribution within a top Indian LIS journal. The majority of publications had two or three authors, according to Paliwal's analysis, which also found important topic areas within Indian LIS research, such as bibliometrics, digital libraries, and information-seeking behaviour. Even though this study only looked at one journal, it offers valuable benchmarks for comprehending domestic publication practices in the Indian LIS community and offers a methodological framework that enhances our more comprehensive G20 analysis by emphasizing how crucial publication venue selection is when evaluating research.

Bibliometric tools like Biblioshiny (Aria & Cuccurullo, 2017) have made it easier to conduct in-depth analysis of publication patterns, collaboration networks, and thematic progression in the context of LIS research. With the use of these technologies, researchers may visualize intricate bibliometric data and see trends that traditional analysis could miss.

3.4 Research Deficit and Input

Although earlier study has looked at LIS production from a variety of geographical locations and historical periods, a thorough examination that focuses exclusively on G20 countries in the last ten years

has not yet been done. Given the G20 countries' economic and political clout and their possible influence on global research objectives and knowledge development in LIS, this disparity is especially noteworthy.

Our work overcomes a number of limitations identified in the existing literature. First, although studies such as Boopathi and Gomathi (2019) offer insightful information about global trends in LIS research, they do not particularly address the G20, a distinct political and economic alliance that has a big impact on the production of knowledge worldwide. Second, while country-specific studies like those by Wodeyar and Mulla (2022) and Mushtaq et al. (2024) give in-depth evaluations of certain countries (like India), they do not offer the comparative viewpoint that our G20-focused study does. Third, it can be difficult to make direct comparisons because the methodological approaches used in earlier research frequently differ significantly. Meaningful cross-national comparisons are made possible by the similar methodological approach our study uses across all G20 countries.

Furthermore, our analysis covers a full decade (2015–2024) and includes all G20 countries, offering a more thorough evaluation of recent trends and advancements in LIS research than earlier studies that have looked at shorter time periods or concentrated on certain regions. We are able to document the effects of major policy changes and technical advancements on research output and focus because of this longer timeframe.

In order to fill these gaps, this study offers a comprehensive evaluation of G20 contributions to LIS research between 2015 and 2024, looking at collaboration networks, publication trends, citation impact, and new research areas. We provide fresh perspectives on the connection between scholarly impact and economic influence in LIS research by concentrating on this particular set of countries and era.

4. Techniques

4.1 Information Gathering

The Web of Science Core Collection, an extensive database of peer-reviewed academic literature, provided the data for this investigation. The search was restricted to works published between 2015 and 2024 that fell under the Web of Science Subject Categories' "Library and Information Science" category. By taking this method, we were able to exclude works from other disciplines that were only loosely related to LIS while still ensuring that our analysis included publications that were expressly related to LIS.

To find all document types (articles, reviews, conference papers, book chapters, etc.) written in English by writers connected to G20 countries, the search query was created. The address data in the publication metadata was used to identify country affiliation. A whole counting approach was used for publications with several authors from various countries, giving each contributing country full credit.

4.2 Analysis of Data

Biblioshiny (Aria & Cuccurullo, 2017), a web-based interface for the R package bibliometrix that enables thorough bibliometric analysis, was used to Analyse the gathered data. Because of its strong analytical capabilities and visualization features, which allow for a thorough analysis of bibliometric data, this tool was chosen.

The following aspects of analysis were investigated:

An overview of the LIS research output from G20 countries is provided by descriptive statistics, which Analyse total publications, annual growth rate, document kinds, and average citations per document (Description Results, n.d.).

Country-wise Analysis: Analysis of each G20 country's contribution according to research specialization, citation impact, and publication numbers (n.d.).

Cooperation Networks: To discover important cooperation clusters and patterns, social network analysis techniques are used to Analyse international co-authorship patterns among G20 countries.

Citation Analysis: To evaluate the academic impact of G20 contributions to LIS research, citation trends, highly cited publications, and journal impact are examined.

Thematic Analysis: Using term co-occurrence analysis and thematic mapping, new research themes and knowledge domains in LIS across G20 countries are identified.

4.3 Indicators of Bibliometrics

A number of bibliometric metrics were used to evaluate various aspects of research productivity and impact:

Publication Output: Distribution across document kinds, total number of publications, and annual growth rate.

Citation Impact: Distribution patterns of citations, h-index, and average citations per document.

Collaboration Intensity: Co-authorship network density, collaboration index, and percentage of publications with international co-authors.

Research Specialization: A measure of relative specialization derived from the distribution and frequency of keywords.

Thematic Evolution: Identifying new and waning research ideas using the temporal study of keyword co-occurrence patterns.

These metrics were chosen to offer a thorough evaluation of G20 contributions to LIS research, taking into account both the qualitative and quantitative aspects of effect.

5. Findings and Conversation

5.1 Research Output and Publication Trends

Significant differences in LIS research production between G20 countries throughout the 2015–2024 timeframe are revealed by the examination of publication patterns. The distribution of publications by nation is shown in Table 1, which emphasizes China's and the United States' dominance in terms of overall output.

Table 1: G20 Nation Distribution of LIS Publications (2015-2024)

Country	Publications	Percentage
USA	2,783	27.9%
China	2,651	26.5%
UK	1,204	12.1%
Australia	758	7.6%
Canada	654	6.5%
Germany	542	5.4%
India	387	3.9%
Italy	321	3.2%
South Korea	298	3.0%
France	267	2.7%
Other G20	120	1.2%

Total	**9,985**	**100%**

Together, the US and China produce more than half (54.4%) of all LIS articles from G20 countries, demonstrating their substantial impact on international LIS research. These two countries lead in overall research productivity across fields, which is consistent with broader patterns of scientific output (Safón & Docampo, 2023).

With some variations over the decade, the temporal analysis of publication output shows an overall upward trend in LIS research from G20 countries. The annual publication counts from 2015 to 2024 are depicted in Figure 1, which demonstrates a generally rising trend with a discernible acceleration in the second half of the time frame.

China's publication production has grown at the fastest rate in the past ten years, with a compound annual growth rate of 12.3%. China's strategic investment in R&D, especially in information science and technology, is reflected in its rapid expansion. Conversely, more modest growth rates of 4.2% and 3.7% are displayed by traditional research powerhouses such as the United States and the United Kingdom.

Even though it is small in comparison to other top countries, India's research output is steadily increasing at a compound annual growth rate of 8.6%. This increase is consistent with studies by Mushtaq et al. (2024), who found that India's LIS research capacity has significantly expanded, especially through greater institutional support and international collaboration. India's 3.9% share of the G20's overall production, however, is still disproportionately small given its size and population, indicating need for more infrastructure and capacity development in the field of research.

5.2 Scholarly Influence and Citation Impact

Table 2: Scholarly Influence and Citation Impact

Year	Mean Citations per Article	N (Publications)	Mean Citations per Year	Citable Years
2015	52.92	784	5.29	10
2016	42.18	821	4.69	9
2017	33.76	867	4.22	8
2018	27.03	912	3.86	7
2019	19.85	978	3.31	6
2020	14.32	1,056	2.86	5
2021	9.73	1,124	2.43	4
2022	5.92	1,187	1.97	3
2023	3.46	1,243	1.73	2
2024	1.81	1,013	1.81	1

Because they have been available for a longer time, earlier publications naturally show greater mean citation counts. From 5.29 for papers published in 2015 to 1.81 for publications published in 2024, the mean citations per year, which accounts for the amount of time after publication, gradually decreases. This pattern probably reflects both possible shifts in citation behaviour over time as well as the citation lag common in academic writing.

There are notable differences between G20 countries when looking at citation impact by nation. With 32.4 citations per manuscript, the United States continues to have the highest average citation effect, followed by the United Kingdom (29.7) and Australia (27.2). China ranks sixth among G20 countries in

terms of citation impact (18.6 citations per manuscript), despite having a high publication output. This suggests that there may be differences between the amount and influence of research output.

India ranks eighth among G20 countries in terms of citation impact (14.8 citations per manuscript), which is consistent with study by Mushtaq et al. (2024) on the difficulties Indian LIS research faces in achieving global recognition and influence. According to Wodeyar and Mulla (2022), citation impact is still somewhat low, especially for publications in domestic journals, even if Indian LIS research output has significantly expanded. This implies that in order to increase the influence and visibility of Indian LIS research globally, strategic actions are required.

These differences are further demonstrated by the h-index, which strikes a balance between publishing productivity and citation impact. With an h-index of 94, the United States is in first place, followed by China (71) and the United Kingdom (76). This measure emphasizes the concentrated influence of these countries' publications, especially when compared to developing research economies such as Brazil (h-index 31) and India (h-index 42).

5.3 Global Networks for Collaboration

Complex networks of collaboration among G20 countries in LIS research are revealed by analysing co-authorship trends. These networks are depicted in Figure 2, where node size denotes publication output and edge thickness denotes the degree of international collaboration.

Three separate clusters are identified by the collaboration network analysis:

- With close ties to Australia and the United Kingdom, the North American Cluster is centred on the United States and Canada. This cluster exhibits strong ties to neighbouring clusters and a high density of internal collaboration.
- Germany, France, Italy, and other European G20 countries make up the European Cluster, which has strong ties and moderate external cooperation.
- China is in charge of the Asian Cluster, which also includes ties to South Korea, Japan, and India. Compared to the other clusters, this one exhibits a lower internal density, indicating less intra-regional cooperation.

India's place in the network of partnership is very significant. India exhibits very less cooperation with other Asian G20 members, such as China, despite having close working relationships with the US and the UK. This pattern, which was previously noted by Mushtaq et al. (2024), implies that linguistic and historical academic ties may have a greater impact on collaboration patterns than geographic proximity. In a similar vein, Wodeyar and Mulla (2022) pointed out that Indian LIS scholars typically work with Western colleagues more than with regional partners, suggesting that there may be room to improve South-South cooperation within the G20 framework.

With close working relationships with 17 of the 19 other G20 members, the US stands out as the key hub in the worldwide network of collaboration. Australia and the United Kingdom also exhibit a high level of collaboration, especially with partners in North America and Europe.

With close relations to the United States, Australia, and the United Kingdom but less cooperation with other G20 countries, China exhibits a more selective collaboration pattern despite its high publishing output. This trend points to a calculated approach to global cooperation, emphasizing well-known research powerhouses over more expansive regional alliances.

There are notable differences amongst G20 countries in the collaboration index, which calculates the average number of countries per multi-country publication. Australia (2.5) and the United Kingdom (2.7) have the highest collaboration indices, indicating their deep integration into global research

networks. Russia (1.5) and Japan (1.6) exhibit lower levels of collaboration, indicating more domestically oriented research endeavors.

5.4 New Knowledge Domains and Research Themes

A keyword co-occurrence analysis of LIS articles from G20 countries reveals a number of important research issues. Four main knowledge categories are revealed by the thematic map in Figure 3, which is based on keyword frequency and co-occurrence:

Research on digital collections, information retrieval techniques, and user interaction with digital resources are all included in the Digital Libraries and Information Retrieval cluster. Keywords like "information retrieval," "digital libraries," and "search engines" are prevalent in this area.

The fields of bibliometrics and scientometrics are concerned with the quantitative evaluation of scholarly works and scientific output. Keywords such as "citation analysis," "bibliometrics," and "research evaluation" describe this cluster.

User studies and information behavior: this theme investigates how people look for, use, and distribute information in diverse settings. The terms "information seeking," "user studies," and "information literacy" are used to describe this field.

Knowledge Management and Organization: The methodical administration and arrangement of knowledge assets is the focus of this cluster. The themes of "knowledge management," "metadata," and "classification systems" are prevalent.

Research focus has changed significantly over the past ten years, according to a temporal analysis of term frequency. The progression of the top 20 keywords from 2015 to 2024 is depicted in Figure 4, which also highlights new and waning issues in LIS research.

Traditional LIS subjects like "academic libraries," "information literacy," and "bibliometrics" dominated the research scene in the early years of the decade (2015–2017). With terms like "machine learning," "artificial intelligence," and "big data" becoming more popular, there has been a discernible shift toward technology-driven themes since 2018. The field's increasing interest in developing technologies and their effects on information management and services is reflected in this evolution.

Issues of scholarly communication and knowledge accessibility are receiving more attention, as seen by the growth of "open access" and "open science" as major research areas (from 3.2% to 8.7% of publications). In a similar vein, the growing popularity of the phrases "social media" and "information behavior" points to a greater emphasis on digital information ecosystems and their social aspects.

There are also clear regional differences in the focus of the studies. Publications from G20 members in North America and Europe place more of an emphasis on knowledge organization, digital literacy, and information behavior. Asian G20 countries, on the other hand, place more emphasis on technical areas including big data analytics, machine learning applications, and information retrieval.

In contrast to other G20 countries, Indian LIS research exhibits clear topic emphases. Our study supports Paliwal's (2015) observation that bibliometric studies account for a major amount of Indian LIS research output (24.3% of publications), which is significantly higher than the G20 average (16.7%). Mushtaq et al. (2024) found that bibliometrics was a prominent research field in Indian LIS studies, which is consistent with this thematic focus. Information literacy, open access, and digital libraries are other major topics in Indian LIS research that represent both regional and worldwide trends.

Although classic LIS issues are still significant, the field is increasingly tackling the difficulties of digital transformation and adopting computational methodologies, according to the thematic evolution study. With over 40% of recent articles containing keywords linked to artificial intelligence, machine learning,

or big data, this trend is especially noticeable in papers from China and South Korea.

5.5 Journal Environment and Publication Locations

Journals publishing LIS research from G20 countries are diverse, according to an analysis of publication venues. The top ten journals by publishing volume are shown in Table 3, along with information about their geographical focus and impact factors.

Table 3: G20 Countries' Top 10 Journals for LIS Research (2015–2024)

Journal	Publications	Impact Factor	Country of Publication
Journal of the Association for Information Science and Technology	684	3.18	USA
Library Hi Tech	542	2.43	UK
Scientometrics	498	3.24	Netherlands
Information Processing & Management	465	4.08	UK
Journal of Documentation	412	2.16	UK
Journal of Academic Librarianship	387	2.22	USA
Journal of Information Science	356	2.80	UK
Library & Information Science Research	325	2.06	USA
Online Information Review	298	2.64	UK
Aslib Journal of Information Management	267	2.39	UK

The historical impact of the United States and the United Kingdom in LIS research is reflected in the preponderance of journals published in these countries. Nonetheless, the growing number of studies from other G20 countries—especially China—in these journals suggests a slow trend toward more regional diversity in high-impact publishing venues.

Publication trends for Indian LIS research reveal a heterogeneous approach. A sizable amount of Indian LIS research is published in domestic journals like the DESIDOC Journal of Library & Information Technology and the Annals of Library and Information Studies, while seasoned researchers typically publish in the foreign journals mentioned above. The findings of Paliwal (2015), who emphasized the value of domestic journals in spreading Indian LIS research, are consistent with this. Publications in domestic journals, however, tend to acquire less citations than those in foreign settings, as noted by Wodeyar and Mulla (2022), indicating possible trade-offs between local relevance and worldwide effect. Articles published in interdisciplinary publications (like Information Processing & Management) typically obtain more citations than those in standard library science journals, according to the citation study. According to this tendency, research that connects LIS to other fields—especially computer science and data science—has a greater scholarly effect.

There are significant differences in open access publication trends among G20 countries. The largest percentage of open access papers (42.3%) is found among G20 members from Europe, followed by those from North America (38.7%) and Asia (27.5%). This discrepancy most likely results from variations in institutional funding sources for open access publishing as well as country open scientific regulations.

6. Conclusion and Prospects for the Future

6.1 Key Findings Synopsis

A number of noteworthy patterns and trends are revealed by this thorough scientometric examination of LIS research from G20 countries:

- **Publication Output:** Together, the US and China produce more than half of all publications from G20 countries, making them the leading countries in LIS research. With a compound yearly growth rate that is about three times that of the US, China, on the other hand, has the most striking productivity increase.
- **Citation Impact:** Traditional research superpowers like the US, UK, and Australia continue to have stronger citation impacts even if China produces a lot more publications. This discrepancy raises the possibility of regional variations in citation styles, international visibility, or study quality.
- **Collaboration Networks:** The G20 countries form three different clusters of collaboration, with the US acting as the global network's focal point. China demonstrates a more selective pattern of collaboration, concentrating on well-established research powerhouses as opposed to more extensive regional alliances.
- **Thematic Evolution:** The study of LIS is tackling the problems of digital transformation and integrating computational methods more and more. While traditional subjects are still significant, they are frequently reframed through technological lenses, with big data analytics, machine learning, and artificial intelligence receiving more attention.
- **Publication Venues:** Although other G20 countries are becoming more represented, journals published in the US and the UK still account for the majority of LIS research publications. Compared to publishing in regular library science journals, interdisciplinary publications typically have a higher citation impact.
- **Indian LIS Research:** Although it is little in terms of quantity, India's contribution to G20 LIS research output exhibits steady growth and clear thematic emphasis. In Indian LIS research, bibliometric studies are very common, indicating both methodological inclinations and strategic research orientation.

6.2 Research Policy Implications

The following are some ramifications of these findings for LIS research policy and strategic planning:

- **Investment in Research Infrastructure:** Given the close relationship between economic growth and research production, a country's contribution to LIS knowledge can be greatly increased by making targeted investments in research infrastructure. Strategic funding of LIS research and teaching could be advantageous for G20 emerging nations.
- **Promoting International Collaboration:** The importance of international relationships is demonstrated by the positive correlation between collaboration intensity and citation impact. Research policies that encourage international cooperation have the potential to improve the volume and calibre of LIS research output.
- **Balancing classic and Emerging Themes:** Although a large portion of the current research agenda is driven by technological innovation, the continued importance of classic LIS themes points to the need for equitable investment across the discipline's range. Funding organizations ought to think about assisting with both user-cantered and technology-driven research projects.
- **Encouraging Open Science:** The disparities in open access publication trends among G20 countries suggest possible obstacles to the sharing of information. All G20 members' LIS research may beco-

me more globally visible and influential with unified open science policies.

- **Resolving Regional Disparities:** The need for capacity-building programs in underrepresented regions is indicated by the concentration of high-impact research in a small number of G20 countries. Regional research networks and focused mentorship programs may be able to assist in addressing these gaps.
- **Enhancing South-South Cooperation:** The lack of cooperation amongst the Asian G20 members—China, South Korea, and India—represents a lost chance for information sharing. Policies that particularly promote South-South cooperation may contribute to the diversification of research methods and viewpoints.

6.3 Prospects for Further Research

This study suggests a number of interesting directions for further investigation:

Longitudinal Impact Assessment: By extending this analysis over a longer period of time, it may be possible to gain a better understanding of how LIS research has changed over time and how it relates to larger societal and technical developments.

Institution-Level Analysis: By looking at the contributions made by certain G20 institutions, it may be possible to identify successful organizational models for LIS research as well as centres of excellence.

Interdisciplinary Connections: Examining how LIS relates to related fields (such as computer science, education, and information systems) may provide new areas for study and possible joint ventures.

Research-Practice Gap: Beyond academic citations, examining how research findings are applied in professional practice may help gauge the practical significance of LIS research.

Alternative Metrics: A more thorough knowledge of research influence, especially for recent publications, may be possible by using altmetrics and other non-traditional impact measures.

Policy Impact Analysis: More efficient strategic planning at the national and institutional levels may result from analysing the connection between national research policies and LIS research output.

Comparative Analysis of Database Coverage: To evaluate potential biases in coverage and representation of G20 countries' research output, future studies should compare Web of Science data with other bibliographic databases (such as Scopus and Dimensions), building on Wodeyar and Mulla's (2022) methodology.

To sum up, this scientometric analysis of LIS research from G20 countries shows that the discipline is dynamic and changing, with notable regional differences in output, effect, and focus. Stakeholders may improve the worldwide reach and societal impact of LIS research by comprehending these trends and creating more effective strategies.

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