

Investigating the Current Research Landscape of Social Justice concerns in Sustainable Development: A Bibliometric Analysis

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Abstract: *Social Justice (SJ) aims for a world where everyone has dignity, opportunity, and resources for a fulfilling life. Addressing injustices and promoting a just society are crucial for achieving the Sustainable Development Goals (SDGs). The United Nations' 2015 SDGs serve as a blueprint for a sustainable future, addressing various issues, with social justice being a core component of these objectives. This study examines the research on social justice in Sustainable Development (SD) using bibliometrics. It analyzed 2468 papers published between 2014 and 2023, focusing on publication trends, keyword co-occurrence for thematic analysis, co-citation analysis in respect of highly cited authors, and collaboration between a number of authors with highly cited countries. This study used a combination of approaches, including qualitative analysis and bibliometrics. The findings aim to enhance knowledge in the field and aid decision-making by academics, researchers, and policymakers in social justice and the SDGs. The study also suggests potential directions for further investigation and cooperation.*

Keywords: *Social Justice, Environmental Justice, Equity, Equality, Sustainable Development, SDGs, Bibliometrics.*

Introduction

In order to achieve the Sustainable Development Goals (SDGs), social justice is both an objective and a precondition. A compelling idea that can lead to strong sustainable consumerism is sustainable development, which prioritizes meeting human needs while respecting the environment (Lorek & Spangenberg, 2014). A societal idea called social justice only exists in the minds of people who are a part of that group, organization, or society. When communicated within a group, it can help with social coordination inside the group or between groups that share similar views on justice (Tyler, 2000). To achieve social justice, one must have a commitment to participatory democracy as a method of recognizing and eliminating all types of oppression and unfair treatment that exist in institutional practices and policies (Hyttén & Bettez, 2011). Today's most important practical, political, and moral concerns include integrating environmental sustainability with social justice and poverty reduction, as well as utilizing science and technology to benefit the underprivileged. In a world of globalized, dispersed governance arrangements and fast, interrelated change in environments, communities, and economies, these must be fulfilled (Leach et al., 2010). Bibliometric analysis offers a unique perspective on research on social justice issues in sustainable development. It provides a comprehensive overview, identifying key areas of interest, notable studies, and future research directions. This approach is beneficial for researchers, decision-makers, and other stakeholders aiming for sustainable development with social justice as a central goal. A more sustainable future for all can be achieved by striving for a more just and equal world.

Review of Literature

The World Commission on Environment and Development's concept of sustainable development, as outlined in *Our Common Future* (1987), emphasizes social justice as a key component. This approach aims to balance physical sustainability, need satisfaction, and equal opportunities within and between generations, aligning with liberal theories of justice (Langhelle, 2000). Since sustainability affects almost every institution, activity, and business in the modern world, the term "sustainability" has been used a lot in policy documents in recent years

(Dhali & Barui, 2024). Development must also take the environment into consideration. The environment affects social justice and even peace and security. As would be expected in a significant historical shift, there are significant obstacles in the way of attaining sustainable development, but they are not insurmountable (About Sustainabledevelopment.Un.Org/Content/Documents/5987our-Common-Future.Pdf - Google Search, n.d.). The Sustainable Development Goals (SDGs) are a set of globally recognized principles that the United Nations has adopted with the intention of improving human well-being, protecting the environment, and fostering prosperity (Fleetwood, 2020). Social justice discourse must be the larger context for corporate social responsibility (CSR) practices in the current globalization and neoliberal period, when sustainable development has also become an international endeavor (Manteaw, 2008). Humanity is tasked with transitioning to a sustainable global society, focusing on interdependence, economic and ecological aspects, and the physical limits of life-support systems. This transition should be based on interdependence, not just a fact, and ensure a just and sustainable global society (Kostas, 2012). Health disparities are mostly caused by social inequality and are more common in underprivileged or clearly socially disadvantaged populations, even in industrialized nations (Mercado et al., 2022).

Objectives of the Study

This study analyzes research papers (2014-2023) engaged in social justice concerns in sustainable development, and the specific objectives are as follows:

- To analyze publication trends and engagements.
- To identify and analyze the thematic structure using keyword co-occurrence.
- To examine the co-citation networks of highly cited authors.
- To investigate the landscape of international research collaboration by examining co-authorship patterns between authors affiliated with most productive countries.

Methodology

- Literature search and screening of records:

Figure 1 shows a flowchart illustrating the process of screening literature for this study. Initially, 3308 records were retrieved from the Scopus database as of March 12, 2024. After initial screening, 3286 records were obtained, and after removing duplicates, the number of records were 2468. Finally, these 2468 records were included for further analysis.

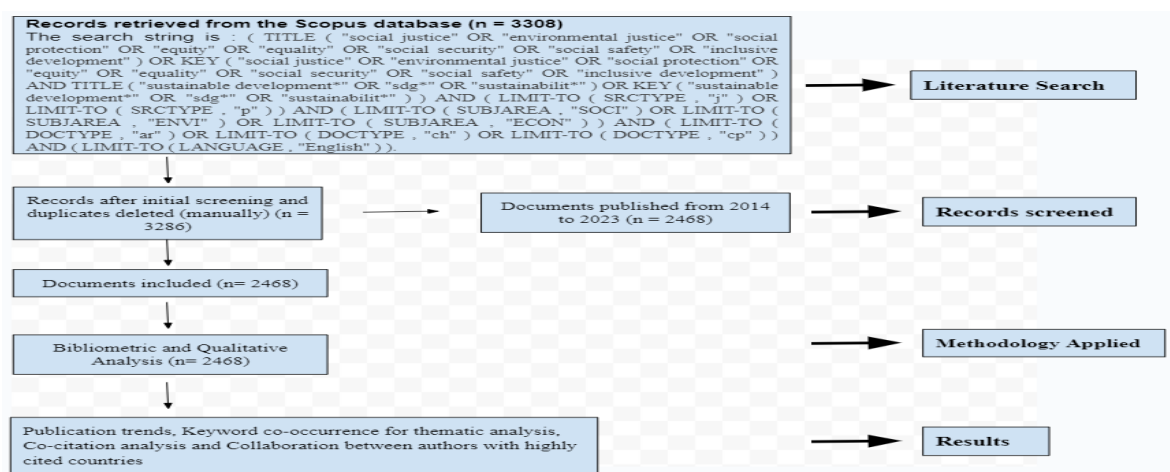


Fig 1: Schematic of literature search and records screened

- Bibliometric Analysis:

To give a comprehensive picture of the literature on social justice concerns in sustainable development, bibliometric analysis was employed in this study to provide a coherent, transparent, and logical research flow. It aims to record scholarly communication through publications. Bibliometrics is the most often used technique for researching topic analysis. It is used in this study to keep track of the corpus of information (Phalswal, 2023).

Results and Discussions

The results of the bibliometric analysis are presented in this section, offering a thorough overview of the publication landscape and research trends on the topic of social justice concerns in sustainable development. For bibliometric analysis, R-based biblioshiny (the bibliometrix tool) and VOSviewer software are used. Excel and Google Sheets are employed for the qualitative analysis with the aid of bibliometric tools.

- The growth trajectory in the number of publications

Figure 2 shows the exponential growth of the number of publications engaged in social justice concerns in sustainable development during the last ten years, with an average annual growth rate of 19.66 percent. The year with the highest growth rate, 64.66 percent, was recorded in 2018. This was followed by 24.24 percent in 2015, 24.20 percent in 2019, 22.40 percent in 2023, 22.00 percent in 2021, 15.45 percent in 2016, and 10.29 percent in 2020 (with the exception of -6.24 percent in 2017 and 0% in 2022). This signifies that over the last ten years, this area of research has gained increasing attention globally.

An R-squared of 0.96 indicates a very strong positive correlation between the dependent variable (number of publications) and independent variable (year) in the dataset.

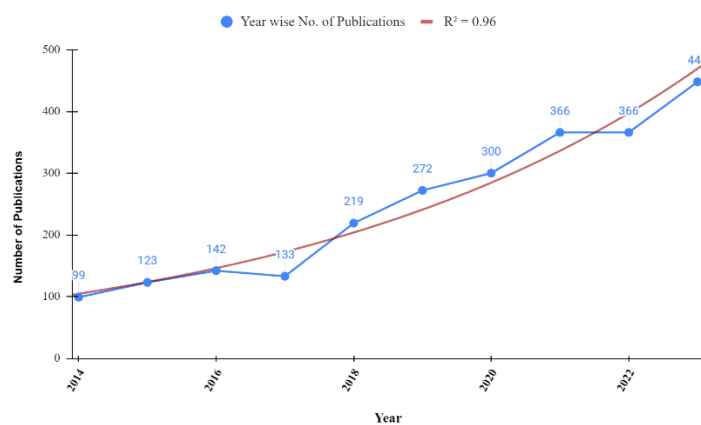


Fig 2: The exponential growth of number of publications for SJ concerns in sustainable development during the last ten years

- Keyword co-occurrence for thematic analysis

It is feasible to determine the likelihood of conceptual relationships with one theme to another by using keyword co-occurrence networks. Out of 7162 authors' keywords from 2468 publications, 48 meet the threshold, where the minimum number of occurrences of a keyword is 20. The publications between 2014 and 2023 were retrieved for network creation and analysis. The results demonstrate that keywords like "sustainability" (frequency: 520), "equity" (frequency: 312), "sustainable development" (frequency: 293), "environmental justice" (frequency: 236), "social justice" (frequency: 176), "sustainable development goals"

(frequency: 147), and “gender equality” (frequency: 146) are commonly used and recurring terms in the literature.

The theme representation based on keyword co-occurrences is displayed in Figure 3. Three unique themes with similar traits were found through co-occurrence analysis. Theme 1: “Human Rights Framework Towards Sustainability” focused on human rights, gender equality, justice, and its possible influence on sustainability in the co-occurrence network analysis of the authors’ keywords. The intricate relationships between “social protection,” “ethics,” “SDGs,” and other facets of sustainable development are also highlighted in Theme 1.

Theme 2: “Equity for Higher Education” mainly highlights “education,” “empowerment,” “development,” and “gender equity.” This theme also emphasizes how equality may be used to address higher education by fostering equal involvement and empowerment in all spheres of life.

Theme 3: “Social Justice Through Accessibility” highlighted environmental justice and social justice as means of advancing accessibility and social sustainability. It implies that attaining a sustainable future calls for an all-encompassing strategy that takes social equity and equitable access to opportunities into account. “Urban sustainability,” “ecosystem services,” and “resilience” are crucial aspects of social justice, emphasizing the need for equitable and inclusive approaches in sustainable movements.

There exists a close relationship between these three themes. Human rights to equity and higher education are essential, and access to accurate information is essential for achieving these goals. This accessibility is crucial for social justice, and the phrase “sustainability” encompasses all of these.

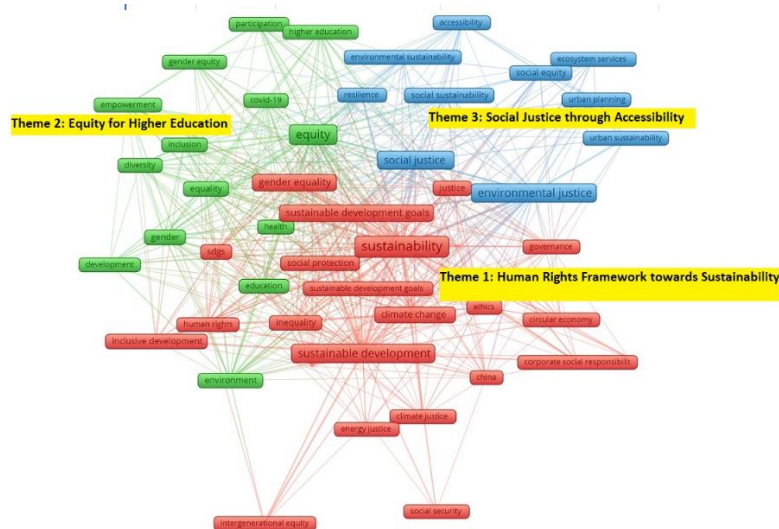


Fig 3: Thematic Representation based on keyword co-occurrence

- Co-citation network of eminent authors

The co-citation patterns of highly cited authors reveal the intellectual structure of the dataset. Figure 4 reveals that the authors are linked by lines if their work is frequently co-cited, and the closeness of the nodes suggests a stronger relationship between the researchers' work. Considering that an author must have at least 50 citations, 240 out of 149313 authors meet the threshold.

Using Vosviewer's visualization, four clusters were created. These are:

Cluster 1 (denoted by red): There are 82 authors in this cluster. Here, the lines show that the authors, who are often cited together, are connected to one another. Figure 4A shows that Liu Y's (number of publications: 10, citations: 210) works are commonly mentioned with Wang J., Wang X., Liu J., Li Y.

Cluster 2 (indicated by green): In this cluster, 79 authors are there. This cluster also reflects the interconnectivity of authors with frequently co-cited works. In Figure 4B: the research conducted by Bennett N.J. (number of publications: 4, citations: 223) is often mentioned with Chan K. M. A., Allison E.H., Brown K., Martin A., Berkes F.

Cluster 3 (denoted by blue) consists of 54 authors, often cited together, indicating their interconnectivity. Figure 4C illustrates that Anguelovski I. (number of publications: 8, citations: 1139) is frequently mentioned alongside Newell J.P., Smith N., Bulkeley H., Pearsall H.

In Cluster 4 (indicated by yellow), 25 authors are interconnected with frequently co-cited works, as shown in Figure 4D. Sovacool B.K.'s research (number of publications: 10, citations: 679) is frequently cited alongside Walker G., Geels F.W., Stephan H., Heffron R.J., Meeaulx D.

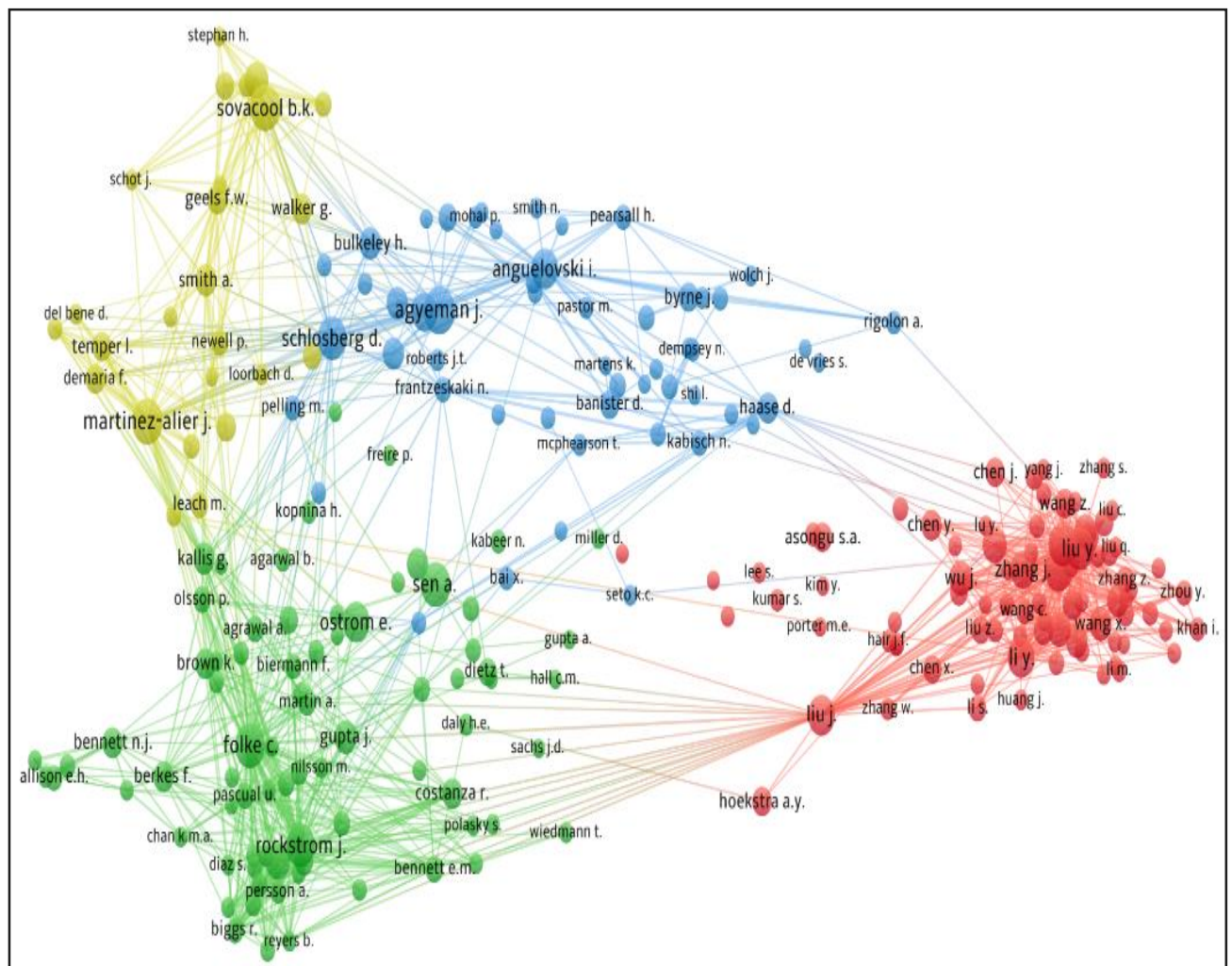
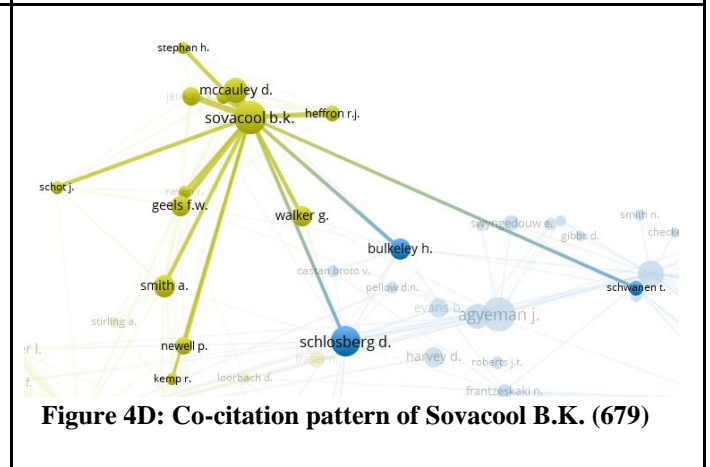
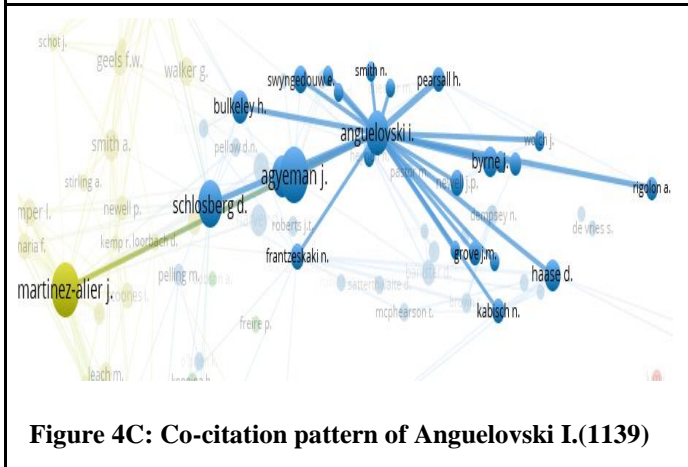
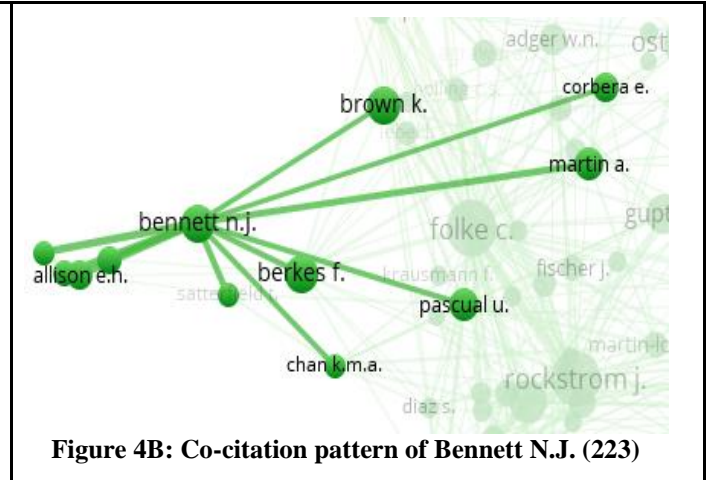
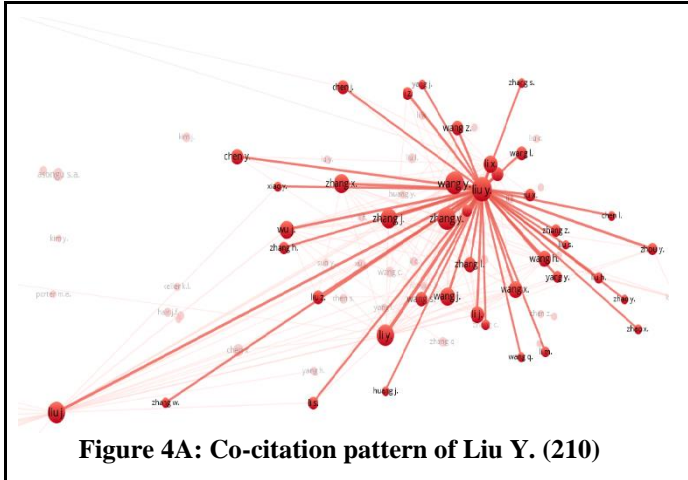


Fig 4: Co-Citation pattern of highly cited authors



- Mapping of co-authorship between countries
Co-authorship analysis reveals the contributions made by authors from various countries in published research articles, assisting in the identification of these authors' shared research interests on social justice issues in sustainable development. Leveraging Total Link Strength (TLS), the VOSviewer tool is utilized to visualize the social networks among co-authors and nations. 41 of the 163 countries match the criterion, which states that a country must have at least 20 documents and 100 citations. Following the United States (TLS=362), Germany (TLS=215), Netherlands (TLS=178), and China (TLS=176) as the most influential country, the United States has 384 TLS (Figure 5).

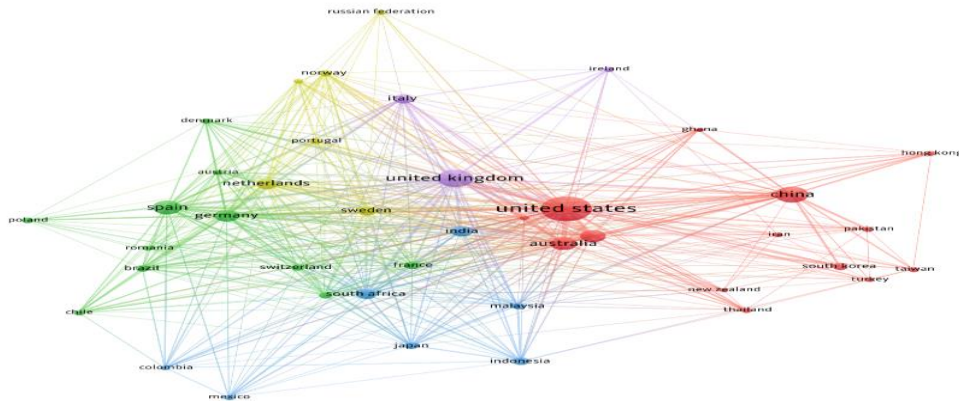


Fig 5: Mapping of co-authorship between countries

- Leading countries with the most influential researchers

This section offers a country-level geographic study that delves deeper into the productivity of the top five most productive countries over the last ten years, from 2014 to 2023. As indicated by Table 1, a country-level analysis is conducted to clarify which nations are most frequently involved in research pertaining to social justice concerns in sustainable development.

Table 1 exhibits that the United States (620) is the country that produces the greatest number of scholarly publications with highest citations, followed by the United Kingdom (321), China (255), Spain (192), and Australia (169). Australia (5821) is ranked third in terms of overall citations, behind the United States (14664) and the United Kingdom (7768). 620 papers, or 25.12%, of the 2468 total papers were published by the United States; the other countries that followed were the United Kingdom (13.01%), China (10.33%), Spain (7.78%), and Australia (6.85%).

Long J. is the most significant author in relation to the United States, having published five times and received 407 citations overall between 2016 and 2023. Martin A. has been the most productive author in the United Kingdom between 2014 and 2020, with five articles and a total of 170 citations. With 14 publications and 425 citations between 2019 and 2023, Wang Y. is China's most influential author. With 8 articles and 1139 citations between 2014 and 2019, Anguelovski I. is Spain's most prolific author, and with 5 publications and 133 citations in 2021–2022, Mangubhai S. is Australia's most impactful author. The authors were selected based on the frequency with which they have written about social justice issues in sustainable development and the number of times they have been cited during the last 10 years.

Table 1: Most productive Countries with highly cited authors

Countries	TP	TC	% TP	Authors	PPA	CPA	TSP
United States	620	14664	25.12%	Long J.	5	407	2016-2023
United Kingdom	321	7768	13.01%	Martin A.	5	170	2014-2020
China	255	4251	10.33%	Wang Y.	14	425	2019-2023
Spain	192	4074	7.78%	Anguelovski I.	8	1139	2014-2019
Australia	169	5821	6.85%	Mangubhai S.	5	133	2021-2022

TP= Total Publications; TC= Total Citations; %TP= Percentage of Total Publications; PPA= Publications Per Authors; CPA= Citations Per Authors; and TSP= Time Span of Publications.

Conclusion and Future Research Directions

Over the course of time, the concept of social justice in sustainable development has garnered interest from academics and scholars seeking a comprehensive understanding of the significant contributions of researchers. Regarding the future course of the study, the bibliometric analysis provides valuable insights. Social justice concerns in sustainable development have primarily been studied in developed nations like the United States (number of publications: 620, rank: first) and the United Kingdom (number of publications: 321, rank: second). Although research in developing nations like India (number of publications: 106, rank: ninth) and Malaysia (number of publications: 43, rank: eighteenth) has begun to pick up speed, additional research in these countries is still required. There is still a great deal of opportunity for empirical research

using mixed-method or quantitative analysis to examine social justice concerns in the sustainable development phenomena, as the majority of studies have used qualitative approach.

The study used a co-occurrence analysis to explore social justice concerns in sustainable development. Three clusters were identified, each representing a specific theme. The findings provide valuable insights into the study's complexity and guide policymakers, practitioners, and researchers to focus on areas with the most potential for fostering social justice and driving sustainable development.

This study summarizes the dataset of the last ten years and draws conclusions based on a review of pertinent prior research. The results of this bibliometric analysis offer insightful information about social justice concerns in sustainable development. The exponential growth towards social justice concerns in sustainable development is evident in the publication trend. Wolch J.R., Byrne J., and Newell J.P. were the most productive authors; their article "Urban green space, public health, and environmental justice: The challenge of making cities 'just green enough'", published in the year 2014, received the most citations (2401).

The study examined the impact of the most significant countries, revealing the United States (14664), the United Kingdom (7768), Austria (5821), China (4251), and Spain (4074) as the countries with the highest citations. The countries with the highest number of publications are the United States (620), the United Kingdom (321), China (255), Spain (192), and Australia (169), in that order. The United States topped the list in terms of both publications and the number of citations.

This study provides insightful information about issues of social justice in sustainable development. Further studies could look into various models, deeper thematic analysis, and additional metrics.

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