Mapping the Landscape of Sustainable Resource Management in Commerce and Management: A Bibliometric Analysis

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Abstract

Aim: The objectivc of this study is to assess the bibliometric parameters of the research papers published during the period of 2020 to 2024 in the area of sustainable resource management in commerce and management.

Sustainable resource management has emerged as a critical imperative for businesses and organizations globally, driven by the need to balance economic growth with environmental conservation and social responsibility. This paper involve quantitative study based on the data retrieved from the dimensions database. This study employs bibliometric analysis to delineate the scholarly discourse surrounding sustainable resource management within the fields of commerce and management. The database was downloaded in CSV format then it was used for data analysis on biblioshiny.

A total of 501 research papers published from 2020 to 2024 were downloaded from the Dimensions database in CSV format. In this database, majority of papers were based on sustainable resource management in the field of management and commerce. During database search sustainable resource management" keyword is used in the category of commerce and management.

Through systematic analysis of scholarly publications, this research aims to identify key themes, influential authors, and intellectual connections, shedding light on the evolution and

current trends in research pertaining to sustainable resource management in commerce and management disciplines. The findings of this study provide valuable insights for researchers, practitioners, and policymakers engaged in sustainability initiatives within organizational contexts.

Keywords: sustainable resource management, commerce, management, bibliometric analysis, sustainability, environmental managementIntroduction

In business and management, sustainable resource management entails incorporating sustainability concepts into supply chain management, corporate decision-making procedures, and commercial operations. It includes tactics and procedures meant to maximize resource efficiency, reduce environmental effects, and improve social responsibility in business settings and administrative structures. In the recent scenario, choice of consumer is largely influenced by organization's sustainability credentials and practices. With the use of sustainability practices, nature can be protected along with minimal greenhouse gas emissions. Sustainable practices reduce risk, minimizes cost of production, raise revenues, and builds brand image in the market.

This bibliometric study focuses on the researches based on sustainability in commerce and management industry based on dataset generated from online academic database.

Sustainable Resources Management

Sustainable resource management is future oriented. It involves preservation, management, and designing of natural capital. Development and implementation of methods for the conservation of natural resources like; energy, water and raw materials is known as sustainable resource management. With the help of sustainable resource management, resources can be conserved for future generations. Also, it minimizes the cost of waste disposal and resource extraction.

Due to increasing number of scandals the demand of sustainable practices also increased. Therefore, it is important to assess the relationship various aspects of business and sustainability. Numerous Environmental, social, and governance activities have been introduced to upgrade the level of organizational contribution to sustainability (Tamayo-Torres, Gutierrez-Gutierrez, & Ruiz-Moreno, 2018).

Commerce and Management

Due to consumers demand, companies are compelled to introduce ecofriendly approaches to ensure sustainable growth in e-commerce industry. Several researches are being done to fill the

research gap on sustainable e- commerce and its impact on environment. By ensuring green practices of employees and top management, many organizations are turning green (Gupta & Jangra, 2023). Many companies are preparing and filing sustainability reports as per requisition of European Union's Corporate Sustainability Reporting Directive 2024. Most of companies are transitioning fossil fuels to generate clean energy. For example, IBM consulting moving forward toward power decarbonization (TechTarget, 2023). Several organizations have taken initiatives to incorporate sustainability into management and design of entire supply chain. Industry practitioners and managers are understanding the sustainable issues and trade-offs to make effective decision in favor of environment (Gupta & Palsule-Desai, 2011).

Hospitality and tourism industry upgraded green human resource culture with sustainability and ethical business practices. Also, they emphasize on organizational citizenship behavior of employees that raise the level of inclusiveness and sustainability in the work culture (Kumar & Puranam, 2024).

Important facets of commerce and management's use of sustainable resources

Companies work to reduce the environmental impact of their supply chains by minimizing waste production, obtaining raw materials ethically, and guaranteeing moral labor practices all the way through the production process. This could entail putting in place life cycle assessments, working with suppliers to advance sustainability standards, and establishing sustainable procurement strategies. By implementing sustainable practices like energy saving, waste reduction, and water management efforts, organizations aim to increase resource efficiency. To reduce resource consumption and increase productivity, this may entail making investments in energy-efficient equipment, putting recycling programs into place, and streamlining manufacturing procedures.

Green product development is the process by which companies create goods and services that are both consumer- and environmentally-friendly while reducing their negative effects. To show environmental stewardship, this may entail using eco-friendly materials, building products with durability and recycling in mind, and acquiring eco-label certifications. Businesses support CSR programs that tackle environmental and social challenges, such as sustainable resource management. This could entail sponsoring community development initiatives, participating in

environmental preservation campaigns, and encouraging staff volunteerism and philanthropy as a means of making a constructive contribution to society.

Research Methodology

Using bibliometric techniques, this study aims to provide an overview of research in the field of sustainable resource management, facilitating understanding, collaboration and planning in the academic world and beyond. Investigating international collaboration mechanisms to identify global research networks and collaborative approaches emerging across sustainable boundaries management research.

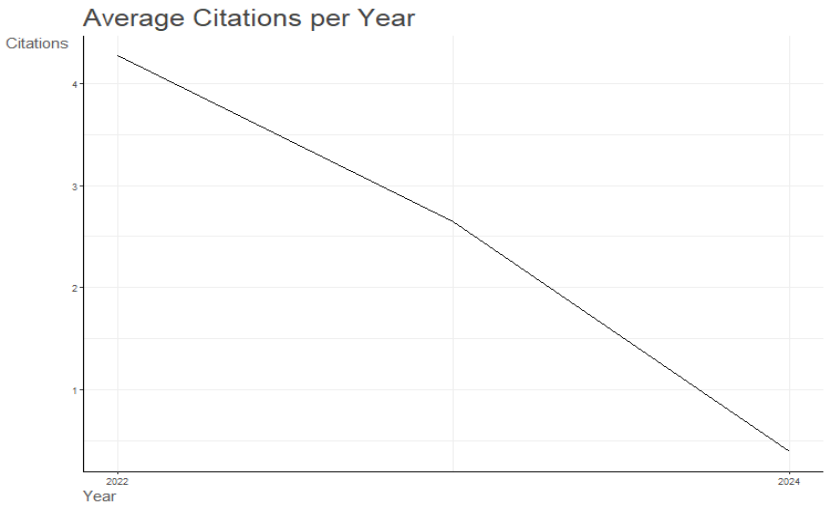
Use keywords to identify dominant themes, emerging topics, and cross-border relationships. Analysis of annual literature to understand the pace of development and impact of sustainability management research. Statistical analysis to identify key articles, authors, and journals in the field and understand the distribution and impact of research. Use the author's search engine to find many research and affiliate sites offering sustainable research. The dataset for this bibliometric study was extracted using the keyword "Sustainable Resource Management". Only five years of data were removed using the filter. The years were 2024, 2023, 2022, 2021, and 2020.

Analysis

The features of the dataset, such as author affiliations, journal distributions, publication years, citation counts, and keyword frequencies, are summed together using descriptive statistics. To illustrate the data in a way that is clear and understandable, visualization tools like pie charts, bar charts, and histograms can be used.

Citation and Co-authorship Analysis

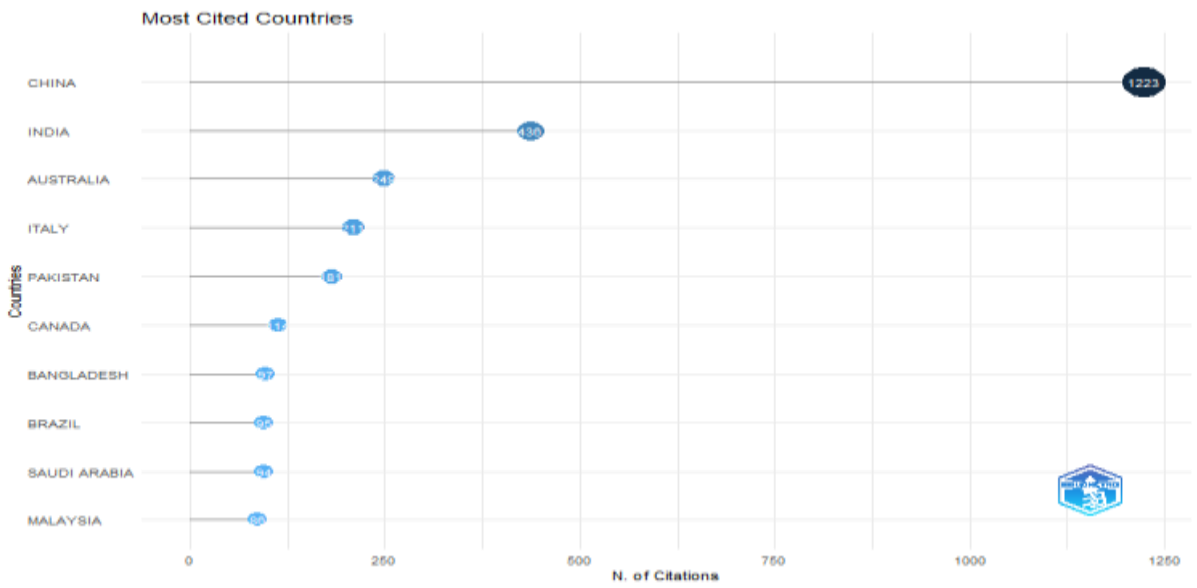
To determine important publications, authors, and research networks, citation analysis looks at the dataset's citation patterns. Important metrics that are used to evaluate the influence and prominence of specific articles and authors in the area include citation counts, h-index, and citation networks. This type of study looks at how authors collaborate with one another inside the dataset. Co-authorship networks are visualized, central authors or research groups are identified, and the level of field collaboration is evaluated through the use of network analytic techniques.



Year	MeanTCperArt	N	MeanTCperYear	CitableYears
2022	12.82	234	4.27	3
2023	5.31	235	2.65	2
2024	0.39	31	0.39	1

The analysis presented shows a clear downward trend in the total number of submissions per article, the average of all submissions per year, and the average number of submissions per article between 2022 and 2024. With 234 articles in 2022, the average rate mentioned above per article was 12.82, indicating a higher percentage. However, the overall average is 4.27 per year, indicating that the decrease in wealth is reported over time. Additionally, the articles received an average of citations over a three-year period, demonstrating the importance of the articles.

While the total number of cases remained the same at 235 by 2023, there was a significant decrease in both reported cases per article (5.31) and average reported cases per year (2.65); This shows that the risk decreases and the birth frequency decreases. Additionally, the average number of years given for each subject has been reduced to 2, indicating a shorter time period. In 2024, the decline continued sharply and only 31 articles were published. While the total average income per item decreased to 0.39, the total annual average income also reflected this decrease and reached the same value. In addition, the average number of years given for each subject has decreased to 1, indicating that life expectancy has decreased, according to the research.



Country	TC	Average Article Citations
CHINA	1223	7.7
INDIA	436	13.6
AUSTRALIA	249	9.6
ITALY	211	15.1
PAKISTAN	181	15.1
CANADA	114	8.1
BANGLADESH	97	8.8
BRAZIL	95	8.6
SAUDI ARABIA	94	47
MALAYSIA	86	4.8
OMAN	73	73
IRAN	64	4.6
SWEDEN	55	13.8
NORWAY	53	17.7

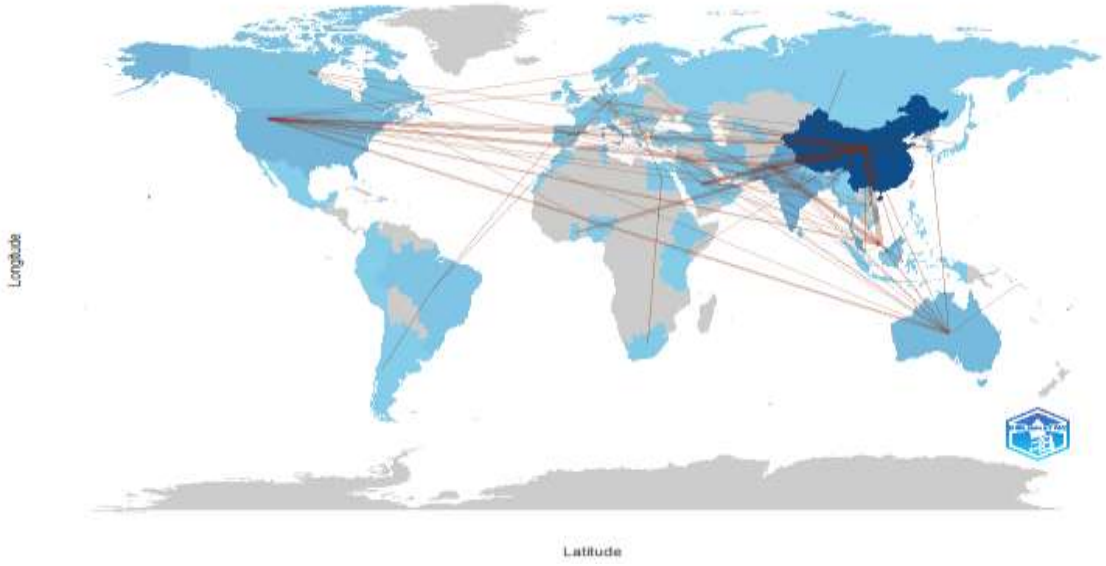
With 1223 articles and an average of 7.7 citations per article, China is the largest in scientific literature. However, the average score for each subject is comparable to some other countries on the list. India has fewer articles (436) than China but the average is higher at 13.6 per

article. This shows that Indian studies are frequently cited, indicating greater influence or impact of Indian studies.

Australia has 249 articles, with an average of 9.6 per article. This shows that great efforts are being made in academic publishing and that there is a significant level of research output. Italy and Pakistan have similar scores for all items (211 and 181), averaging 15 points. 1. This shows that despite differences in the nature of research, both countries produce relatively more research. With 114 articles and an average score of 8.1 per article, Canada continues to perform well in scientific publications, with research results receiving a moderate score. Bangladesh and Brazil have similar averages across all scores (97 and 95 respectively), with a relative average of 8. 8 and 8. 6. This shows the relative level of research impact of these countries.

Saudi Arabia scores well at 94 points but has an unusually high average of 47 per point. This shows that although Saudi Arabia produces fewer articles than some other countries, its research results have a significant impact and are widely cited in academic literature. Malaysia and Iran both have mean comparisons for each item (4.8 and 4.6 respectively), indicating that the findings may be unaffected or affected compared to the other countries in the dataset.

Sweden and Norway have the lowest number of all articles (55 and 53), but the highest average is given for each article (13, 8 and 17). 7), indicating that research from these countries is more frequently cited and stronger. Oman stands out with 73 articles, with each article receiving an average score of 73, indicating that the research is both productive and has a significant impact. Each article received a relatively large number of responses.



The data shows the frequency of cooperation between different countries. For example, China has alliances ranging from 1 to 32 with many countries such as Bangladesh, Malaysia and Pakistan.There are many partnerships between the two countries, such as Australia and Canada, Australia and Germany, China and Malaysia. This cooperation may cover various aspects such as trade, investment, research or cultural exchange. Cooperation models: Some countries show models in cooperation. For example, China has alliances with neighboring countries in Asia as well as countries in Africa, Europe and the United States. This reflects China's role in global economic affairs.

Cooperation between countries can encompass many activities, including economic cooperation, academic research cooperation, cultural exchange and foreign relations programmes. The data do not reveal the nature of cooperation, but they do give an idea of the level of cooperation between countries. Data can be analyzed to identify trends, trends and potential opportunities to strengthen cooperation between countries or regions. Understanding cooperation models can inform policy decisions, business strategies, and foreign policy actions.

Keyword Analysis

Qualitative analysis identifies themes and occurrences in the data set by examining the frequency and relationships of words in article titles, abstracts, and keywords. This makes it easy to identify some of the important connections, research trends, and current issues in the field. Correlations between structure and information in the data set are identified using bibliometric mapping techniques such as factor analysis, mapping, and term analysis.

Maps, links, and figures are often created using viewing software such as VOSviewer, CiteSpace, R Studio, and BibExcel to help understand bibliometric data. Here R studio was used to analyze keywords.

Terms	Frequency
Humans	110
Sustainable Development	98
Conservation Of Natural Resources	87
China	78
Commerce	45
Waste Management	42

Ecosystem	34
Agriculture	33
Industry	32
Economic Development	31
Water	31

The lyrics reflect many ideas about sustainable development and environmental protection. There is an emphasis on balancing economic development, social development and environmental protection, with emphasis on people (110) and sustainable development (98). Conservation of Natural Resources (87) emphasizes the importance of preserving ecosystems for the future. Popularity in China (78) reflects the political climate, particularly in commerce (45) and industry (32); here, discussions can focus on trade and environmental policies.

Waste management (42) and water management (31) represent concerns related to resource efficiency and maintenance. Agriculture (33) and industry (32) are likely to be sustainable and technologically advanced. In short, the analysis provides a comprehensive approach to sustainable development that addresses many important issues for a sustainable and prosperous future.

Findings

The projection lines from 2022 to 2024 show a significant change in the nature of the impact of knowledge and sustainability. What started as a period of ups and downs has become very intense. In 2022, the number of applications has been reduced, characterized by reduced risk, reduced frequency and shortened research duration. A comprehensive analysis of the scientific literature around the world highlights the different strengths of research impact and influence in different countries. Although China appears as a strong force in many publications, the average contribution to each topic suggests that there is room for further development of research impact.

On the other hand, few Indian institutions believe that they are effective because they reflect a culture of research excellence that resonates with students. Australia's strength in academic publishing is impressive, reflecting a rich research ecosystem. The focus on sustainable development and the balance between economic development, social development and environmental protection demonstrates the importance of a unified approach to policy formulation and implementation.

Due to the focus on China, the study is able to examine China's policies, performance and implementation in depth from him. And the impact on global sustainable development, particularly in the areas of trade, industry and the environment. Concerns about natural resource conservation and waste management underscore the need for strategies and technologies aimed at better resource management and reduction of environmental impacts. Discussions about ecosystems and their interactions highlight the importance of protecting and restoring ecosystems on which conservation efforts can focus.

Research may investigate sustainable farming practices, agricultural technologies, and industries that aim to reduce environmental impacts while focusing on food security and economic growth. Findings focusing on water resources and issues that may be scarce or polluted can inform water management strategies, environmental protection and policies to address water-related issues. The focus on people highlights the need for sustainable and balanced research towards sustainable development, prioritizing human well-being while protecting the environment.

Suggestions

In recent years, research has been conducted on factors that may have contributed to the decline in published rates, such as changes in research methods, changes in scholarly communica tion practices, or emerging research that replicates previous research. Conduct a comparative ana lysis with other departments or subsectors to determine whether cost savings are specific to susta

inable resource management or part of the university overall.

Learn how citation strength varies among different journals publishing research on sustainable re source management. Research whether there are newspapers that are trending downward at a cert ain level, or whether there are newspapers that are trending. Perform short term analysis to track changes in specific characteristics over time as part of sustainable asset management. Ide ntify key metrics or factors related to price changes and track their impact. Investigating the effec ts of various studies on proposed measures for sustainable resource management.

Analyze whether different partnerships produce better results and explore possible reasons for thi s.

Consider regional differences in sustainable resource management. Investigate whether there is more or less research experience in certain areas and investigate factors that contribute to t hese differences. Discuss the impact of low prices on policy decisions regarding research funding and sustainable resource management. Emphasize the importance of supporting effective researh and encouraging the dissemination of knowledge to find solutions to environmental problems.

To make suggestions for management based on bibliometric analysis results. Identify wh ere additional research is needed to address knowledge gaps or emerging issues in sustainable res ource management.

Conclusions

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