

# Bibliometric Analysis of the Role of Culture in Sustainable Development

Loso Judijanto<sup>1</sup>, Tera Lesmana<sup>2</sup>, Salwa Aulia Novitasari<sup>3</sup>

<sup>1</sup> IPOSS Jakarta, Indonesia

<sup>2,3</sup> Universitas Nusa Putra

## Article Info

### Article history:

Received February, 2024

Revised February, 2024

Accepted February, 2024

### Keywords:

Culture

Sustainable Development

Bibliometric Analysis

## ABSTRACT

The intricate relationship between culture and sustainable development has emerged as a focal point of scholarly inquiry and policy discourse in an era marked by increasing globalization and interconnectedness. Culture, encompassing beliefs, values, customs, traditions, and social norms, plays a fundamental role in shaping individuals' perceptions, behaviors, and interactions with the environment. However, the nuanced influence of culture on sustainable development remains underexplored, leading to fragmented literature and disparate thematic focuses. To address this gap, this research conducts a comprehensive bibliometric analysis to elucidate the multifaceted role of culture in sustainable development. Through the identification of key thematic areas, trends, and patterns within the existing literature, this study aims to pinpoint gaps and emerging areas of interest for future research endeavors. The insights gleaned from this analysis can inform evidence-based policymaking and contribute to the development of inclusive, culturally sensitive approaches to sustainable development.

*This is an open access article under the [CC BY-SA](#) license.*



## Corresponding Author:

Name: Loso Judijanto

Institution: IPOSS Jakarta, Indonesia

Email: [losojudijantobumn@gmail.com](mailto:losojudijantobumn@gmail.com)

## 1. INTRODUCTION

In an era marked by increasing globalization and interconnectedness, the intricate interplay between culture and sustainable development has emerged as a focal point of scholarly inquiry and policy discourse [1]–[3]. As societies strive to achieve sustainability across economic, social, and environmental dimensions, understanding the nuanced influence of culture becomes imperative [3], [4]. This research endeavors to conduct a comprehensive bibliometric analysis to elucidate the multifaceted role of

culture in sustainable development, thereby contributing to a deeper understanding of this complex relationship.

Culture, encompassing beliefs, values, customs, traditions, and social norms, serves as a fundamental determinant shaping individuals' perceptions, behaviors, and interactions with the environment [5]–[7]. Its impact reverberates across various facets of society, from governance structures and economic systems to community resilience and environmental stewardship. However, while cultural factors profoundly influence development trajectories, their nuanced

effects remain underexplored within the realm of sustainable development scholarship. Thus, there exists a pressing need to systematically examine the existing literature to discern patterns, gaps, and emerging trends concerning the role of culture in fostering sustainable development [8], [9].

Despite growing recognition of culture's significance, the existing body of literature on its relationship with sustainable development exhibits fragmentation and disparate thematic focuses [10]. This fragmentation hampers the synthesis of knowledge and the identification of overarching patterns, hindering the formulation of comprehensive strategies and policies [1], [11]–[13]. Consequently, there is a critical research gap concerning the systematic analysis and synthesis of literature elucidating the multifaceted interplay between culture and sustainable development. Addressing this gap is essential for advancing scholarly understanding and informing evidence-based policymaking aimed at fostering culturally grounded sustainability initiatives.

The primary objective of this research is to conduct a rigorous bibliometric analysis of the scholarly literature pertaining to the role of culture in sustainable development. Specifically, the study aims to:

1. A systematic literature review of sustainable entrepreneurship with thematic analysis
2. To pinpoint gaps and emerging areas of interest for future research endeavors.
3. Cultural policies for sustainable development: Four strategic paths

This research holds significance for academia, policymakers, and practitioners engaged in sustainable development efforts worldwide. By systematically mapping the landscape of literature on culture and sustainability, this study aims to foster interdisciplinary dialogue, facilitate knowledge transfer, and inform evidence-

based decision-making. Ultimately, insights gleaned from this bibliometric analysis can contribute to the development of more inclusive, culturally sensitive approaches to sustainable development that resonate with diverse communities and promote resilience, equity, and well-being.

## 2. LITERATURE REVIEW

### 2.1 Culture and Sustainable Development

Culture and sustainable development are interconnected in various ways. Culture, including organizational culture and local wisdom, plays a significant role in promoting sustainable development. For instance, green human resource management (GHRM) practices and the enablers of green organizational culture have been shown to positively affect a firm's environmental performance and sustainable development [14]. Similarly, local wisdom, which encompasses the ways of life, behavior, and knowledge of local people, contributes to good governance and community development, thus influencing sustainable development [15]. Furthermore, the role of financial education in achieving sustainable development highlights the importance of enhancing individuals' financial literacy for a more sustainable future [16], [17]. However, cultural factors such as ethnic sentiment and cultural differences can also pose challenges to sustainable development, particularly when they lead to social tensions and governance issues [18]. In summary, culture, including organizational, local, and educational aspects, can both facilitate and hinder sustainable development, making it a crucial consideration in efforts to promote long-term environmental, social, and economic sustainability.

## 3. METHODS

### 3.1 Data Collection

A comprehensive search will be conducted across multiple scholarly databases, including but not limited to Web of Science, Scopus, PubMed, and Google

Scholar. These databases cover a wide range of disciplines, ensuring inclusivity in the selection of relevant literature. The search strategy will involve the use of relevant keywords and Boolean operators to capture relevant publications. Keywords will include terms related to culture and sustainable development. The search strategy will be tailored to each database to optimize retrieval of relevant literature. Publications will be included if they (a) examine the relationship between culture and sustainable development, (b) are peer-reviewed articles, reviews, conference papers, or book chapters, and (c) are published in English. No restrictions will be imposed on publication date to ensure a comprehensive analysis of the literature.

### 3.2 Bibliometric Analysis

The retrieved literature will undergo bibliometric analysis to quantitatively assess various aspects, including publication trends, citation patterns and thematic content. Bibliometric analysis will be conducted using specialized software (VOSviewer). These tools enable visualization and analysis of bibliographic data, facilitating the identification of key trends and patterns within the literature. Citation networks, and keyword co-occurrence networks will be constructed to visualize relationships among authors, publications, and research themes. Thematic analysis will be performed to identify prevalent themes and topics within the literature. Keywords and abstracts of retrieved publications will be scrutinized to categorize them into thematic clusters representing different aspects of the relationship between culture and sustainable development.

## 4. RESULTS AND DISCUSSION

### 4.1 Research Data Metrics

Table 1. Data Citation Metrics

Publication years	: 1986-2024
Citation years	: 38 (1986-2024)
Paper	: 980

Citations	: 206015
Cites/year	: 5421.45
Cites/paper	: 210.22
Cites/author	: 136576.75
Papers/author	: 612.25
Author/paper	: 2.17
h-index	: 219
g-index	: 408
hI,norm	: 176
hI,annual	: 4.63
hA-index	: 64
Papers with ACC	: 1,2,5,10,20:977,955,765,496,254

Source: Publish or Perish Output, 2024

The provided table presents bibliometric data regarding research within the domain of human resource management (HRM) in the manufacturing industry, covering publication years from 1986 to 2024. A total of 980 papers have been published, accumulating 206,015 citations over the span of 38 citation years. This yields an average citation rate of 5,421.45 per year, indicative of the ongoing scholarly engagement with this field. On average, each paper has received 210.22 citations, reflecting a moderate level of influence within the academic community. Authors have contributed significantly to this body of literature, with an average of 612.25 papers per author and an authorship ratio of 2.17. The h-index, a measure of both productivity and citation impact, stands at 219, underscoring the recognition and dissemination of research findings. Furthermore, the g-index, which accounts for highly-cited papers, is calculated at 408. The hI,norm and hI,annual values provide normalized and annualized versions of the h-index, respectively, emphasizing the enduring impact of the research. Additionally, the hA-index, focusing on the impact of an author's work, is determined to be 64. The majority of papers have been cited at least once, with percentages ranging from 97.7% for papers with one citation to 25.4% for those with twenty or more citations, highlighting the breadth of engagement with the subject matter. Overall, these metrics illustrate the scholarly contributions and impact of research in HRM within the

manufacturing industry during the specified timeframe.

Table 2. Top Cited Research

Citations	Authors and year	Title
4154	SM Lele (1991)	Sustainable development: a critical review
3222	KW Robert, TM Parris (2005)	What is sustainable development? Goals, indicators, values, and practices
3159	M Redclift (2002)	Sustainable development: Exploring the contradictions
2933	S Campbell (1996)	Green cities, growing cities, just cities?: urban planning and the contradictions of sustainable development
2647	J Grin, J Rotmans, J Schot (2010)	Transitions to sustainable development: new directions in the study of long term transformative change
2614	N Dempsey, G Bramley, S Power (2011)	The social dimension of sustainable development: Defining urban social sustainability
2458	B Smit, O Pilifosova (2003)	Adaptation to climate change in the context of sustainable development and equity
2414	OD Mebratu (1998)	Sustainability and sustainable development: historical and conceptual review
2343	G Seyfang, A Smith (2007)	Grassroots innovations for sustainable development: Towards a new research and policy agenda
2275	H Bossel (1999)	Indicators for sustainable development: theory, method, applications

Source: *Publish or Perish Output*, 2024

The table presents a selection of influential citations in the field of sustainable development, along with their respective authors and publication years. These citations represent seminal works that have contributed significantly to the theoretical framework, conceptual understanding, and practical applications of sustainable development. From SM Lele's critical review of sustainable development in 1991 to KW Robert and TM Parris's exploration of its goals, indicators, values, and practices in 2005, the table spans several decades and diverse perspectives within the field. Notable contributions include M Redclift's examination of the contradictions inherent in sustainable development, S Campbell's

analysis of urban planning's role in sustainable cities, and J Grin, J Rotmans, and J Schot's study of transformative change towards sustainability. Additionally, the table includes works addressing specific dimensions of sustainability, such as the social dimension by N Dempsey, G Bramley, and S Power, and adaptation to climate change within the context of equity and sustainable development by B Smit and O Pilifosova. Overall, this table provides a comprehensive overview of key literature shaping the discourse on sustainable development, offering a rich foundation for further research and policy development in this critical area.

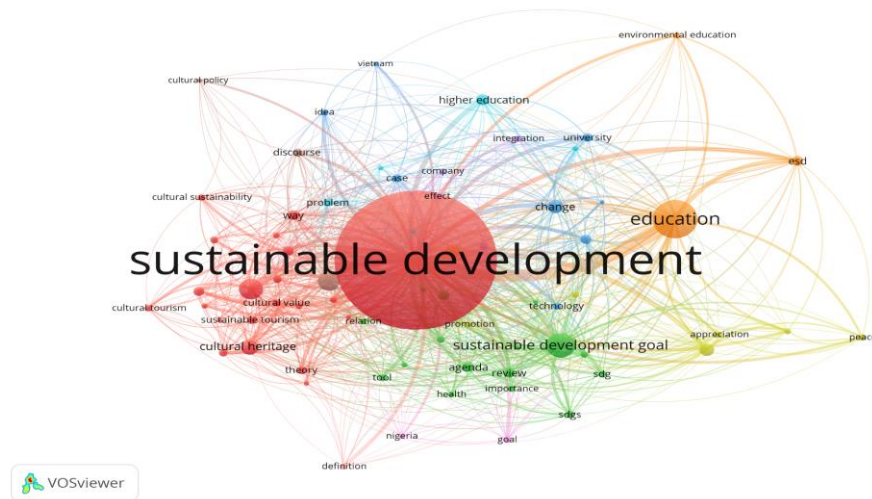


Figure 1. Network Visualization  
 Source: Data Analysis Result, 2024

The bibliometric analysis reveals distinct clusters of terms, each representing thematic areas or domains within the field under study. The "Red Cluster" appears to focus on issues related to cultural heritage and sustainability, encompassing terms such as "sustainable development," "cultural tourism," and "cultural sustainability." This cluster suggests a significant emphasis on the intersection of sustainability and cultural preservation, indicating a growing interest in how cultural assets can be leveraged for sustainable development initiatives, particularly in the realm of tourism. It underscores a recognition of the importance of preserving cultural heritage while advancing sustainable practices, reflecting a multidisciplinary approach that integrates environmental, social, and cultural dimensions.

Conversely, the "Blue Cluster" centers

around terms like "higher education," "university," and "change," indicating a focus on educational institutions and transformative processes. This cluster suggests a keen interest in exploring the role of higher education in driving change and innovation, potentially reflecting research inquiries into organizational dynamics within universities or the impact of educational reforms. The inclusion of terms like "idea" suggests a creative aspect to this cluster, hinting at discussions around innovation and the generation of new concepts within the context of higher education. The juxtaposition of these clusters highlights the diverse range of topics and perspectives within the overarching theme of sustainable development, from cultural preservation to educational reform, underscoring the interdisciplinary nature of research in this field.

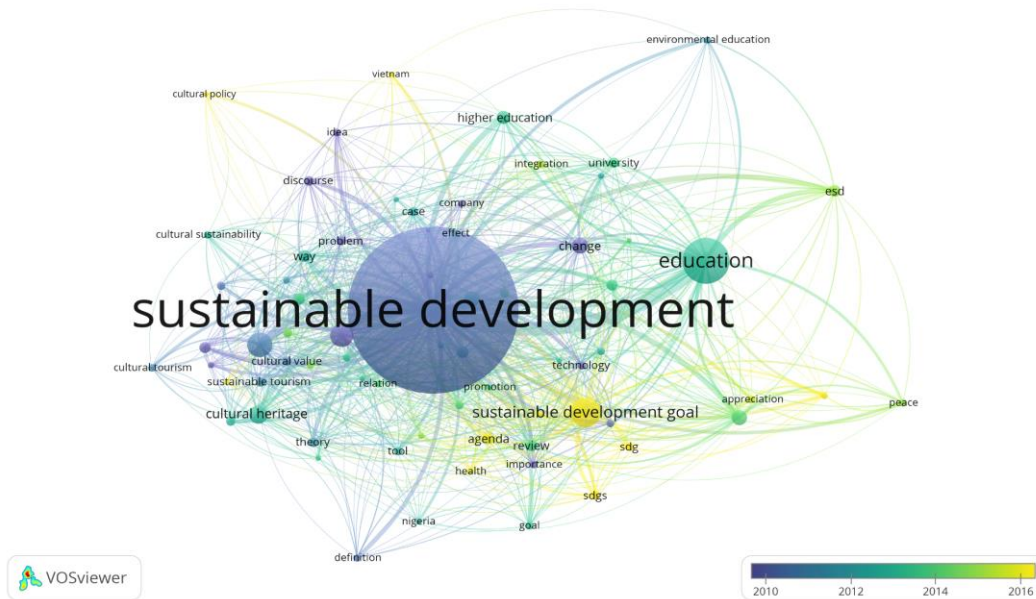


Figure 2. Overlay Visualization

Source: Data Analysis Result, 2024

The overlay visualization of terms across different years reveals temporal shifts and evolving thematic emphases within the research landscape. In 2010, the focus seems to be on broad concepts such as "sustainable development" and "change," indicating an early exploration of foundational principles and challenges within the field. The inclusion of terms like "discourse" and "problem" suggests a critical examination of sustainability issues and the discourse surrounding them, perhaps indicating a period of theoretical development and problem identification. Additionally, the presence of "company" in this year's overlay suggests a growing awareness of the role of corporations in sustainable development initiatives, hinting at discussions around corporate social responsibility and business practices.

Moving forward to 2012, there is a

noticeable shift towards educational themes, with terms like "education," "higher education," and "cultural heritage" gaining prominence. This suggests a transition towards exploring the role of education, both formal and cultural, in promoting sustainability and preserving heritage. The inclusion of "goal" indicates a growing focus on setting objectives and targets within the context of sustainability, potentially reflecting the emergence of frameworks like the Sustainable Development Goals (SDGs) and their integration into educational discourse. The juxtaposition of these themes across different years highlights the dynamic nature of research priorities within the field of sustainable development, with scholars gradually shifting focus from foundational concepts to more specialized domains such as education and cultural sustainability.

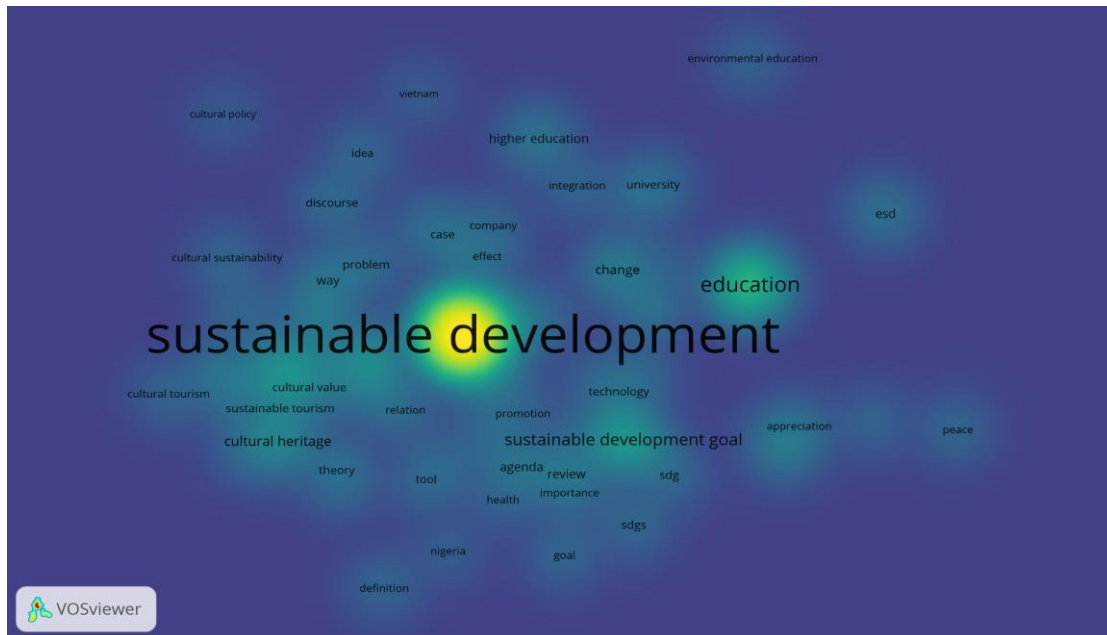


Figure 3. Density Visualization

Source: Data Analysis, 2024

The density visualization highlights the varying levels of research intensity across different terms, with "Sustainable development" standing out as the focal point with high intensity of light. This indicates that sustainable development is a central and extensively researched topic within the field, garnering significant attention and scholarly interest. The term serves as a hub around which other concepts and themes revolve, suggesting its overarching importance and relevance in the discourse on sustainability.

Conversely, the terms with less intensity of light suggest areas that may be relatively underexplored or receive less attention in current research. These terms represent potential avenues for future inquiry and expansion within the field of sustainable development. Researchers may consider delving deeper into these areas to contribute to a more comprehensive understanding of sustainability issues and to address emerging challenges. By exploring topics such as cultural heritage, education, and health with greater depth and focus, scholars can uncover new insights, identify gaps in knowledge, and pave the way for innovative solutions and interventions.

Future research directions may

include interdisciplinary investigations that bridge gaps between different thematic areas, such as exploring the intersections between cultural heritage and sustainable development or examining the role of education in promoting environmental sustainability. Additionally, there may be opportunities for comparative studies to assess the effectiveness of various strategies and interventions in achieving sustainable development goals across different contexts. Furthermore, as the field continues to evolve, there may be a need for longitudinal studies to track changes and trends in sustainability discourse over time, helping to inform policy decisions and shape sustainable development agendas for the future.

## 5. CONCLUSION

In conclusion, the bibliometric analysis offers valuable insights into the multifaceted landscape of sustainable development research. The identification of distinct clusters of terms highlights diverse thematic areas, ranging from cultural heritage preservation to educational reform, each contributing to the broader discourse on sustainability. Temporal shifts and evolving emphases underscore the dynamic nature of

research priorities, with scholars transitioning from foundational concepts to more specialized domains over time. The density visualization further emphasizes the centrality of "Sustainable development" as a focal point of research, while also pointing towards potential areas for future inquiry. Moving forward, interdisciplinary investigations, comparative studies, and

longitudinal analyses offer promising avenues for advancing knowledge and addressing emerging challenges in sustainable development, ultimately guiding policy decisions and shaping agendas for a more sustainable future.

## REFERENCES

- [1] P. Wei, Y. Wang, Z. Pan, H.-T. Liao, and X. Zhou, "Towards the Convergence of Green and Digital Transformation of Creative and Cultural Industries: An Exploratory Bibliometric Analysis for Sustainable Development," in *2020 Management Science Informatization and Economic Innovation Development Conference (MSIED)*, IEEE, 2020, pp. 259–263.
- [2] İ. YAYLA, "Bibliometric Analysis of Literature on Religious Tourism in Web of Science," *J. Tour. Gastron. Stud.*, vol. 11, no. 3, pp. 1844–1856, 2023.
- [3] C. Isensee, K.-M. Griese, and F. Teuteberg, "Sustainable artificial intelligence: A corporate culture perspective," in *Sustainability Management Forum | NachhaltigkeitsManagementForum*, Springer, 2021, pp. 217–230.
- [4] C. Zheng, J. Tham, and S. M. F. Azam, "Links and Interaction of Villagers and Rural Revitalization: A Bibliometric Review," *J. Namibian Stud. Hist. Polit. Cult.*, vol. 33, pp. 1631–1648, 2023.
- [5] A. Hlastec, D. Mumel, and L. Hauptman, "Is There a Relationship between Self-Enhancement, Conservation and Personal Tax Culture?," *Sustainability*, vol. 15, no. 7, p. 5797, 2023.
- [6] H. T. G. Tran, "An exploration of the potential for sustainable tourism development on selected Vietnamese islands." Southern Cross University, 2016.
- [7] S. S. Shah, N. Ali, M. Anwer, and A. Jaffar, "Nurturing sustainable teachers' leadership culture: Possibilities, challenges, stakeholders' behavior analysis in the context of Pakistan," *Int. J. Res.*, vol. 2, no. 3, 2015.
- [8] S. Bag, "Supplier management and sustainable innovation in supply networks: An empirical study," *Glob. Bus. Rev.*, vol. 19, no. 3\_suppl, pp. S176–S195, 2018.
- [9] L. Fassam, S. Copsy, and A. Gough, "Network Northamptonshire: total transport smart city procurement theoretical framework for sustainable economic and social change," *Int. J. Adv. Logist.*, vol. 5, no. 3–4, pp. 117–124, 2016.
- [10] F. Periac, A. David, and Q. Roberson, "Clarifying the interplay between social innovation and sustainable development: a conceptual framework rooted in paradox management," *Eur. Manag. Rev.*, vol. 15, no. 1, pp. 19–35, 2018.
- [11] A. Zbucea, "Traditional Crafts. A Literature Review Focused on Sustainable Development," *Cult. Soc. Econ. Polit.*, vol. 2, no. 1, pp. 10–27, 2022.
- [12] G. Zhu, G. Lei, and J. Zuo, "Clan culture and internal pay gap: evidence from listed family firms," *China J. Account. Stud.*, vol. 11, no. 3, pp. 660–693, 2023.
- [13] B. Shantika, N. M. Ernawati, and N. L. A. K. Y. Sarja, "Balinese Women's Role and Gender Gap in the Sustainable Tourism Development," *Int. J. Green Tour. Res. Appl.*, vol. 3, no. 2, pp. 49–57, 2021.
- [14] S. Roscoe, N. Subramanian, C. J. C. Jabbour, and T. Chong, "Green human resource management and the enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable development," *Bus. Strateg. Environ.*, vol. 28, no. 5, pp. 737–749, 2019, doi: 10.1002/bse.2277.
- [15] H. Marini and D. G. Suharto, "Wewowo Local Wisdom in Realizing the Process Sustainable Development," *Local Wisdom Sci. Online J.*, vol. 14, no. 2, pp. 190–204, 2022.
- [16] R. G. Castro, J. Enríquez-Díaz, and B. A. García, "The role of financial education in the path towards sustainable development: A practical experience with students of secondary education," in *Financial management and risk analysis strategies for business sustainability*, IGI Global, 2021, pp. 1–19.
- [17] H. Achimugu, U. J. Ata-Agboni, and A. Aliyu, "Ethnicity, Ethnic Crisis, and Good governance in Nigeria: Implications for Sustainable National Development," *Public Policy Adm. Res.*, vol. 2, no. 12, 2013.
- [18] N. Suvorov and I. Suvorova, "Scientific Basis of the Strategy of Holistic Sustainable Development of an Individual, Nation, Civilization," *Eur. J. Sustain. Dev.*, vol. 8, no. 2, p. 225, 2019.