

Bukti Pengalaman Melakukan Review Jurnal Internasional Bereputasi

Beberapa kegiatan review jurnal internasional bereputasi yang pernah dilakukan disampaikan pada tabel berikut.

Tanggal Review	Nama Jurnal	Indeksasi	Judul Artikel
20 Agustus 2024	Heliyon	Scopus (Q1)	Tourism promotion during emergency response to Omicron subvariant outbreak (revisi kedua dari penulis)
10 Juli 2024	Heliyon	Scopus (Q1)	Tourism promotion during emergency response to Omicron subvariant outbreak (revisi pertama dari penulis)
13 Mei 2024	Heliyon	Scopus (Q1)	Tourism promotion during emergency response to Omicron subvariant outbreak
7 April 2024	Heliyon	Scopus (Q1)	Influence of financial accounting information transparency on supply chain financial decision-making (revisi pertama dari penulis)
13 Maret 2024	Heliyon	Scopus (Q1)	Influence of financial accounting information transparency on supply chain financial decision-making
18 September 2023	Heliyon	Scopus (Q1)	Rural recreation tourism in the Panxi region of China in the context of ecological welfare (revisi pertama dari penulis)
27 Juli 2023	Heliyon	Scopus (Q1)	Rural recreation tourism in the Panxi region of China in the context of ecological welfare
8 Juni 2024	Journal of Asian Architecture and Building Engineering	Web of Science dan Scopus (Q1)	Exploring Research Progress and Development Trends in Tibetan Villages of China: A Bibliometric Visualization Study
3 Maret 2023	Cogent Business & Management	Web of Science dan Scopus (Q2)	Green Intellectual Capital Disclosure On Financial Performance Moderated Family Ownership
7 Agustus 2022	Cogent Business & Management	Web of Science dan Scopus (Q2)	Does board capital improve climate change disclosures?

Beberapa rekam kegiatan review pada jurnal internasional bereputasi (Jurnal Heliyon (Q1)) terlihat pada profil ORCID dengan link berikut: <https://orcid.org/my-orcid?orcid=0000-0001-7392-9994>

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- Emails:** fafurida@mail.unnes.ac.id
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- Other IDs:** SciProfiles: 1023929
- Keywords:** (empty)
- Countries:** (empty)
- Names:** Name: Fafurida
- Biography:** (empty)
- Activities:**
 - Employment (0):** Add
 - Education and qualifications (0):** Add
 - Professional activities (0):** Add
- Peer review (6 reviews for 1 publication/grant):**
 - Review activity for **Heliyon.** (6)
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Link Jurnal Heliyon: <https://www.cell.com/heliyon/current>



Ucapan Terima Kasih Atas Review Artikel Dari Jurnal Heliyon

- **Email Tanggal 20 Agustus 2024**

Manuscript Number: HELIYON-D-24-13882R4 (Review Revisi Artikel)

Judul: Tourism promotion during emergency response to Omicron subvariant outbreak

Review for Heliyon - manuscript accepted External Inbox X



Heliyon em@editorialmanager.com

to me

Manuscript Number: HELIYON-D-24-13882R4

Tourism promotion during emergency response to Omicron subvariant outbreak

Dear Dr Fafurida,

Thank you for reviewing the above referenced manuscript for Heliyon, an open access journal that is part of the Cell Press family. With your help, we have reached an accept decision on this manuscript.

Thank you for your contribution and time in reviewing this manuscript, which not only assisted us in reaching our decision, but also enables the author(s) to disseminate their work at the highest possible quality.

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Kind regards,

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- **Email Tanggal 10 Juli 2024**

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Judul: Tourism promotion during emergency response to Omicron subvariant outbreak

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Heliyon em@editorialmanager.com

to me

Manuscript Number: HELIYON-D-24-13882R2

Tourism promotion during emergency response to Omicron subvariant outbreak

Dear Dr Fafurida,

Thank you for reviewing the above referenced manuscript for Heliyon, an open access journal that is part of the Cell Press family. I greatly appreciate your contribution and time, which not only assisted me in reaching my decision, but also enables the author(s) to disseminate their work at the highest possible quality. Without the dedication of reviewers like you, it would be impossible to manage an efficient peer review process and maintain the high standards necessary for a successful journal.

I hope that you will consider Heliyon as a potential journal for your own submissions in the future.

Kind regards,

Jan Willem

Associate Editor - Tourism & Hospitality

Heliyon

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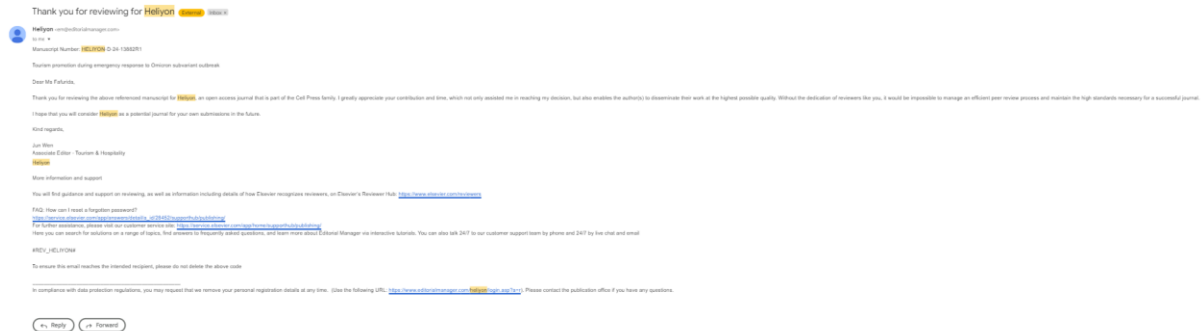
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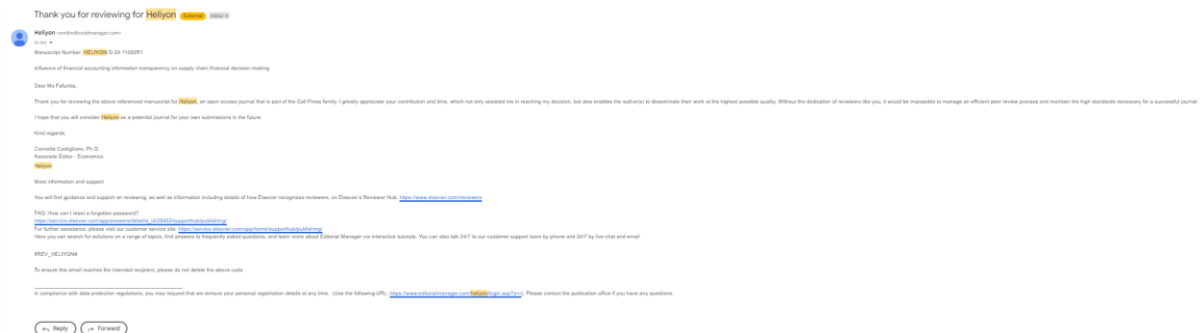
Judul: Tourism promotion during emergency response to Omicron subvariant outbreak



- **Email Tanggal 7 April 2024**

Manuscript Number: HELIYON-D-24-11052R1 (Review Revisi Artikel)

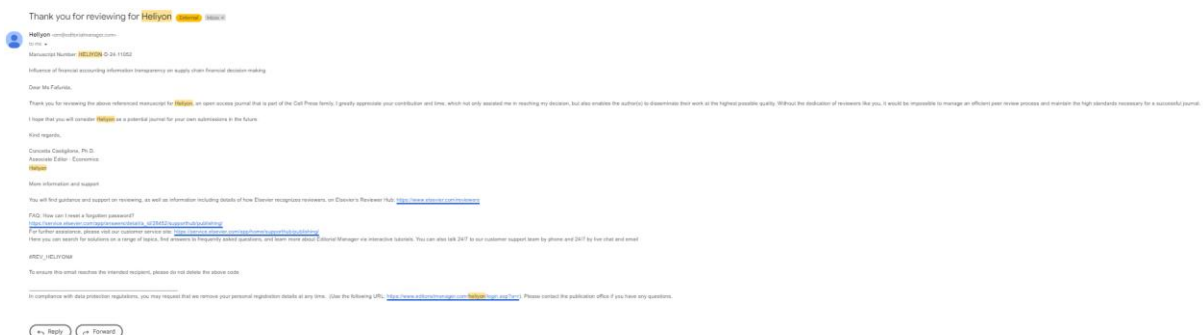
Judul: Influence of financial accounting information transparency on supply chain financial decision-making



- **Email Tanggal 13 Maret 2024**

Manuscript Number: HELIYON-D-24-11052

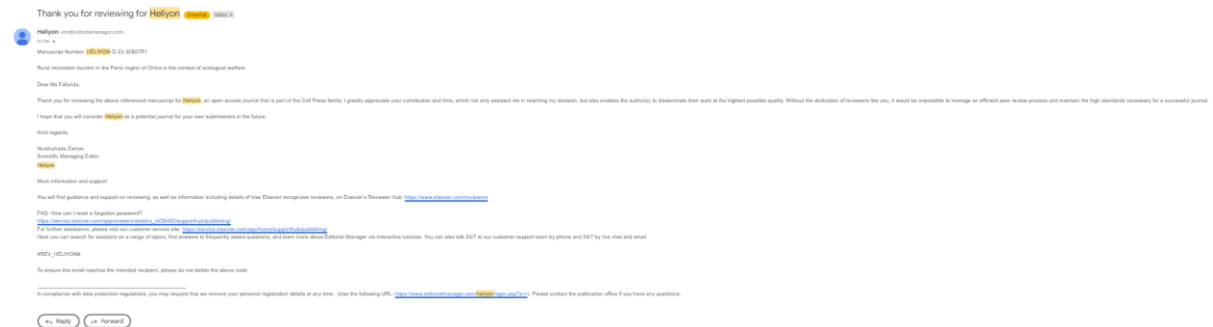
Judul: Influence of financial accounting information transparency on supply chain financial decision-making



- **Email Tanggal 18 September 2023**

Manuscript Number: HELIYON-D-23-30807R1 (Review Revisi Artikel)

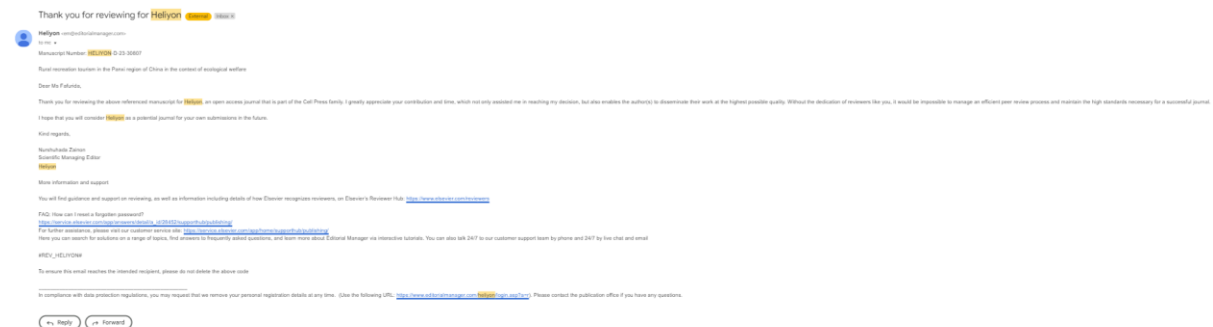
Judul: Rural recreation tourism in the Panxi region of China in the context of ecological welfare



- **Email Tanggal 27 Juli 2023**

Manuscript Number: HELIYON-D-23-30807

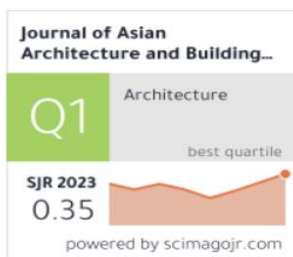
Judul: Rural recreation tourism in the Panxi region of China in the context of ecological welfare



Beberapa rekam kegiatan review jurnal internasional bereputasi pada jurnal terindeks *web of science* terlihat dalam profil *web of science* dengan link berikut:
<https://www.webofscience.com/wos/op/peer-reviews/summary>

The screenshot shows a user interface for 'My peer review records'. It features a purple header with a '+ Add a review' button. Below the header, there are three tabs: 'PEER REVIEW', 'GRANT REVIEW', and 'PEER REVIEW INTEREST'. The 'PEER REVIEW' tab is active. On the left, there are 'Refine results' filters including 'Quick filters' (Verified reviews, Publicly displayed reviews, Reviews with content, Community reviews, Web of Science Core Collection publications), 'Journals' search, 'Journal Research Field (ESI)' search, and 'During Period' (Start to End). A 'Filter' button is at the bottom left. The main content area shows '3 peer review records of 3 manuscripts' with a 'Sort by: Date reviewed: newest first' dropdown and pagination '< 1 of 1 >'. Three records are listed: 1) 'Exploring Research Progress and Development Trends in Tibetan Villages of China: A Bibliometric Visualization Study' (Journal of Asian Architecture and Building Engineering, Jun 8, 2024, status: approved), 2) 'GREEN INTELLECTUAL CAPITAL DISCLOSURE ON FINANCIAL PERFORMANCE MODERATED FAMILY OWNERSHIP' (Cogent Business & Management, Mar 3, 2023, status: approved), and 3) 'Does board capital improve climate change disclosures?' (Cogent Business & Management, Aug 7, 2022, status: approved, 5 Citations). Each record has icons for status, bookmark, comment, edit, and delete.

Link Journal of Asian Architecture and Building Engineering:
<https://www.tandfonline.com/journals/tabe20>



Ucapan Terima Kasih Atas Review Artikel Dari Journal of Asian Architecture and Building Engineering

- **Email tanggal 8 Juni 2024**

Manuscript: JAABE2405370AH entitled "Exploring Research Progress and Development Trends in Tibetan Villages of China: A Bibliometric Visualization Study"

The screenshot shows an email from 'Journal of Asian Architecture and Building Engineering' to 'Dr. Fafurida' dated '08-Jun-2024'. The email content includes: 'Thank you for submitting your review of Manuscript ID JAABE2405370AH for the Journal of Asian Architecture and Building Engineering', 'Thank you for reviewing manuscript # JAABE2405370AH entitled "Exploring Research Progress and Development Trends in Tibetan Villages of China: A Bibliometric Visualization Study" for the Journal of Asian Architecture and Building Engineering', and 'On behalf of the Editors of the Journal of Asian Architecture and Building Engineering, we appreciate the voluntary contribution that each reviewer gives to the Journal. We thank you for your participation in the online review process and hope that we may call upon you again to review future manuscripts.' The email is signed by 'Dr. Fang Qing, Field Editor, Journal of Asian Architecture and Building Engineering' with contact information 'fangqing@tsinghua.edu.cn, imaqing@hotmail.com'. At the bottom, there are 'Reply' and 'Forward' buttons.

Link Jurnal Cogent Business and Management:
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Sampel Ucapan Terima Kasih Atas Review Artikel Dari Jurnal Cogent Business and Management

- **Email tanggal 4 Maret 2023**



Heliyon

Assessing Rural Tourism's Contribution to Sustainable Cities and Communities: A Systematic Review (2022-2024) --Manuscript Draft--

Manuscript Number:	HELIYON-D-24-65649
Article Type:	Systematic review and meta-analysis
Section/Category:	Social Sciences
Keywords:	Country/regional contexts; Cultural heritage; Rural tourism; Socio-cultural aspect; Sustainable community; SDG 11; Systematic Review
Abstract:	<p>Rural tourism (RT) plays an important role in advancing the Sustainable Development Goals (SDGs), but attention to sustainable cities and rural areas (SDG 11) in the rural context is fragmented. Following the guideline of PRISMA 2020, this study presents a systematic review of 66 empirical studies on RT and SDG 11 from the Web of Science (WoS) defined categories (2022-2024, hereafter RT-SDG11). Coding frameworks were derived from the literature. Multiple criteria for data screening were adopted (see section 2.1), and interrater coding agreement reached 92%. Content analysis was then used for the data. analysis. Results showed that most RT-SDG11 studies were mainly published in 7 journals; however, the distribution of research contexts by country/region was skewed towards Asian contexts (n = 53). Second, most researchers used the socio-cultural aspect (n = 51), followed by the environmental (n = 32) and economic (n = 21) aspects. Third, the preservation of cultural heritage (SDG 11.4; n = 28) and regional development planning (SDG 11.a; n = 23) were two streams of SDG 11. Concerning the four UN principles, we found that safety (n = 37), comprising SDGs 11.1, 11.2, and 11.4) and sustainability (n = 32; comprising SDGs 11.6, 11.a, and 11.b) were most explored. Fourth, empirical studies on economic sustainability, socio-cultural, and environmental safety within Asian contexts were identified as the mainstream of RT-SDG11, while studies on community resilience are relatively scarce. The data of this research focused on the WoS-defined categories. Future research can include other databases (e.g., Scopus). Implications for the tourism industry are provided. This article was funded by the National Science and Technology Council.</p>

Heliyon

Thank you for agreeing
to review this manuscript





PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	p.1
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	Please see RISMA 2020 for Abstracts Checklist
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	p.5; sec. 1.3
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	p.6; sec. 1.3
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	p.7; sec. 2.1
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	p.7; sec. 2.1
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	p.7; sec. 2.1
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	p.7; sec. 2.1
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	p.7; sec. 2.1
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	p.7; sec. 2.1
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	p.7; sec. 2.1
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	n/a
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	n/a
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	pp.7-10; sec. 2.2
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	pp.7-10; sec. 2.2
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	pp.7-10; sec. 2.2
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	n/a
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	n/a
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	n/a



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	n/a
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	n/a
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	pp.10-20; sec. 3
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	pp.10-20; sec. 3
Study characteristics	17	Cite each included study and present its characteristics.	pp.10-20; sec. 3
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	pp.10-20; sec. 3
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	pp.10-20; sec. 3
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	pp.10-20; sec. 3
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	pp.10-20; sec. 3
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	n/a
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	n/a
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	n/a
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	n/a
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	pp. 21-26. Sec. 4
	23b	Discuss any limitations of the evidence included in the review.	p.27. Sec. 5
	23c	Discuss any limitations of the review processes used.	p.27. Sec. 5
	23d	Discuss implications of the results for practice, policy, and future research.	p.28. Sec. 6
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	n/a
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	n/a
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	n/a
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	p.29
Competing	26	Declare any competing interests of review authors.	p.29



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
interests			
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	p.29

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71. This work is licensed under CC BY 4.0. To view a copy of this license, visit <https://creativecommons.org/licenses/by/4.0/>.



PRISMA 2020 for Abstracts Checklist

Section and Topic	Item #	Checklist item	Reported (Yes/No)
TITLE			
Title	1	Identify the report as a systematic review.	Yes, line 1
BACKGROUND			
Objectives	2	Provide an explicit statement of the main objective(s) or question(s) the review addresses.	Yes, lines 6-7
METHODS			
Eligibility criteria	3	Specify the inclusion and exclusion criteria for the review.	Yes, lines 9-10
Information sources	4	Specify the information sources (e.g. databases, registers) used to identify studies and the date when each was last searched.	Yes, line 7
Risk of bias	5	Specify the methods used to assess risk of bias in the included studies.	No
Synthesis of results	6	Specify the methods used to present and synthesise results.	Yes, lines 10
RESULTS			
Included studies	7	Give the total number of included studies and participants and summarise relevant characteristics of studies.	Yes, lines 7;10-20
Synthesis of results	8	Present results for main outcomes, preferably indicating the number of included studies and participants for each. If meta-analysis was done, report the summary estimate and confidence/credible interval. If comparing groups, indicate the direction of the effect (i.e. which group is favoured).	Yes, lines 7;10-20
DISCUSSION			
Limitations of evidence	9	Provide a brief summary of the limitations of the evidence included in the review (e.g. study risk of bias, inconsistency and imprecision).	Yes, lines 20-21
Interpretation	10	Provide a general interpretation of the results and important implications.	Yes, line 21
OTHER			
Funding	11	Specify the primary source of funding for the review.	Yes, line 22
Registration	12	Provide the register name and registration number.	No

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71. This work is licensed under CC BY 4.0. To view a copy of this license, visit <https://creativecommons.org/licenses/by/4.0/>

Assessing Rural Tourism's Contribution to Sustainable Cities and Communities: A Systematic Review (2022-2024)

Carlos Iban

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A funding statement

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A conflict of interest statement

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

An ethics statement

This article is a systematic literature review focused on the analysis of published articles. There are no human participants in this article. Institutional review board approval for this ethical/informed consent statement was not applicable.

Data availability statement

The data that support the findings of this study are openly available in Harvard University's Dataverse at <https://doi.org/10.7910/DVN/U4XOXR>.

1 **Assessing Rural Tourism’s Contribution to Sustainable Cities and** 2 3 **Communities: A Systematic Review (2022-2024)**

3 **Abstract**

4 Rural tourism (RT) plays an important role in advancing the Sustainable Development Goals
5 (SDGs), but attention to sustainable cities and rural areas (SDG 11) in the rural context is
6 fragmented. Following the guideline of PRISMA 2020, this study presents a systematic review
7 of 66 empirical studies on RT and SDG 11 from the Web of Science (WoS) defined categories
8 (2022-2024, hereafter RT-SDG11). Coding frameworks were derived from the literature.
9 Multiple criteria for data screening were adopted (see section 2.1), and interrater coding
10 agreement reached 92%. Content analysis was then used for the data. analysis. Results showed
11 that most RT-SDG11 studies were mainly published in 7 journals; however, the distribution of
12 research contexts by country/region was skewed towards Asian contexts ($n = 53$). Second, most
13 researchers used the socio-cultural aspect ($n = 51$), followed by the environmental ($n = 32$) and
14 economic ($n = 21$) aspects. Third, the preservation of cultural heritage (SDG 11.4; $n = 28$) and
15 regional development planning (SDG 11.a; $n = 23$) were two streams of SDG 11. Concerning
16 the four UN principles, we found that safety ($n = 37$), comprising SDGs 11.1, 11.2, and 11.4)
17 and sustainability ($n = 32$; comprising SDGs 11.6, 11.a, and 11.b) were most explored. Fourth,
18 empirical studies on economic sustainability, socio-cultural, and environmental safety within
19 Asian contexts were identified as the mainstream of RT-SDG11, while studies on community
20 resilience are relatively scarce. The data of this research focused on the WoS-defined categories.
21 Future research can include other databases (e.g., Scopus). Implications for the tourism
22 industry are provided. This article was funded by the National Science and Technology Council.

23
24 **Keywords:** Country/regional contexts, Cultural heritage, Rural tourism, Socio-cultural aspect,
25 Sustainable community, SDG 11, Systematic review.
26

1. Introduction

Rural tourism (RT) is essential for preserving cultural heritage, protecting natural landscapes, and stimulating local economies (Karali et al., 2024; Lane, 1994; Valderrama & Polanco, 2022). Based on a narrative approach, Lane (1994) furnished an overview of tourism development in rural areas as a pioneering review of RT research. RT does occur as a distinct activity with unique characteristics that vary by people and place, therefore entailing a special link between RT and the notion of sustainability (Lane & Kastenholz, 2015; Telfer & Sharpley, 2007). On the other hand, RT is highlighted as experiential activities fitted to the cultural assets, emphasising visitors' engagement with the natural environment to increase the well-being of suburban regions (Hsiao & Tang, 2024). Meanwhile, it is increasingly perceived as a tool for improving the economic viability of hitherto neglected regions (Utami et al., 2023). However, it can irritate local communities due to overtourism, leading to overcrowding (Ghaderi et al., 2022).

According to a global survey conducted by the United Nations World Tourism Organization in 2023, policies for sustainable communities are mainly generated by tourism activities that transpire in rural areas. Of the 47 countries that responded to the survey, 29 had a response rate that considered RT as an indirect priority in formulating policies to make communities sustainable. Most of them, 59%, had RT as one of their top priorities. Rural destinations for sustainable development are envisioned based on the principles of edifying a prosperous economy, safeguarding nature's biodiversity, and preserving cultural heritage.

1.1 Tourism research and the UN's SDGs: from urban to rural perspectives

Tourism research has often been amalgamated with sustainable development for decades. These blended topics have captivated substantial research engagement, particularly following

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the United Nations (UN) inception of the Sustainable Development Goals (SDGs) in 2015. According to the UN (2015), one of the goals is to seek inclusive, safe, resilient, and sustainable cities and human settlements, which is also known as SDG 11. The ten sub-goals of SDG 11 include: ensuring adequate, safe, and affordable housing (11.1), providing accessible and sustainable transport systems (11.2), promoting inclusive participation in planning and management (11.3), protecting cultural and natural heritage (11.4), and strengthening disaster resilience (11.5). It is also important to reduce environmental impacts by prioritising air quality and waste management (11.6), to promote positive economic, social, and environmental links between urban and rural areas (11.a), to implement tailored sustainable development policies (11.b), and to help least developed countries build sustainable and resilient buildings using local materials (11.c). However, most SDG 11 research focuses on cities or metropolitan regions (Fernández-Díaz et al., 2023). This study analysed SDG 11 from a rural perspective.

1.2 Research on the UN macro elements and ten sub-goals of SDG 11

67 Previous research also focused on the four UN macro elements (inclusive, safe, resilient, and
68 sustainable) and 10 sub-goals (SDGs 11.1-11.7; 11.a-11.c) individually. Few scholars have
69 related the four high-level principles to SDG 11 sub-goals. This study suggested some
70 connections between them. First, inclusiveness ensures that everyone in the community has
71 fair and equal access to tourism advantages and opportunities (Scheyvens & Biddulph, 2018).
72 Researchers say inclusive tourism may help individuals participate in their communities and
73 make decisions. Huo et al. (2023) suggested including many stakeholders in planning and
74 management for inclusive development. Inclusive socio-ecological regions have improved
75 community connections and social fairness by linking place meanings to locally defined
76 landscape units (Masterson et al., 2017). Thus, SDG 11 objectives 11.3 and 11.7 promote
77 tourism benefits equity via inclusivity.

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79 Safety is protecting society from danger, risk, or injury (Hollnagel, 2014). Second,
80 governments and policymakers must balance sustainable development and safe living
81 circumstances. While Adabre and Chan (2019) advocate for sustainable and affordable housing,
82 Tiwari and Phillip (2021) argue for safe, high-quality public transit. Consequently, preserving
83 and safeguarding cultural and natural heritage from negative impacts is essential for
84 maintaining community safety (Bonazza et al., 2021). Thus, community safety requires
85 protecting against negative cultural and natural heritage consequences. By securing local
86 people's living environments and heritage resources, the safety aspect of RT supports SDGs
87 11.1, 11.2, and 11.4.

88
89 Third, resilience involves how well communities can adapt to and recover from such
90 disturbances, whether natural or man-made, such as disasters or other economic disruptions
91 (Southwick et al., 2014). Relatedly, the available literature shows that community resilience
92 can be built through preparedness and adaptive responses to such challenges (Imperiale &
93 Vanclay, 2021). Sheller's (2020) study explores the rationale for rebuilding tourism by
94 developing resilient and sustainable tourism infrastructure based on domestic raw materials. In
95 a related article, Heijman et al. (2019) explain that rural resilience is the ability of a rural area
96 to absorb and successfully adapt to external shocks, thus ensuring that the quality of life
97 remains sufficiently good. Therefore, the resilience dimension promotes SDGs 11.5 and 11.c,
98 by raising awareness about disaster risk reduction and how local resources can be used to build
99 resilience in rural destinations.

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101 Fourth, sustainability balances current and future requirements (Hall, 2019). Scholars
102 emphasise that tourism greatly influences physical surroundings, requiring eco-friendly travel.

103 C. Liu et al. (2020) and Nooripoor et al. (2021) renegotiated two RT issues: motivating
104 communities to care for the environment and raising eco-awareness. Effective planning and
105 targeted policies yield urban-rural economic, social, and environmental benefits (Baffoe et al.,
106 2021; Pan et al., 2018). RT raises eco-awareness and reduces the effect by adopting sustainable
107 development policies, contributing to SDGs 11.6, 11.a, and 11.b.

108
109 The regional context is important for RT research. Past research has sought to identify and
110 explore whether areas have unique characteristics for development. For example, Joshi et al.
111 (2024) across Europe demonstrate that RT can influence local economies through the growth
112 of communities, where sustainable preservation of heritage tends to be a priority in most cases.
113 Ramaano (2023) argues that geographic information systems benefit local people with major
114 operations in Africa through cultural and community-based activities. American researchers
115 assessed residents' notions of RT inclusivity and how it hurdles sustainability (Soulard et al.,
116 2023). Therefore, RT research emphasised that it is important to accommodate the local social,
117 cultural, and environmental conditions.

118 119 **1.3 Reviews on RT research and sustainability: A need to link RT and its relevance to** 120 **SDG 11**

121 A deeper understanding of RT and its relationship to sustainability is critical (Madanaguli et
122 al., 2023; Qu et al., 2022). Regarding systematic review, researchers have shown interest in
123 synthesising and integrating RT and sustainable concepts (Rosalina et al., 2021). A systematic
124 review underlines the potential of indicating positive impacts on rural sustainability and giving
125 directions toward further research simultaneously for creating change in the positive direction
126 in rural areas. The main purpose of this analysis is to systematically review the study trends on
127 RT and their relevance to the goal of sustainable community development in SDG 11 (RT-

128 SDG11). Most previous review studies have been applied to different contexts, such as “rural
129 tourism and rural homestay tourism” (Janjua et al., 2021), “forty years of the rural tourism
130 research” (Karali et al., 2024), and “rural tourism and sustainable territorial development”
131 (Valderrama & Polanco, 2022). Compared to related papers, the current study offers significant
132 contributions to RT research and the broader goals of SDG 11. This is achieved by establishing
133 a link to RT-SDG11, emphasising inclusive human empowerment, safety promotion, resilience,
134 and sustainable communities in rural areas. In terms of the research period, recent reviews have
135 covered the period from 2010 to 2022 as the last year of research (Joshi et al., 2024; Madanaguli
136 et al., 2023). Nevertheless, there is a need for more updated publications to observe the
137 transformation of research trends, especially after the COVID-19 outbreak (Karali et al., 2024).
138 The current research is being carried out to bring knowledge to date on research developments
139 and trends in RT-SDG11. The research raises the following research questions (RQs):

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141 RQ1: What are the trends in empirical RT research on SDG 11 from 2022 to 2024 (first quarter),
142 including journals and countries/regions over time?

143 RQ2: What are the trends in research aspects (e.g., economic, socio-cultural, environmental)
144 that researchers have adopted?

145 RQ3: Among the empirical research in the field, which sub-goals of SDG 11 (e.g., 11.1-11.7,
146 11.a, 11.b, 11.c) have been most researched in rural tourism, and how do they relate to
147 the UN’s missions of SDG 11 (inclusive, safe, resilient, sustainable)?

148 RQ4: Among the empirical research in the field, what are the trends in the relationships
149 between aspects of rural tourism research and SDG 11 in specific countries/regions?

150

151 **2. Methods**

152 **2.1 Data**

153 Based on PRISMA, procedures for data inclusion using paper identification, screening,
154 eligibility, and finally, the included data set. In identification, we used "rural tourism" as a
155 search term to acquire applicable research papers in the categories of hospitality, leisure, sport,
156 and tourism. This research category is characterised by the Web of Science (WoS). This
157 international academic source contains publications from paramount tourism journals,
158 including the Journal of Sustainable Tourism and Current Issues in Tourism. Following past
159 research (Freire & Veríssimo, 2021), the WoS was selected to have esteemed publications
160 comprising rigorous standard that includes a well-organised peer review process in the tourism
161 area. The search timeframe was set between 2022 and Q1 2024 to ensure that we included the
162 latest research. This research was completed on April 22, 2024. Selecting 2022 as its genesis
163 was based on the global introduction of the COVID-19 vaccine in February 2021 and the fact
164 that international air travel recovered expeditiously in 2022, boosting tourism into a new phase.
165 According to the WoS, 107 articles were identified in this phase. Second, to select publications
166 per our objectives, we used the new WoS feature category "Sustainable Development Goals"
167 to identify research articles categorized by SDG 11. This yielded 74 papers. One of the last
168 requirements was that the paper relied on empirical research. Two researchers independently
169 reviewed all 74 papers, and this screening process resulted in the exclusion of 8 non-empirical
170 papers, leaving 66 papers for content analysis. There is no discrepancy between the screening
171 results of the two researchers. This review has not been registered. This article was funded by
172 the National Science and Technology Council. There are no competing interests in this review.

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174 **2.2 Coding framework**

175 In line with the research objectives, a two-dimensional coding framework was proposed, as
176 shown in Table 1, where it is explained in more detail which dimension of focus and sub-
177 aspects within it are to be used in this current review study. Here, RT is divided into three

178 dimensions: economic, socio-cultural, and environmental. From an economic point of view,
179 tourism directly creates jobs and income for communities, thus providing a potential way to
180 alleviate poverty through entrepreneurship. It also includes cooperative development initiatives
181 with local stakeholders to enable peripheral communities to attract more tourists and thus
182 promote the development of local small businesses. In addition to economic consideration, a
183 socio-cultural aspect strengthens communities and preserves traditional ways of life. Finally,
184 environmental aspect highlights eco-awareness and empowers communities to protect natural
185 resources.

186

187 Next, a dimension looks at the four macro aspects of SDG 11 was interpreted. The first is
188 inclusive, which embodies the notion of making sure that every person in a community has
189 equal access to tourism activities and gains from them equitably. Inclusiveness includes two
190 sub-goals: inclusive planning and management (11.3) and provision of inclusive ecological and
191 community spaces (11.7). Safety, the second aspect, refers to protecting communities from risk,
192 danger, and harm. In SDG 11, the safety aspect is related to promoting safe and affordable
193 livelihoods (11.1), effective and safe transport systems (11.2), and preserving natural and
194 cultural heritage (11.4). Thirdly, it would refer to resilience, that is, the ability of communities
195 to adapt and recover from disruptions, such as natural disasters or economic crises. The
196 resilience aspect includes disaster recovery (11.5) and supporting least developed countries to
197 design durable, sustainable structures with local materials (11.c). Finally, sustainable resource
198 management satisfies current demands without compromising future needs. The aspect of
199 sustainability in SDG 11 includes prioritising air quality and waste management to reduce
200 environmental effects (11.6), planning to improve urban-rural economic, social, and
201 environmental ties (11.a), and tailoring policies for sustainable development (11.b). All 66
202 papers were then coded by two researchers using the criteria as proposed in the framework.

203 The independent coding process was finished in two rounds. This result of interrater coding
 204 agreement reached 92.42%, showing a high reliability of the coding results. Each disagreement
 205 was resolved through discussions.

Table 1. Coding Framework

Dimensions of main focus	Sub-aspects	Description
Rural tourism	Economic Aspect	RT directly contributes to generating employment and income for communities and delivering possibilities to exit poverty through entrepreneurship. RT also forms collaborative initiatives with local partners to help peripheral communities attract more visitors and promote the development of local small businesses (Scheyvens & Hughes, 2019; Telfer & Sharpley, 2007).
	Socio-cultural Aspect	RT empowers local communities and safeguarding traditional lifestyles (Everett & Aitchison, 2008; Eyisi et al., 2023).
	Environmental Aspect	RT encourages communities to preserve natural resources and raising awareness about environmental issues (C. Liu et al., 2020; Nooripoor et al., 2021; Pan et al., 2018).
UN's four macro aspects and SDG 11's sub-goals	Inclusiveness	Inclusiveness embodies the principle of guaranteeing that every individual within the community has fair and equal access to the advantages and prospects of engaging in tourism activities (Scheyvens & Biddulph, 2018). In SDG 11, inclusive aspects encompass: inclusive participatory in planning and management (11.3) (Huo et al., 2023) as well as providing inclusive ecological and communal areas (11.7) (Masterson et al., 2017).
	Safe	Safety generally means protecting communities from risk, danger, or harm (Hollnagel, 2014). In SDG 11, safety aspect represent: advancing safe and affordable living (11.1) (Adabre & Chan, 2019), effective and safe transportation systems (11.2) (Tiwari & Phillip, 2021), protect and safeguard cultural and natural heritage (11.4) (Bonazza et al., 2021).
	Resilience	Resilience refers to the capacity of communities to adjust and recover from disruptions, such as natural disasters or economic crises (Heijman et al., 2019; Southwick et al., 2014) In SDG 11, resilience aspect encompass: resilience from disaster (11.5) (Imperiale & Vanclay, 2021) and supporting least developed nations in developing sustainable and resilient structures using local resources (11.c) (Sheller, 2020).

Sustainable

Sustainability entails the prudent use of resources in a way that satisfies present need while safeguarding the capacity of future generations to fulfill their own demands (Hall, 2019). In SDG 11, sustainable aspects encompass: prioritize air quality and waste management to reduce environmental effect (11.6) (C. Liu et al., 2020; Nooripoor et al., 2021), planning to improve urban-rural economic, social, and environmental ties (11.a) (Baffoe et al., 2021), tailoring policies for sustainable development (11.b) (Pan et al., 2018).

3. Results

This section was organised around four research questions (RQs), including the research trend and regional representation (RQ1), the distribution of research aspects adopted by RT researchers (RQ2), the relationships between SDG 11 sub-goals and UN macro-aspects in RT research (RQ3). Finally, the relationships between RT aspects and SDG11 in specific regions (RQ4) were also reported.

3.1 Results for RQ1: What are the trends in empirical RT research on SDG 11 from 2022 to 2024 (first quarter), including journals and countries/regions over time?

Table 2 presents the distribution of journals for the empirical studies on RT-SDG11 within the last three years (2022-2024). Among these, the top seven journals published 44 papers (e.g., *Journal of Sustainable Tourism*, $n = 10$; *Current Issues in Tourism* $n = 9$), accounting for 66.6% of the total 66 papers. In addition to the most productive journals, the remaining 11 journals published a total of 22 papers, an average of 2 papers per journal.

Table 2. Journals for Empirical RT-SDG11 Related Research

#	Journal	2022	2023	2024	Total
1	<i>Journal of Sustainable Tourism</i>		5	5	10
2	<i>Current Issues in Tourism</i>		7	2	9
3	<i>Tourism Management Perspectives</i>	4	2		6
4	<i>Asia Pacific Journal of Tourism Research</i>	2	3		5
5	<i>Tourism Management</i>	3		2	5

6	<i>Journal of Hospitality and Tourism Management</i>	2	3	5	
7	<i>Tourism Review</i>		4	5	
The top 7 journals (total 44 papers)		11	24	9	44
The rest of 11 journals (total 22 papers)		8	8	6	22
Total		19	32	15	66

In terms of regional contexts of research, it is dominated by the Asian context, with a total of 53 papers (see Table 3), accounting for 80.30% of the total. Both the American and European contexts consist of a total of 6 papers (Fusté-Forné, 2022; Soulard et al., 2024). African context only has one paper in this review. Such results indicate that empirical research on RT-SDG11 today mainly originated from experiences in Asia, especially China ($n = 29$). The increasing prominence of RT-SDG11 in Asian countries is drawing the attention of a growing number of experts to engage in research on this topic, while the quantity of European and American studies remains rather consistent, with only one study from Africa in 2023.

Table 3. Distribution of Research Contexts by Country/Region

#	Research contexts	2022	2023	2024	Total counts	Main countries/regions
1	Asia	16	25	12	53	China ($n = 29$)
2	Europe	2	3	2	6	Italy ($n = 2$); Spain ($n = 2$)
3	America	1	3	2	6	USA ($n = 3$)
4	Africa	0	1	0	1	South Africa ($n = 1$)

Research on the conservation of cultural heritage in attempts to enhance local economies, specifically in Asia, is usually a combination of traditional agricultural practices and tourism. For instance, in their contribution to the discourse, Dai et al. (2023) examine how tourism growth has increased income diversity and changed inhabitants' life orientation from self-service in an agrarian society to helping others in a more thorough division of labour. In contrast, Y. Liu et al. (2022) found that many farmlands have been converted for infrastructure development, leading residents to abandon their ancient agricultural practices.

242 Regarding the opposite depopulation of rural areas in Europe, generally, the most prevalent are
243 preserving historical landscapes and promoting innovative projects. For instance, Fusté-Forné
244 (2022) attests that gastronomic tourism in rural Spain has improved the local economy by
245 maintaining the flow of tourists but, at the same time, not interfering with local habits. In a
246 different study, researchers in Italy investigated how tourism-based development projects help
247 maintain rural communities from displacement and population ageing (Danzi & Figini, 2023)
248 and boost rural micro-businesses with innovative tourism projects (Biconne et al., 2023).
249 Meanwhile, research in England has focused more on immersing tourists in livestock farming
250 activities (Caffyn, 2024).

251
252 The results showed how the role of RT could contribute to achieving SDG 11. Much of the
253 research conducted in the American context focuses on community-based tourism and the
254 active participation of local citizens in the development and planning of tourism activities. In
255 their study, Soulard et al. (2024) investigated the impact of RT projects in the United States on
256 environmental conservation and community resilience in rural areas facing economic decline.
257 Rocca & Zielinski (2022) showcased the construction of clean water infrastructure in Mexico
258 through participatory planning by RT community enterprises. Mehlomakhulu and Buschke
259 (2023) highlight the potential of RT to promote sustainable wildlife attractions for income
260 generation and conservation support in South Africa.

261 262 **3.2 Results for RQ2: What are the trends in research aspects adopted by researchers?**

263 Table 4 shows the research trends in three aspects of RT and the changes in each dimension.
264 The result shows that socio-cultural research is the most popular in the field, with a total of 51
265 papers accounting for 49.03% of the total. Research with environmental aspects (32 papers;
266 30.76%) and research with economic aspects (21 papers; 20.19%) are the second streams of

267 the field. More specifically, we can see research with socio-cultural aspects continue to lead
 268 from 2022-2024, from 16 studies in 2022 to 21 in 2023 to 14 in 2024. The number of
 269 environmental studies peaks at 17 in 2023, double the number in 2022. The most constant thing
 270 is the number of business studies. In this case, it shows that experts are interested in how RT
 271 growth will affect the social, cultural, and natural surroundings. Focusing on social- cultural
 272 issues like inclusivity and resilience in SDG 11 is also linked to these results.

Table 4. Trends in Three Aspects of RT Research

#	Aspects	2022	2023	2024	Total	Reference
1	Economic aspect	6	10	5	21	Scheyvens and Hughes (2019) Telfer and Sharpley (2007)
2	Socio-cultural aspect	16	21	14	51	Everett and Aitchison (2008) Eyisi et al. (2023)
3	Environmental aspect	9	17	6	32	C. Liu et al. (2020) Nooripoor et al. (2021) Pan et al. (2018)

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 275 In most cases, research on the socio-cultural dimension looks at the impact of RT on the cultural
 276 heritage of the rural community. For example, many scholars have studied local festivals in
 277 rural areas (Chi et al., 2023; Mwesiumo et al., 2022). Those events, they reasoned, catered to
 278 the tourists, built community spirit, and preserved some of the significant traditions peculiar to
 279 that region. Similarly, another researcher investigated the effects of RT on Indigenous
 280 communities in rural areas, highlighting how community-based tourism initiatives can
 281 contribute to cultural preservation (X. Li & Wang, 2023; Rosalina et al., 2023) and community
 282 empowerment (Bennike & Nielsen, 2024; Tian et al., 2023). These studies demonstrate the
 283 significant socio-cultural benefits of RT, including the fostering of social cohesion and cultural
 284 sustainability.

286 In RT, environmental research studies address the sustainability of tourism activities and
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2 287 ecological impacts. For example, Mehlomakhulu and Buschke (2023) studied ecotourism in
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5 288 rural Africa. They explained how sustainable tourism in such rural areas might induce the
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7 289 conservation of mountains and protected areas. Similarly, P. Zhang et al. (2023) found that
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10 290 rural summer wellness tourism among urban Chinese seniors is increasing significantly. Most
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12 291 tourists are urban seniors who evade the summer heat to villages with beautiful natural scenery
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14 292 and cool weather. In this regard, Ghaderi et al. (2022) examined the essential relationships
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17 293 between local authorities and the population, in general, to reduce the pressure on the natural
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19 294 environment in a time mixed with mass tourism from rural Iran.
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24 296 This also implies that, for the most part, economic research in RT is targeted at the economic
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26 297 possibilities for developing tourism products in rural areas. For example, Fichter & Román
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29 298 (2023) investigated the value of RT at particular rustic destinations in Spain through a survey
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31 299 about perceptions towards recreation activities provided by the residents and visitors. Also,
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34 300 Tsang et al. (2022) examined agritourism in rural India, concentrating on visitors' buying
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36 301 behaviour towards tourism products of RT.
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41 303 **3.3 Results for RQ3: Among the empirical research in the field, which sub-goals (e.g.,**
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43 304 **SDGs 11.1-11.7, 11.a, 11.b, 11.c) have been most researched in rural tourism? How do**
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46 305 **they relate to the UN's missions (inclusive, safe, resilient, sustainable) of SDG 11?**
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48 306 In addition to examining three aspects of RT research, this study also identified which sub-
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51 307 goals of SDG 11 were most frequently used by field researchers. Table 5 shows the extent to
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53 308 which each of the SDG 11 sub-goals was addressed in the 66 empirical studies on RT-SDG11.
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56 309 It should be noted that because a study may address multiple sub-goals simultaneously, a
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58 310 multiple coding approach was used, resulting in the total number of sub-goals equalled to 96.
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311 Of the 96 responses, SDG 11.4 (safeguard world natural and cultural heritage) and SDG 11.a
 312 (reinforce urban-rural ties in national and regional development planning) had the highest
 313 number of responses, with 28 and 22, respectively, reflecting the high level of interest in
 314 heritage protection and urban-rural linkages.
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Table 5. Dissemination of Empirical Research on RT in Relation to SDG 11

Sub-category of SDG 11	Description	Counts*
11.1	Safe and affordable housing	10
11.2	Affordable and sustainable transport systems	4
11.3	Inclusive and sustainable urbanization	6
11.4	Protect the world’s cultural and natural heritage	28
11.5	Reduce the adverse effects of natural disasters	5
11.6	Reduce the environmental impacts of cities	5
11.7	Provide access to safe and inclusive green and public spaces	9
11.a	Strong national and regional development planning	23
11.b	Implement policies for inclusion, resource efficiency and disaster risk reduction	5
11.c	Support least developed countries in sustainable and resilient building	1

* A multiple-coding approach was used in this analysis. Total counts of responses: 96

316
 317 For example, researchers have pointed out that cultural and natural heritage is a core tourism
 318 attraction for many rural communities (X. Li & Wang, 2023; Y. Liu et al., 2022); however,
 319 balancing heritage conservation with tourism development is a challenge. RT planning should
 320 respect local cultural traditions and involve communities in heritage use and management. In
 321 addition, Soulard et al. (2024) took the example of a rural tourist community in Illinois, USA,
 322 and suggested that improving rural infrastructure and public services is crucial to enhancing
 323 the attractiveness of tourist destinations and the life quality of villagers. At the same time, it is
 324 important to avoid over-urbanization and to break the urban-rural dichotomy.
 325
 326 Research on SDG 11.1 and 11.7 is the second most popular issue, with 10 and 8 papers,
 327 respectively. For instance, studies focusing on SDG 11.1 have highlighted the importance of

1 328 improving housing and basic services in RT areas. J. Liu et al. (2023) researched rural China,
2 329 demonstrating the critical role of institutional and social embeddedness in the successful
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4 330 development of rural entrepreneurship, particularly in the context of bed and breakfast
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6 331 accommodations. Dai et al. (2023) demonstrated the importance of using traditional
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8 332 architecture in villa structures and halting the tourism agenda for ancient building replacement.
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10 333 In addition, Z. Li et al. (2024) researched rural destinations to promote idyllic settings, which
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12 334 fit with SDG 11.7, by establishing an idealised picture of rural life that strongly impacts
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14 335 visitors' choice of rural locations. The study shows that images of landscapes with idyllic life
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16 336 themes and motifs, such as fields, forests, mountains, rivers, fruits and vegetables, and flowers
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18 337 and plants, are important to the rural tourist' sensory image.
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26 339 Research on SDGs 11.2, 11.3, 11.5, 11.6, and 11.b is restricted, with only some papers available,
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28 340 while only one paper dealt with SDG 11.c. For instance, one study on SDG 11.2 indicated that
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30 341 trail-based tourism is becoming increasingly unsustainable in the rural Canadian setting
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32 342 because it is expected to lead to conflict between various trail users. The findings of the study
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34 343 show that improvement in stakeholder management and innovation in transportation and digital
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36 344 technology planning is required to reduce potential conflict (Neumann & Mason, 2023).
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38 345 Additionally, SDG 11.3 was explored through research in practices of inclusive planning in
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40 346 Colombia, where the rural peripheries were brought within the urban frameworks so that the
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42 347 rural population benefited from the social capital and presence of the municipal government
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44 348 (Rocca & Zielinski, 2022). Other studies focused on SDG 11.5, including that of Zhai et al.
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46 349 (2022), which dealt with promoting mental health for the public and improving places for
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48 350 relaxation, such as lakefronts, enabling them to be fit for tourists, particularly after COVID-19.
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51 351 In China, Zhu et al. (2022) dealt with pro-environmental behaviour, encouraging it for the rural
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53 352 areas visited by tourists and advocating for recycling, conservation of water and energy, and
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353 promoting sustainable ways of disposal of waste as a way of reducing the negative
 354 environmental impacts of tourism, SDG 11.6. Only a few studies related to SDG 11.b, such as
 355 one by Ma et al. (2022) on strategic resistance to tourism development among rural Chinese
 356 residents. Ultimately, Bennike and Nielsen (2024) highlighted the potential of utilising RT to
 357 bolster economic development in rural Nepal. This emphasises the need for international aid
 358 and investment in infrastructure and capacity building, as outlined in SDG11.c.
 359
 360 Furthermore, based on the literature, sub-goals with similar objectives were aggregated into a
 361 higher-order construct of SDG 11 (see Table 6), providing a simpler but more meaningful
 362 typological understanding of RT research. A multi-coding approach was also adopted. A total
 363 of 90 responses were received, highlighting the diverse and multifaceted nature of research on
 364 RT-SDG11. The data reveals that RT-SDG11 has mainly addressed community safety ($n = 37$;
 365 including SDGs 11.1, 11.2, and 11.4) and sustainable communities ($n = 32$; including SDG
 366 11.6, 11.a and 11.b). The subsequent 15 papers are linked to inclusive development,
 367 encompassing the remaining themes of SDGs 11.3 and 11.7.

Table 6. Four Aggregate Aspects of SDG 11 to Further Profile Empirical Research on RT in Relation to SDG 11

#	Four aspects of SDG 11	Counts*
1	Inclusive Inclusive participatory in planning and management (SDG 11.3) as well as providing inclusive ecological and communal areas (SDG 11.7).	15
2	Safe Advancing safe and affordable living (SDG 11.1), effective and safe transportation systems (SDG 11.2), protect and safeguard cultural and natural heritage (SDG 11.4),	37
3	Resilience Resilience from disaster (SDG 11.5), and aiding least developed countries in developing resilient, sustainable structures with local resources (SDG 11.c).	6
4	Sustainable prioritise air quality and waste management to reduce environmental effect (SDG 11.6), planning to improve urban-rural economic, social, and environmental ties (SDG 11.a), tailoring policies for sustainable development	32

(SDG 11.b).

* A multiple-coding approach was used in this analysis. Total counts of responses: 90

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370 For instance, Wu et al. (2022) pointed out that their research is focused on one of the civic
371 behaviours of rural residents and discussed the construction of a mutually supportive, caring,
372 safe, and inclusive community environment; hence, it contributes evidence to the aims of
373 community safety. Zhu et al. (2022) explained the environmental behaviours of RT enterprises
374 in China. They emphasised trust and cooperation building at the level of community,
375 enterprises, and the government to achieve mutual benefits between environmental protection
376 and economic development to harmonise the conflicting goals to build sustainable
377 communities. In addition, Soulard et al. (2023) studied inclusive perception in America's RT
378 destination development. They, therefore, examined how consistent and non-discriminatory
379 procedures are established so that there will be a fair distribution of benefits and costs, access
380 to resources, and meaningful participation in decision-making for small tourism business
381 entrepreneurs.

382

383 **3.4 RQ4: Among the empirical research, what are the trends in the relationships between**
384 **rural tourism aspects and SDG 11 in specific countries/regions?**

385 Fourthly, one would have examined the interplay between facets of RT and aggregate facets of
386 SDG 11. Moreover, for every scenario, the most studied research context by country/region
387 was indicated, according to Table 7. Regarding economic issues, RT research mostly dealt with
388 sustainability issues with $n = 14$ and safety with $n = 10$, while fewer studies were on issues
389 related to inclusive communities with $n = 6$ and community resilience with $n = 4$. Relating to
390 contextual dispersion, it is observed that Asia-related contexts generate the highest share of
391 studies ($n = 25$), with the most concentrated being in China. For example, J. Liu et al. (2023)
392 evaluated the entrepreneurship of the rural accommodation business. They concluded that

393 embeddedness made a difference in developing economic sustainability for bed-and-breakfast
 394 businesses. The second majority of research was related to European contexts ($n = 7$). For
 395 example, Fichter and Román (2023) compared the economic preferences of residents and
 396 tourists in rural Spain and gave insights on developing differentiated product strategies.

397

398 Table 7. Relationships Between RT and SDG 11

Relationships and research contexts	Inclusive	Safe	Resilience	Sustainable
Economic aspect	6 (Asia, $n = 5$; America, $n = 1$)	10 (Asia, $n = 9$; America, $n = 1$)	4 (Asia, $n = 3$ Europe, $n = 1$)	14 (Asia, $n = 8$; Europe, $n = 5$; America, $n = 1$)
Socio-cultural aspect	14 (Asia, $n = 10$; America, $n = 4$)	29 (Asia, $n = 25$; America, $n = 3$; Europe, $n = 1$)	3 (Asia, $n = 3$)	25 (Asia, $n = 20$; America, $n = 3$ Europe, $n = 1$)
Environmental aspect	5 (Asia, $n = 4$; America, $n = 1$)	20 (Asia, $n = 17$; America, $n = 2$; Africa, $n = 1$)	1 (Asia, $n = 1$)	17 (Asia, $n = 12$; Europe, $n = 3$; America, $n = 2$)

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400 We also found that the largest amount of RT-SDG11 research is related to the socio-cultural
 401 aspect. Among which, a total of 29 studies are related to community safety, 25 to a sustainable
 402 community, and 14 to an inclusive community. However, only 3 of them are related to
 403 community resilience, which means that research regarding community resilience is not yet
 404 well developed. However, only 3 of them are related to community resilience, which means
 405 that research regarding community resilience is not yet well developed. In terms of research
 406 contexts, Asian cases dominate with 58 entries. For example, M. Wu et al. (2023) examined
 407 the interaction rituals of residents in rural communities in China, which influenced their impact

1 408 on community relationship networks and placed an emphasis on the requirement to foreground
2 409 the physical nature of village democracy and increase the sense of participation and
3
4 410 accessibility. In addition, Merkel Arias and Kieffer (2023) found a negative impact on local
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6 411 communities. The authors emphasise that some rural projects became frightening for
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8 412 participants who remained silent during the activities. However, it is less common for research
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10 413 on socio-cultural aspects to use Europe and Africa as cases.
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16 415 Finally, it is interesting to note that the environmental aspect focused more on safety ($n = 20$)
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18 416 and sustainability ($n = 17$) than the previous two. However, there were fewer studies related to
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20 417 inclusion and resilience. Asia-related research still dominates ($n = 33$). For example, J. Chen
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22 418 et al. (2023) explored how the RT experience can secure green consumption and environmental
23
24 419 protection in rural communities in China. It is worth noting that compared to economic and
25
26 420 socio-cultural aspects, studies on rural ecotourism are more prevalent in regions other than
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28 421 Asia. We seldom find any empirical research with a cross-regional context in this analysis. Chi
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30 422 et al. (2022) discussed the impact of image elements on loyalty intentions towards the Qingdao
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32 423 Beer Festival in China. The event is part of the four significant events writers define as global
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34 424 beer extravaganzas, alongside Munich's Oktoberfest, the Denver Beer Festival, and the London
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36 425 Beer Event. The authors propose cross-country studies with foreign travellers as one of the
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38 426 future research directions.
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48 428 **4. Discussion**

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51 429 Findings from the present study and related literature are discussed to provide directions for
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53 430 future research and implications for practitioners and industries.
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58 432 **4.1 The inequality in regional representation**

1 433 The results showed that empirical RT-SDG11 research is strongly represented by Asian studies,
2 434 particularly in mainland China ($n = 29$). Research in rural Asia discussed integrating digital
3
4 435 intelligence and festival branding (Chi et al., 2022). Studies in the European and American
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7 436 contexts are equal in number of papers ($n = 6$). However, we found that RT empirical studies
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9
10 437 with European contexts in this study concentrated on the importance of tourism practices as
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12 438 intermediaries in preserving cultural heritage and combating rural population decline (Danzi
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14 439 & Figini, 2023; Fusté-Forné, 2022). Other studies also highlighted the significance of farm-
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16 440 based tourism and the openness to create innovative tourism projects in rural micro-businesses
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19 441 (Biconne et al., 2023; Caffyn, 2024). In the context of research in the Americas, the focus has
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22 442 emerged on active involvement in community-based tourism development (Merkel Arias &
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24 443 Kieffer, 2023; Soulard et al., 2023). In contrast, the single publication in the African context
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26 444 underlines the capacity of RT to drive sustainable development in Africa (Mehlomakhulu &
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28
29 445 Buschke, 2023).

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34 447 The regional representation of RT-SDG11 research shows numerous important factors. First,
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36 448 the dominance of empirical research in Asia demonstrates the region's focus on digital
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39 449 intelligence, festival branding, and sustainable practices within RT. It is hinging on the
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41 450 conjecture that the Asian government has allocated substantial financial resources to the
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44 451 campaign for rural advancement and awareness of SDGs. Conversely, Europe relies on
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46 452 initiating novel projects to spin the economic wheel velocity in rural areas. It portrays the
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49 453 necessity of addressing the emerging demographic challenges facing rural regions.
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51 454 Community-based tourism and local inclusion exemplify a bottom-up planning model for long-
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53 455 term regional development in the Americas. It is moulded by a dynamic tapestry of socio-
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56 456 cultural backgrounds and robustly inclusive policies. Ultimately, the study in Africa
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58 457 underscores the intrinsic value of wildlife attractions. It illustrates both the immense potential
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1 458 and the constraints of RT-SGD11 research. Underinvestment in research infrastructure and
2 459 other more pressing research gaps, such as finding solutions to economic challenges, might be
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4 460 a limiting factor. This regional representation disparity shows inequality in global research
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7 461 efforts, implying the demand for a more academic and practical focus across regions. This will
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10 462 improve international understanding of RT's role in sustainable development and address
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12 463 varied regional contexts and distinct issues.
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17 465 **4.2 The socio-cultural aspect has gained prominence as a key focus in RT research**

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19 466 Based on the compelling evidence from previous reviews, it is imperative to categorise RT into
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22 467 various components. Researchers (Rosalina et al., 2021; Telfer & Sharpley, 2007; Valderrama
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24 468 & Polanco, 2022) concurred that RT consists of three sub-categories, all dedicated to driving
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26
27 469 sustainable development. These sub-categories include economic progress, social and cultural
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29 470 preservation, and environmental protection. The research confirms our results by identifying
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32 471 economic, socio-cultural, and environmental RT. Moreover, Janjua et al. (2021) explored
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34 472 research on RT and SDG, which mainly focused on the social pillar, followed by economic
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36 473 aspects, while the environmental aspect needed to be adequately addressed because of a lack
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39 474 of studies. However, despite the RT nexus with SDG 11 on socio-cultural issues being the most
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41 475 focused publications ($n = 52$), our research concluded that the environmental aspect received
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44 476 the second-highest number of study papers ($n = 32$). In contrast, the economic aspect received
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46 477 the fewest ($n = 21$).
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51 479 A major focus of previous socio-cultural studies has been on how RT can be used to empower
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53 480 local communities and protect culture and traditional ways of life (Everett & Aitchison, 2008;
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56 481 Eyisi et al., 2023). While the values of togetherness and cooperation are at the forefront of our
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58 482 review, maintaining harmonious relationships between villagers and ensuring that future
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1 483 generations inherit this is also highlighted (Dai et al., 2023; Mwesiumo et al., 2022). Similarly,
2 484 RT reiterates that community-based tourism development supports cultural sustainability and
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4 485 enhances the well-being of community members (Bennike & Nielsen, 2024; Tian et al., 2023).
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7 486 It is a mechanism for safeguarding distinctive practices, providing an authentic experience and
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9
10 487 defining cultural distinctiveness (Fusté-Forné, 2022; Wu et al., 2022). In conclusion, RT offers
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12 488 harmonious living, empowers communities and helps to embed authenticity and identity in
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14 489 rural destinations.

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19 491 Extensive research has consistently shown that RT plays a significant role in fostering the
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22 492 preservation of natural resources and promoting community awareness of environmental issues
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24 493 (Nooripoor et al., 2021; Pan et al., 2018). This study, however, found that some researchers
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26 494 emphasise how ecotourism and wellness tourism may elevate natural resource conservation
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29 495 and sustainability (Mehломakhulu & Buschke, 2023; P. Zhang et al., 2023). Accordingly, RT
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31 496 drives to preserve natural resources, accentuate the sustainability effect of tourist operations,
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34 497 and raise environmental awareness while promoting a healthy and eco-friendly lifestyle.

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39 499 Finally, regarding economic aspects, prior research defines RT as generating employment and
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41 500 delivering possibilities to exit poverty through entrepreneurship (Scheyvens & Hughes, 2019).
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44 501 It also forms collaborations with local partners to attract more visitors and promote the
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46 502 development of local small businesses (Telfer & Sharpley, 2007). Recent studies have
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49 503 pinpointed strategies to achieve economic benefits and consolidate entrepreneurship in this
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51 504 sphere of activity. To be precise, studies point out the possibility of products such as
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53 505 agritourism and customised tour packages as means of RT to create a positive trend in the rural
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56 506 economy (Fichter & Román, 2023; Tsang et al., 2022). Thus, RT is the embodiment of
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1 507 entrepreneurial activities that link to the rural economy but also the catalyst that boosts rural
2 508 infrastructure for such initiatives.

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7 510 **4.3 The two most researched sub-goals of SDG 11 are SDGs 11.4 and 11.a, providing a**
8
9 511 **link with the UN's main focus on community safety and sustainability for rural areas**

10 512 The ten sub-targets give specific insight into SDG 11. Our findings suggest that research has a
11
12 513 stronger focus on protecting cultural heritage (SDG 11.4, $n = 28$) and national and regional
13
14 514 development planning (SDG 11a, $n = 23$). By preserving cultural authenticity, it can boost
15
16 515 positive experiences and place attachment (X. Li & Wang, 2023). Moreover, national and
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18 516 regional development planning addresses issues of infrastructure adequacy, limited public
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20 517 services, and unpreparedness of governance exposed by the pandemic (Rocca & Zielinski,
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22 518 2022). As robust planning is needed to address current and future crises, SDG 11.a has received
23
24 519 increased attention.

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29 521 However, few researchers have tried to associate sub-goals with the UN's four main themes
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31 522 (inclusiveness, safety, resilience, and sustainability) of SDG 11. A review by Karali et al. (2024)
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33 523 considered RT sub-themes as codes of analysis, which were further merged into broader themes.
34
35 524 Themes and sub-themes also show how frequently the writers used RT subjects to broaden
36
37 525 their deconstruction aims and fill research gaps. This study picked SDG 11 as the interwoven
38
39 526 thread of this RT research because it emphasises the importance of rural regions in accelerating
40
41 527 SDG's achievement. Findings showed that past empirical research has primarily focused on
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43 528 community safety ($n = 37$; comprising SDGs 11.1, 11.2, and 11.4) and sustainable communities
44
45 529 ($n = 30$; comprising SDGs 11.6, 11.a, and 11.b), followed by inclusive development ($n = 13$;
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47 530 comprising SDGs 11.3 and 11.7). In this study, integrating SDG 11 sub-goals into four higher-
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49 531 level themes in RT research improves understanding of how RT supports SDG 11. Moreover,
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1 532 grouping these sub-goals into high-level ideas can simplify the framework for policymakers,
2 533 academics, and practitioners. Overall, amalgamating similar sub-goals into higher-level
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4 534 constructs illustrates that research on RT has significantly contributed to SDG 11 targets by
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7 535 highlighting community safety, promoting sustainable communities, and fostering inclusive
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9 536 development. The broad areas of inclusion, safety, resilience, and sustainability make
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11 537 analysing and reporting progress easy. We acknowledge and utilise these relationships by
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13 538 integrating sub-goals into wider ideas, creating more synergistic and effective treatments of the
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16 539 nexus.

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20 21 22 541 **4.4 Three streams of RT-SDG11 research**

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24 542 Our study showed that recent RT-SDG11 research has shifted its focus to socio-cultural aspects,
25
26 543 especially community safety, which has the largest proportion of empirical studies. This
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28 544 finding indicates a change in research trend, as previous studies emphasised the importance of
29
30 545 socio-cultural elements in sustainability (Valderrama & Polanco, 2022). These are the issues
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32 546 being fostered regarding the safeguarding of cultural values and prevention from being down
33
34 547 seriously by tourism. The most investigated context about socio-cultural safety has been Asia,
35
36 548 above all China, with 25 studies. These works outlined that protection is required by the cultural
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38 549 authenticity of X. Li and Wang (2023) and traditional architecture in the construction of
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40 550 housing structures of Dai et al. (2023). Counterparty, however, the socio-cultural aspects of
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42 551 European and African domains are somehow less pragmatically researched.

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51 553 Economic sustainability has also become equally important among researchers who primarily
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53 554 deal with small businesses, rural entrepreneurship, and planning and governance in rural
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55 555 development. Small businesses and rural entrepreneurship primarily attracted empirical
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57 556 research from Asia (J. Liu et al., 2023; Zhu et al., 2022), while European studies concentrate

1 557 on the link between sustainable economic projects and naturally based products (Caffyn, 2024;
2 558 Danzi & Figini, 2023; Fichter & Román, 2023). In the American case of research, it is
3
4 559 discovered that the management of governance is a vital issue in rural areas (Rocca & Zielinski,
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6
7 560 2022).

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11 562 Environmental security has also gained significance as a key research problem by addressing
12
13 563 topics such as environmental degradation, land use conflicts, and biodiversity conservation.
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15 564 Asia is still the top priority in research ($n = 16$), and the area of study is mainly green
16
17 565 consumption and biodiversity conservation (J. Chen et al., 2023; Mehlomakhulu & Buschke,
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19 566 2023). Most of the empirical studies conducted in the case of America scourge mainly on the
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21 567 development of the conflict over land use (Neumann & Mason, 2023; Rocca & Zielinski, 2022).

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25 569 It is worth noting that empirical studies on resilience were understudied in the field, as
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27 570 evidenced by the fact that only eight had an economic, socio-cultural, and environmental
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29 571 component ($n = 4, 3, 1$). As Tian et al. (2023) pointed out, this translates to a socio-cultural and
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31 572 economic resilience that is needed in RT ethnic communities where residents compete with
32
33 573 outside developers despite a lack of skills. This justifies the gap in past RT-related research as
34
35 574 most have dwelt on immediate economic benefits, such as employment and income generation
36
37 575 (Scheyvens & Hughes, 2019). This gap, therefore, means that during the formulation of future
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39 576 research, this work should take centre stage in developing long-term resilience strategies
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41 577 against the myriad challenges presented by life in the rural community.
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52 579 **5. Conclusion**

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54 580 This paper systematically reviews 66 empirical studies from 2022 to early 2024. Key findings
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56 581 are highlighted. First, the study shows that there is a reasonable regional imbalance in research
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582 on RT-SDG11, with many studies focused on Asian countries, especially China. This indicates
583 a need for more balanced global research. Second, there is evidence that the socio-cultural
584 dimensions, particularly in terms of safety and sustainability, have been at the forefront of
585 recent research on RT-SDG11. Third, this study integrates the sub-goals of SDG 11 with the
586 four UN principles of inclusiveness, security, resilience, and sustainability. The findings
587 provide a simplified framework for assessing RT research's contributions to sustainable
588 development. The findings also identify that community safety and sustainability have been
589 well-researched. However, this work contributes to the still very limited research on inclusive
590 development and resilience and suggests potential lines of future inquiry. Fourth, possible new
591 trends in RT-SDG11 research tend to be: a) rise in attention to economic sustainability due to
592 small businesses and rural entrepreneurship; b) in tourism products based on nature, there is a
593 growing focus on environmental security.

594
595 This study has two limitations. First, it relies on data from a single database. This research aims
596 to use the WoS-defined categories (tourism, leisure, and hospitality; sustainable development
597 goals) to isolate relevant tourism articles in which the subjects are under investigation. Future
598 research can increase this scope of the study with other databases like Scopus; however,
599 definitions for different categories will need to be recalibrated. Second, this study focused on
600 SDG 11 because RT research is highly relevant to SDG 11. Other future SDGs, such as tourism
601 education (related to SDG 4), can be included in the discussion. Further research is suggested
602 to compare tourism education in rural and urban zones. In addition to the research implications,
603 the following are implications for the tourism industry.

604

605 **6. Implications for the tourism industry**

606 From the findings, four key implications for the tourism industry were provided as follows:

- 607 ● Accommodation services. One finding points out that creating a more sustainable
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2 608 accommodation service model that benefits the local community and provides a unique
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5 609 experience for visitors is a global trend. Therefore, we recommend that a) local
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7 610 accommodation enterprises take full advantage of the local traditional architecture and
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10 611 interiors comprising local material to respect the local culture and environment of the
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12 612 local region (Dai et al., 2023); b) local ownership and management of the
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14 613 accommodation enterprises were encouraged to deliver direct remuneration to the local
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16 614 economy (J. Liu et al., 2023).
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19 615 ● Attraction services. From the perspective of sustainable development, eco-tourism and
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21 616 related local products provide tourists with a deeper and more meaningful travel
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23 617 experience and promote the sustainable development of local communities. It is
24
25 618 therefore suggested that tourism managers: a) collaborate with stakeholders in the
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27 619 management of attraction products; b) encourage more promotion of ecotourism and
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29 620 health tourism products within the premises of local attraction enterprises; c) provide
30
31 621 farm visits and immersive experiences for tourists (Caffyn, 2024).
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34 622 ● Transportation, food and beverage services. This study also found that regional
35
36 623 characteristics are one key aspect of rural tourism. Based on the findings and literature,
37
38 624 we make the following recommendations: a) eco-friendly vehicle units and digitalised
39
40 625 route planning information are suggested to provide for international tourists (Neumann
41
42 626 & Mason, 2023); b) creating events to promote unique regional culinary through
43
44 627 festivals is highly recommended, such as Gastronomic Mushroom Festival in Spain,
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46 628 Trænafestivalen in Norway and Qingdao International Beer Festival in China (Chi et
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48 629 al., 2022).
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635

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638

639 **Disclosure statement**

640 The authors report there are no competing interests to declare.

641

642 **CRedit authorship contribution statement**

643 **Carlos Iban:** Conceptualization, Writing – original draft, Data curation.

644 **Kai-Yu Tang:** Conceptualization, Data curation, Methodology, Supervision, Writing – review
645 and editing.

646

647 **Declaration of competing interest**

648 The authors declare that they have no known competing financial interests or personal
649 relationships that could have appeared to influence the work reported in this paper.

650

651 **Data availability**

652 The data that support the findings of this study are openly available in Harvard University's
653 Dataverse at <https://doi.org/10.7910/DVN/U4XOXR>.

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REVIEW RESULTS

1. Relevance of the Title and Abstract

Title:

The title, "*Assessing Rural Tourism's Contribution to Sustainable Cities and Communities: A Systematic Review (2022-2024)*," is highly relevant and accurately reflects the content of the article. It explicitly highlights the focus on the relationship between rural tourism and Sustainable Development Goal (SDG) 11.

Abstract:

The abstract provides a clear summary of the research objectives, methods (PRISMA 2020), key findings, and contributions to the literature. However, it could be improved by briefly including the policy implications discussed in the article's conclusion.

2. Quality of the Introduction

The introduction provides a comprehensive background on the role of rural tourism in supporting SDG 11. The authors effectively discuss key concepts such as sustainability, rural tourism's socio-economic and environmental impacts, and its relevance to sustainable development goals.

However, the discussion on research gaps, particularly in non-Asian geographical contexts, could be expanded to highlight the novelty of the study.

3. Methodology

The methodology employs a systematic review approach using PRISMA 2020 guidelines, which is a robust and well-established method for this type of research. Details such as inclusion and exclusion criteria, coding process, and data sources (Web of Science) are clearly explained.

Strengths:

- Transparency in the research process is demonstrated through the use of a PRISMA flow diagram.
- An interrater coding agreement of 92% indicates the reliability of the coding process.

Weaknesses:

- Reliance on the Web of Science database may limit the generalizability of findings. The authors acknowledge this and recommend incorporating other databases, such as Scopus, in future studies.

4. Analysis of Results

The authors analyze research trends across three main dimensions of rural tourism—socio-cultural, environmental, and economic—and their relationships with SDG 11 sub-goals.

Strengths:

- Results are presented systematically, supported by well-organized tables.

- The study makes a significant contribution by identifying research gaps, such as the limited focus on community resilience.

Weaknesses:

- The results section is largely descriptive. A deeper critical analysis of how these trends impact policy or practice would enhance the study's contribution.

5. Discussion and Implications

The discussion effectively links the findings to previous literature and highlights implications for future research. However, it tends to repeat the results without providing deeper insights into how the implications can be applied in various geographical or policy contexts.

6. Strengths and Weaknesses of the Article

Strengths:

- The article provides a comprehensive overview of rural tourism's contributions to SDG 11.
- The use of PRISMA 2020 enhances the credibility of the methodology.
- The authors effectively identify research gaps, particularly the need for studies beyond Asia.

Weaknesses:

- Narrow geographical focus, primarily on Asian contexts.
- Limited critical analysis of results and their policy implications.

7. Conclusion

The article makes an important contribution to the literature on rural tourism and sustainability. However, its impact could be strengthened by emphasizing broader policy analyses and implications across diverse geographical contexts.

RECOMMENDATIONS

This article has a strong foundation for acceptance in a Scopus journal. However, addressing the identified weaknesses through the suggested revisions will significantly improve its quality and relevance. If these improvements are implemented, the chances of publication in a Scopus journal are highly favorable.

Weaknesses to Address:

1. Limited Geographical Focus:

- The article is overly concentrated on Asian contexts. For an internationally-focused Scopus journal, expanding the geographical scope (e.g., incorporating more data from Africa, the Americas, or Europe) would enhance the article's appeal and relevance.

2. Shallow Analysis:

- Some sections, especially the discussion, are descriptive. Adding critical analysis linking the findings to global policy implications or practical applications would strengthen the article.

3. Restricted Database Usage:

- Relying solely on the Web of Science may be seen as limiting the scope of the research. Incorporating data from Scopus or other relevant databases could boost the article's credibility.

Recommendations to Enhance Acceptance:

1. Expand Geographical Discussion:

- Include more analysis or discussion on non-Asian contexts, particularly from underrepresented regions such as Africa or Latin America.

2. Critical Policy Analysis:

- Strengthen the discussion with practical insights on how the findings can be applied to policy development or sustainability strategies.

3. Utilize Additional Data Sources:

- Incorporate studies from other databases to broaden the literature scope.

4. Align with the Target Journal's Scope:

- Ensure the article aligns with the focus and scope of the target journal, including adherence to formatting and writing style requirements.



Exploring Research Progress and Development Trends in Tibetan Villages of China: A Bibliometric Visualization Study

Journal:	<i>Journal of Asian Architecture and Building Engineering</i>
Manuscript ID	JAABE2405370AH
Manuscript Type:	Architectural History and Theory
Keywords (up to 5):	Tibetan villages, bibliometrics, visualization, CiteSpace
Categories:	AH: History of Architecture/City/Urban Planning < Architectural History and Theory

Exploring Research Progress and Development Trends in Tibetan Villages of China: A Bibliometric Visualization Study

ABSTRACT

Tibetan villages, embodying the rich integration of Tibetan culture and nature, have garnered research interest in China amidst the rapid development of ethnic minority villages, showcasing multidisciplinary approaches with a strong policy orientation. This study utilizes the bibliometric visualization tool CiteSpace to conduct a comprehensive visual analysis of keyword patterns, including co-occurrence, clustering, timelines, bursts, and collaboration networks. The analysis covers 866 articles from the China National Knowledge Infrastructure (CNKI) database spanning 1998 to 2023. Additionally, the study analyzes 283 papers on funding and publishing trends, along with 50 English-language articles from the Web of Science (WOS) for a balanced perspective. Furthermore, the study systematically reviews literature related to China's major policies and the most cited papers. The findings highlight a focus on the physical and cultural aspects of Tibetan villages, the spirit of place, and sustainable development. There is significant emphasis on rural revitalization, public spaces, and spatial forms, especially in Sichuan, Gansu, and Yunnan. The findings suggest enhancing protection and inheritance systems for Tibetan villages across disciplines and promoting the adaptive development of residential structures under policy directives. Overall, this study offers a novel bibliometric visualization approach for analyzing the dynamics of this field.

KEYWORDS

Tibetan villages, bibliometrics, visualization, CiteSpace

1. Introduction

China is home to a vast number of ethnic minority villages, each reflecting the historical development, environmental characteristics, residential styles, regional cultures, and customs of their respective ethnic groups. The Tibetan ethnic group, a unique branch among China's ethnic minorities, is primarily distributed in the Tibet Autonomous Region, Qinghai Province, western Sichuan Province, Gansu Province, and Yunnan Province. Through long-standing practices in production and inter-ethnic exchanges, the Tibetan people have created a distinctive regional architectural culture. Their architectural skills integrate traditional ethnic culture with the concept of adapting to local conditions, carrying regional characteristics and the wisdom of their ancestors. These architectural works, which coexist harmoniously with nature, are considered shining gems within the treasury of architectural culture (Wang 2018; Hu et al. 2023).

In the context of today's urbanization, which has shifted toward quality and acceleration, China's emphasis on rural construction has increasingly intensified. Following the implementation of a series of policies aimed at rural revitalization, research on characteristic villages and traditional settlements is flourishing. Unlike uniform urban settlements, ethnic minority villages not only possess high recognizability but also carry a wealth of cultural and

emotional significance (He 2023). In recent years, Chinese scholars have dissected Tibetan villages (see Figure 1) from various perspectives. Their research primarily focuses on local architecture, tourism, economy, ethnic culture, and geology and geography in areas such as western Sichuan, Jiarong, Weizang, Kham, and Amdo Tibetan regions. However, up to this point, there has been no bibliometric research specifically dedicated to the holistic development, historical culture, and architectural space of Tibetan villages.



Figure 1. Tibetan villages in Danba County, western Sichuan Province, China.

This study, which utilizes CiteSpace for bibliometric visualization analysis, provides an objective summary of research hotspots, thematic directions, development trends in the field, and networks of cooperation among researchers and institutions. It presents the current status and development trends of the field in an intuitive and clear manner through maps. While this method has been preliminarily applied in disciplines such as geography, landscape architecture, ecology, and urban and rural planning in recent years, it has been seldom used in the study of traditional ethnic minority villages. Therefore, this study constructs a visual knowledge map based on CiteSpace, carefully selects related literature from the China National Knowledge Infrastructure (CNKI) and Web of Science (WOS) databases for in-depth exploration and analysis, and comprehensively elucidates the research progress, current status, and trends of Tibetan village studies. It aims to provide references and benchmarks for further research into the latest dynamics and hotspots in this field, offering a methodological and theoretical guide for bibliometric visualization analysis of the dynamics in research related to Tibetan villages.

2. Materials and Methods

In November 2023, domestic and international literature related to Tibetan villages were systematically retrieved. Using the advanced search tool in CNKI with the terms "Tibetan village" OR "Tibetan residential house" OR "Tibetan area residential house" OR "Tibetan ethnic village" OR "Tibetan area village" OR "Tibetan ethnic settlement" OR "Tibetan ethnic community" OR "Tibetan area settlement" OR "Tibetan area community" as the theme for search, and after excluding papers with irrelevant keywords, reports, and papers with weak relevance, a total of 866 highly relevant papers were obtained. In WOS, the search was conducted with TS = "Tibetan house" OR "Tibetan village" OR "Tibetan dwelling" OR "Tibetan settlement", and after removing papers with weak relevance, 50 related papers were finally selected.

The CiteSpace 6.1.R6 software was used for the quantitative analysis of the 866 papers retrieved from CNKI between 1998 and 2023, and the 50 papers retrieved from WOS between 2008 and 2023, including the disciplines they belong to, keyword co-occurrence, keyword clustering, the publication time span of documents containing each keyword cluster, keyword bursts, author collaboration relationships, institutional collaboration relationships, and citation analysis. This generated visual network knowledge maps such as keyword co-occurrence maps, keyword clustering maps, keyword timeline maps, author collaboration network maps, and institutional collaboration network maps of research literature on Tibetan villages. The development trends of the research were analyzed based on the annual changes in the number of published papers on Tibetan village studies. The themes and main research contents of Tibetan village studies were identified using keyword co-occurrence and clustering maps. The current characteristics, hotspots, and development trends of Tibetan village research were analyzed using keyword timeline and keyword burst timeline maps. The collaboration among scholars engaged in Tibetan village research and their institutions was analyzed using author collaboration network maps and institutional collaboration network maps.

3. Knowledge Map of Tibetan Village Studies

3.1. Analysis of International Publications

The number of publications per year and their annual changes are crucial indicators for measuring the research interest trend in a specific topic. In the CNKI database, the research on Tibetan villages in China from 1998 to 2007 was in its nascent and initial development stages, with the annual publication volume gradually increasing from an initial rate of one paper per year to 16 papers per year. The total publication volume over these 10 years was 47 papers, accounting for 5.42% of the total publications from 1995 to 2023.

The research on Tibetan villages entered its second growth period from 2008 to 2016, with the annual publication volume increasing from 23 papers per year to 70 papers per year. Between 2017 and 2019, it was in a steady development stage, with an average annual publication volume of approximately 64 papers. Subsequently, research on Tibetan villages entered a third development stage, with a significant increase in the annual publication volume, reaching 86 papers per year by 2022 (see Figure 2).

In contrast, the period covered by the WOS database from 2008 to 2023 shows that research on Tibetan villages from 2008 to 2016 was in an embryonic stage; from 2017 to 2023,

it was in a period of rapid development, with the publication volume in 2022 being six times that of 2016 (see Figure 1). Overall, whether in the CNKI or WOS databases, the research interest in Tibetan villages demonstrates an upward trend, indicating that research on Tibetan villages is increasingly gaining attention and actively developing.

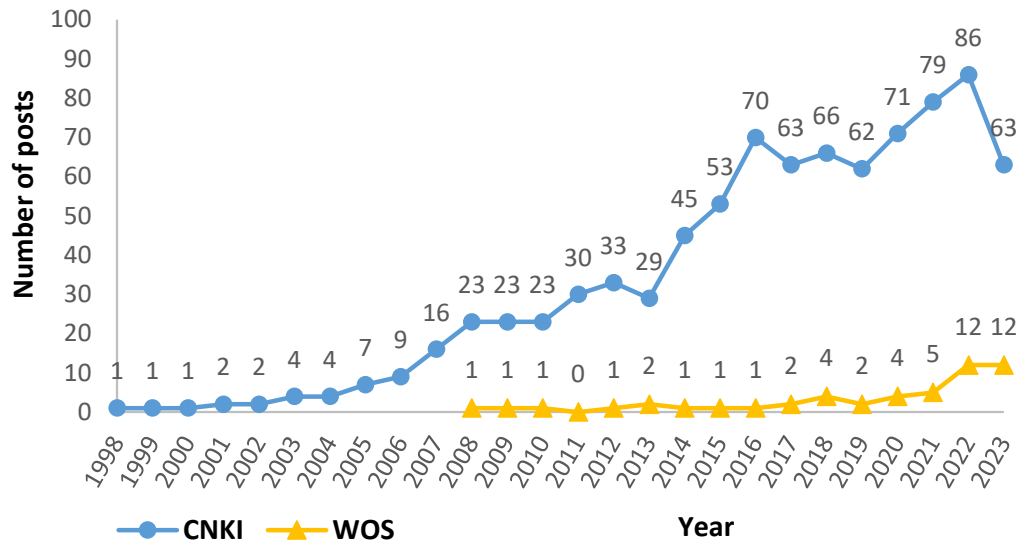


Figure 2. Annual publication volume of research papers on Tibetan villages

The discipline distribution data for Tibetan village studies, obtained through the visualization function of discipline distribution in the CNKI database (see Figure 3), spanning from 1995 to 2023, reveals that Chinese scholars' publications on Tibetan village research mainly fall into ten disciplines: Architectural Science and Engineering, Tourism, Geography, Administration and National Administration Management, Agricultural Economy, Ethnology, Culturology, Fine Arts (Calligraphy Sculpture and Photography), Sociology, Statistics, and Archaeology. Among these, the disciplines of Architectural Science and Engineering, Tourism, Geography, Administration and National Administration Management, Agricultural Economy, and Ethnology have the most publications. Research in China on Tibetan villages primarily includes studies on traditional Tibetan residences, rural tourism in Tibetan areas, the natural environment of Tibetan villages, the revitalization of Tibetan areas under government guidance, and research on traditional Tibetan culture.

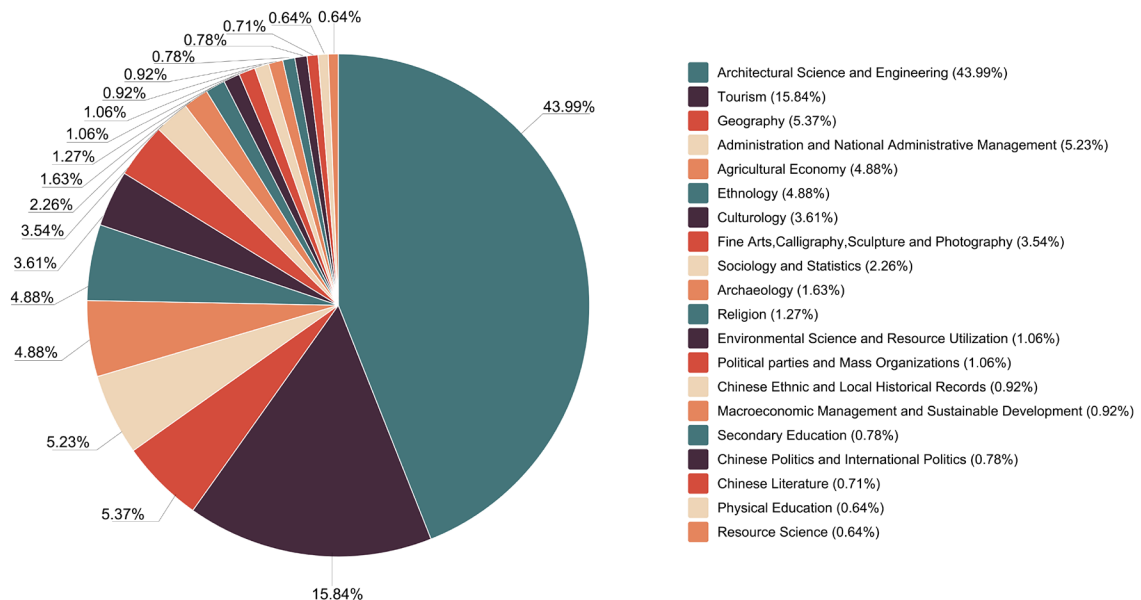


Figure 3. Discipline distribution map of Tibetan village studies based on the CNKI database

3.2. Distribution and Collaboration Map of Major Research Institutions

Analyzing the affiliations of authors can provide insights into the institutions currently involved in Tibetan village research and their collaborative relationships. This analysis helps build new research collaborations and models, promoting sustained and in-depth development of research (Zhang et al., 2023). Using CiteSpace 6.1.R6 software and selecting the CNKI database, we set the node type to institutions, the time span to 1998-2023, and the time slice to one year, resulting in a co-occurrence map of Tibetan village research institutions with 350 nodes, 119 links, and a density of 0.0019 (see Figure 4).



Figure 4. Collaboration network of institutions on Tibetan village studies based on the CNKI database

The map reveals that the main research institutions conducting Tibetan village studies

included Xi'an University of Architecture and Technology (which published 113 papers, including 23 from the School of Architecture), Southwest Jiaotong University (61 papers, including 9 from the School of Architecture and 10 from the School of Architecture and Design), Southwest University for Nationalities (47 papers, including 8 from the School of Urban Planning and Architecture, 6 from the Institute of Southwest Ethnic Studies, and 4 from the School of Tourism and Historical Culture), and Chengdu University of Technology (23 papers, including 6 from the School of Tourism and Urban-Rural Planning). These universities were the main forces in Tibetan village research in China, forming a core institutional collaboration network centered around Xi'an University of Architecture and Technology, Southwest Jiaotong University, Southwest University for Nationalities, Chengdu University of Technology, and Sichuan University. The highest-publishing core institutions had few connections between them, indicating many independent research institutions.

An analysis of the WOS database shows results (see Figure 5) that were broadly similar to those from the CNKI database. The leading institutions in terms of publication volume included the Chinese Academy of Sciences (University of Chinese Academy of Sciences), Southwest University of Science and Technology, Xihua University, Sichuan University, Xi'an University of Architecture and Technology, and Sichuan Agricultural University, among others, with Sichuan University and the Chinese Academy of Sciences forming a dense network of institutional collaboration. The high-publication institutions in both CNKI and WOS databases were Chinese research institutions, indicating that research on Tibetan villages was mainly concentrated in China.

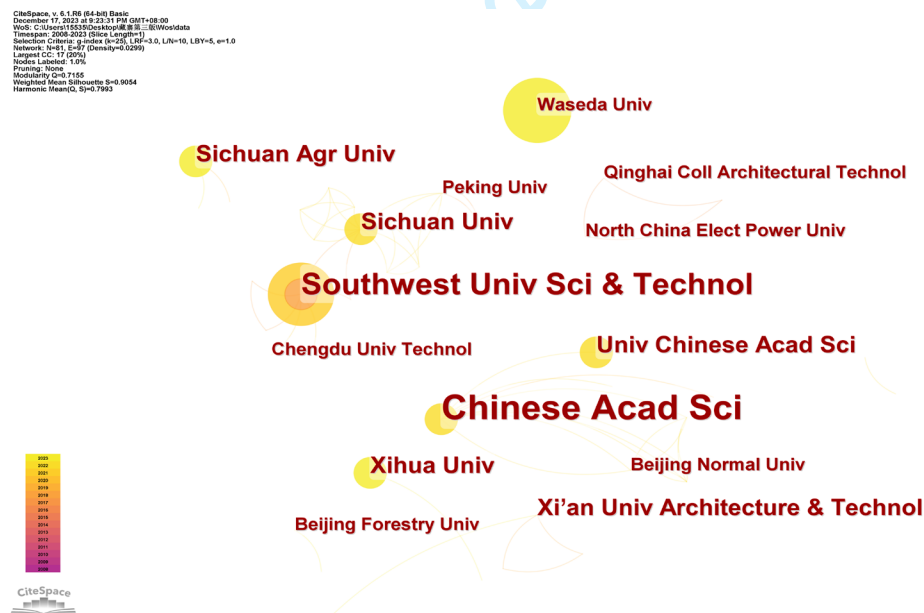


Figure 5. Collaboration network of institutions on Tibetan village studies based on the WOS database

3.3. Research Hotspot Analysis

Keywords serve as specialized terms that reflect the core research content of academic papers in a specific field. High-frequency keywords in research papers within a particular domain indicate the research hotspots in that field. Analyzing the co-occurrence of keywords in papers through visualization network analysis allows for the identification of research

hotspot issues and their evolving trends in a particular research area (Gao, Su, and He 2023).

Using CiteSpace 6.1.R6 software and importing research literature data from CNKI, we analyzed data with a time span from 1998 to 2023, time slices of one year, node type set as keywords, and default parameters. This resulted in a keyword co-occurrence graph with 518 nodes, 777 links, and a density of 0.0058 (Figure 6). In the graph, node size represented the frequency of keyword occurrence, the font size of the label text on nodes indicated the centrality strength of the nodes, and the number of links between nodes represented the co-occurrence frequency of keywords. More links between nodes indicated stronger co-occurrence relationships between keywords.



Figure 6. Keyword co-occurrence graph of Tibetan village research based on the CNKI database

The three largest nodes in the graph were "Tibetan dwelling," "Tibetan," and "Jiarong Tibetan." These three keywords formed a triangle distribution in the graph, with the highest number of connections to other keywords. This suggests that "Tibetan dwelling," "Tibetan," and "Jiarong Tibetan" had the highest frequency of appearance in the 866 papers analyzed, the highest network density, and the most significant centrality, making them the main research topics.

Other larger nodes with high-frequency keywords indicated that research on Chinese Tibetan villages from 1998 to 2023 mainly focused on topics such as traditional dwellings, traditional villages, traditional settlements, Jiarong Tibetan villages, and the spatial forms of Tibetan villages. This indicates that Jiaju Tibetan villages in the Jiarong Tibetan area were the primary research objects in this field.



Figure 7. Keyword co-occurrence graph of Tibetan village research based on the WOS database

Co-occurrence analysis of keywords in the WOS database (see Figure 7) revealed the top ten keywords as China, design, Tibetan plateau, performance, energy consumption, strategy, spatial distribution, indoor thermal environment, and settlement. It was evident that "design" played a pivotal role in the entire network. Unlike the CNKI database, the research hotspots in the WOS database primarily revolved around architectural energy development, utilization, and conservation in mountainous regions, particularly the Tibetan Plateau, as well as the ecosystem services of clustered settlements and sustainable development concepts.

3.4. Analysis of Research Theme and Content

Keyword clustering analysis simplifies co-occurring keywords into a smaller number of keyword clusters using statistical clustering methods (Chen et al. 2015). The log-likelihood ratio (LLR) algorithm in CiteSpace 6.1.R6 software was employed to conduct cluster analysis on the selected keywords from both the CNKI and WOS databases, resulting in the generation of a keyword clustering graph (see Figure 8). In the graph, keyword clusters are represented along with label numbers, cluster sizes, and average cited years, reflecting the research hotspots in Tibetan village studies and their temporal changes. The size of a keyword cluster indicates the number of keywords within that cluster, with smaller label numbers indicating a larger number of keywords in the cluster. Keyword clusters with a later average cited year signify emerging research hotspots.

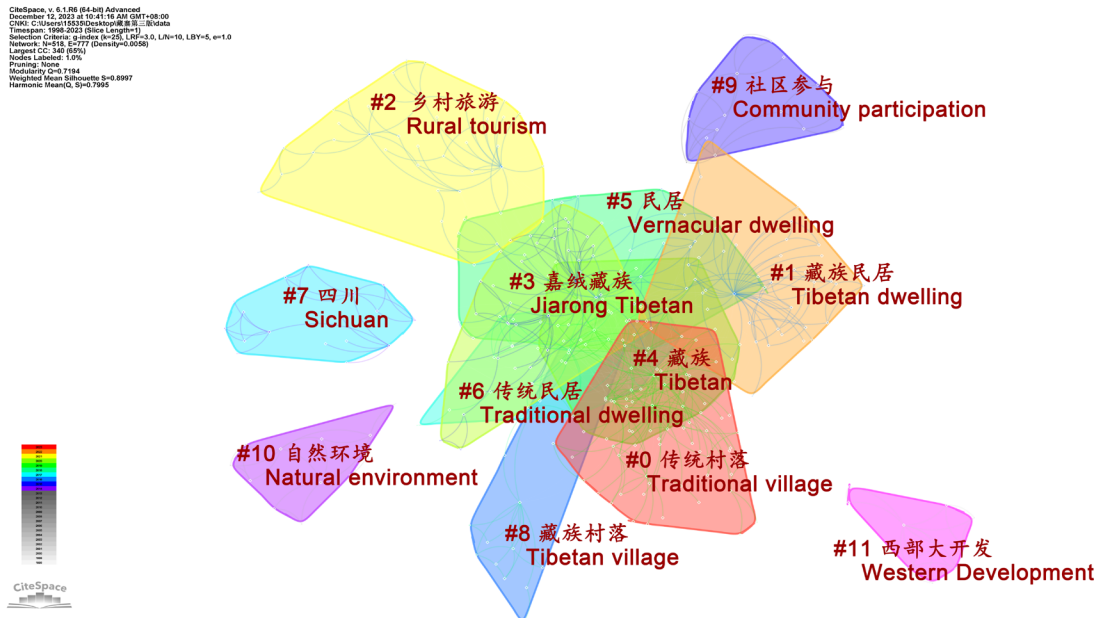


Figure 8. Keyword clustering graph of Tibetan village research based on the CNKI database

The keyword clustering graph of Tibetan village research, based on the CNKI database, displayed 12 main keyword clusters, indicating that the primary content of Tibetan village research in China included traditional villages, Tibetan traditional houses, rural tourism, Jiarong Tibetan, Tibetan people, dwellings, traditional dwellings, Sichuan, Tibetan villages, community participation, natural environment, and western development (Li et al. 2022; Chen 2022). Keyword clustering analysis revealed that research on Tibetan villages in China went through a developmental process from studying traditional dwellings and settlements to research on development and human-environment relationships.

According to the keyword clustering graph of Tibetan village research and the top five co-occurring keywords within each keyword cluster, Tibetan village research could be categorized into four research domains (see Table 1).

Research on Tibetan villages: This research domain's keyword clustering included #0 Traditional village and #8 Tibetan village. Co-occurring keywords encompassed Traditional village, traditional settlement, residential architecture, conservation and development, Anduo Tibetan Area, Tibetan village, Functions, Jiarong Tibetan residential architecture, and Zhagana, among others. The primary research topics included the preservation and development of traditional villages, human habitat environments, residential architecture, historical contexts, and identity.

Research on Tibetan dwellings: This research domain's keyword clustering included #1 Tibetan dwelling, #5 Vernacular dwelling, and #6 Traditional dwelling. Co-occurring keywords included Tibetan traditional dwelling, Tibetan Buddhism, Vernacular architecture, Residential renewal, Geographical adaptability, Vernacular dwelling, Kangba Tibetan Area, Indoor thermal environment, Lhasa, Traditional dwelling, Gannan Tibetan Area, Gene map, Architectural space, and Regional gene. The primary research focuses on exploring Tibetan Buddhist culture, studying architectural expressions as symbols in vernacular houses, investigating indoor thermal environments in dwellings, understanding the relationships within residential household groups in multi-forested areas, and constructing a regional architectural creation system.

Research on the sense of place in Tibetan villages: This research domain's keyword clustering included #3 Jiarong Tibetan and #10 Natural environment. Co-occurring keywords included Jiarong Tibetan, Jiuzhaigou, Village society, Traditional village, Religious, Natural environment, Resource utilization patterns, Jiaju, Architecture, and Household surveys. The primary research topics focused on the preservation of Tibetan traditional settlement heritage, Tibetan area religious beliefs, village culture changes, decorative arts in traditional villages, and public perception of architectural landscapes.

Table 1. Keyword clustering of Tibetan village research based on CNKI database (1998-2023)

Cluster ID	Cluster Label (Hot Spot)	Size	Mean (Year)	High-Frequency Keywords
#0	Traditional villages	57	2016	Traditional village, Traditional settlement, Dwelling house, Protection and Development, Anduo Tibetan
#1	Tibetan dwelling	43	2012	Tibetan dwelling, Tibetan Buddhism, Vernacular architecture, Residential renewal, Geographical adaptability
#2	Rural tourism	39	2014	Rural tourism, Jiaju Tibetan village, Ethnic community, Danba county, Development status
#3	Jiarong Tibetan	38	2012	Jiarong Tibetan, Jiuzhaigou, Village society, Traditional village, Religion
#4	Tibetan	35	2013	Tibetan, Protect, Inheritance, Preservation and Renewal, Blockhouse dwelling
#5	Vernacular dwelling	28	2013	Vernacular dwelling, Kangba Tibetan Area, Indoor thermal environment, Lhasa, Tibetan dwelling
#6	Traditional dwelling	21	2012	Traditional dwelling, Gannan Tibetan Area, Gene map, Architectural space, Regional gene
#7	Sichuan	18	2008	Sichuan, Tibetan area, Changes, Field survey, Economics
#8	Tibetan village	15	2011	Tibetan village, Functionality, Identity, Jiarong Tibetan dwelling, Zhagana
#9	Community participation	15	2008	Community participation, Sustainable development, Danba, Jiarong Tibetan Area, Changping village
#10	Natural environment	11	2003	Natural environment, Resource utilization patterns, Jiaju, Architecture, Household survey
#11	Western development	10	2002	Western Development, "Coterie", Breakthrough, Tibetan village, Transformational

Research on sustainable development in Tibetan regions: This research domain's keyword clustering included #2 Rural tourism, #4 Tibetan, #7 Sichuan, #9 Community participation, #11 Western development. Co-occurring keywords encompassed Rural tourism, Zhagana, Tibetan village, Ethnic communities, Danba County, Development status, Tibetans, Protect, Inheritance, preservation and renewal, blockhouse dwellings, Sichuan, Tibetan Area, changes, field survey, economics, community participation, sustainable development, Danba, Jiarong Tibetan Area, Changping village, Western development, "coterie," Breakthrough, Tibetan village, and Transformation, among others. The main research focuses on the inheritance methods of Tibetan villages, diversified development, ethnic cultural tourism in Danba County of western Sichuan as an example, the inheritance and development of Tibetan

dwelling and culture, the influence of vernacular characteristics of ethnic villages, and rural revitalization in Tibetan areas (Zhang 2022; Shen 2008).

In the keyword clustering analysis of the WOS database (see Figure 9), combined with the keyword co-occurrence graph in the WOS database (see Figure 7), the research on Tibetan villages primarily focused on qualitative studies related to climate-responsive design strategies and thermal environments in Tibetan traditional village residences, as well as building energy retrofitting and numerical simulations in cold regions. This indicates that in the CNKI database, the clustering content covered various aspects of Tibetan villages, ranging from macro to micro perspectives, and included both explicit and implicit components. In contrast, the clustering content in the WOS database placed more emphasis on regional adaptation and building energy efficiency in Tibetan villages.

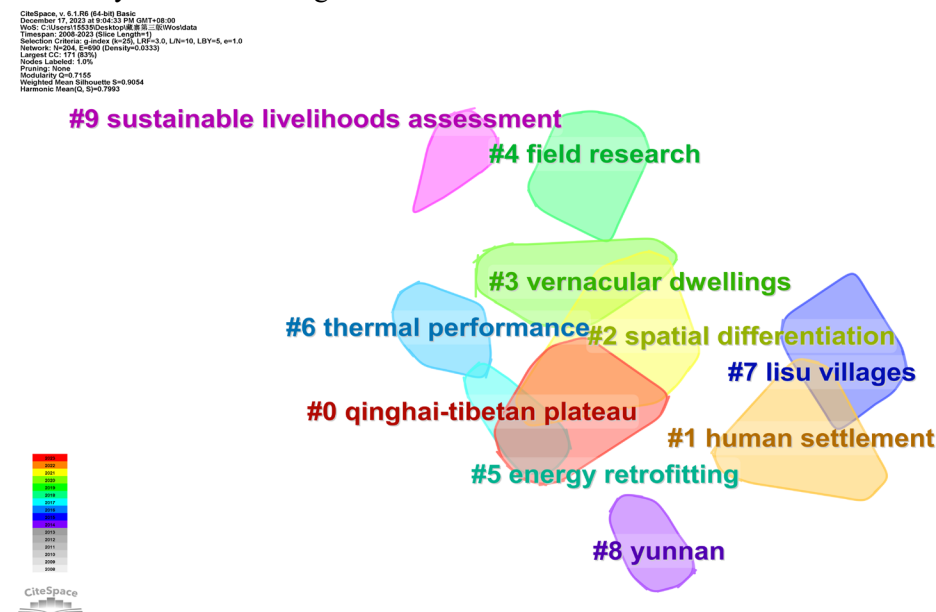


Figure 9. Keyword clustering graph of Tibetan village research based on the WOS database

3.5. Analysis of the Evolutionary Trends in Research

The keyword timeline graph reflects the relationships between various keyword clusters and the publication time span corresponding to each keyword cluster. Based on the co-occurrence keyword analysis in the CNKI database using CiteSpace 6.1.R6 software, keyword clusters ranked #0 to #11 were selected to generate the keyword timeline graph in five-year time segments to analyze the research topics, the start time, and development trends of each keyword cluster (see Figure 10). Based on the start time, duration, and density of nodes on the timeline for each keyword cluster, Tibetan village research themes were categorized into four groups.

Research themes with an early start, long duration, and a high number of generated keywords: This group included #4 Tibetan, #5 Vernacular dwelling, and #6 Traditional dwelling keyword clusters. The primary research topics included the morphological evolution of Tibetan traditional dwellings, the landscape characteristics of Tibetan villages, the inheritance and development of Tibetan traditional dwellings and culture (An et al. 2023), traditional settlement landscapes, and regional genes of traditional dwellings.

Research themes that started relatively late, had a long duration, and generated a

significant number of keywords: This group included #0 Traditional village, #1 Tibetan dwelling, #2 Rural tourism, and #3 Jiarong Tibetan keyword clusters. The primary research topics included symbolic patterns in Tibetan traditional villages, the current development and construction of Tibetan traditional houses, dwelling renovation, the inheritance of regional culture, spatial forms in Tibetan regions, rural governance, rural revitalization, renovation, development, and protection.

Research themes with a relatively late start, short duration, and a low number of generated keywords: This group included #7 Sichuan, #8 Tibetan village, and #9 Community participation keyword clusters. The primary research topics included ecological and cultural tourism, the architectural style of traditional buildings in Tibetan villages, economic development in ethnic regions, and the identity of Tibetan village communities.

Research themes characterized by an early start, a shorter duration, and fewer generated keywords: This group included #10 Natural environment and #11 Western development keyword clusters. The primary research topics included the development and leadership role of Western development in Tibetan areas, Tibetan architecture, ethnic culture, and the diversified development of Tibetan villages.

An overview of the entire graph shows that research on Tibetan villages has been continuously refined and supplemented. Additionally, the emergence of keywords such as spatial distribution, world natural heritage site, blockhouse dwelling, regional gene, and cultural integration indicates that research is increasingly delving into the external characteristics and internal influencing factors of Tibetan villages from a multidisciplinary perspective, thereby promoting the sustainable development of Tibetan villages.

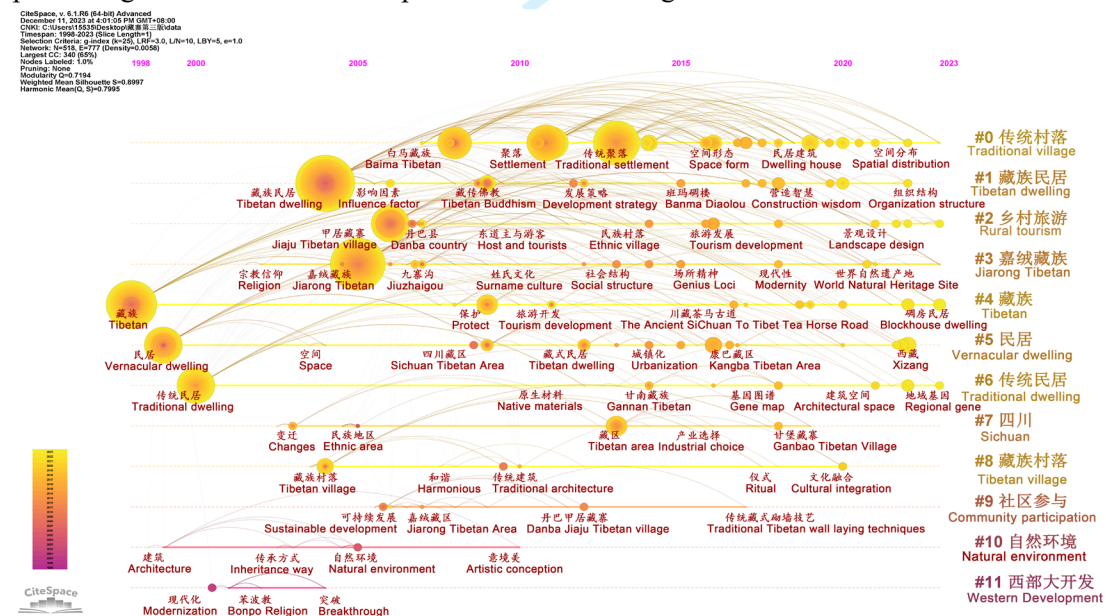


Figure 10. Keyword timeline graph of Tibetan village research in the CNKI database from 1998 to 2023

3.6. Analysis of Research Frontiers

Burst keywords are those keywords that experience a sudden increase in citation frequency during a specific period. These burst keywords reflect the research hotspots in a particular phase and are used to analyze the research development trends in a specific field. To analyze the

development trends in the research on Tibetan villages in China, the filtered CNKI literature data were imported into CiteSpace 6.1.R6 software. The analysis parameters were set to “Burst terms” to obtain a keyword burst graph for Tibetan village research from 1998 to 2023. In the graph, “begin” and “end” represent the start and end times of burst keywords, and “strength” indicates the burst keyword's strength. A higher strength indicates a higher citation frequency and greater influence (Li et al. 2017).

The top 15 burst keywords in Tibetan village research from 1998 to 2023 include Jiaju Tibetan village, Vernacular dwelling, Tibetan dwelling, Dwelling house, Anduo Tibetan Area, Kangba Tibetan Area, Gannan Tibetan Area, Traditional dwelling, Traditional village, Space form, Tibetan, Tibetan area, Public space, Rural revitalization, and Spatial feature (Figure 11). Among them, the earliest burst keywords were Jiaju Tibetan village, Vernacular dwelling, and Tibetan dwelling, with burst periods from 2009 to 2017. This suggests that the initial focus of Tibetan village research was primarily on residential studies, mainly centered around the Jiaju Tibetan village. Subsequently, the research direction began to diversify, with the appearance of burst keywords related to the Anduo Tibetan Area, Kangba Tibetan Area, Gannan Tibetan Area, Dwelling house, Traditional dwelling, and Traditional village. This suggests an extension of research territory beyond the Jiarong Tibetan area, where Jiaju Tibetan village is located, to other Tibetan areas.

Top 15 Keywords with the Strongest Citation Bursts

Keywords	Year	Strength	Begin	End	1998 - 2023
甲居藏寨 Jiaju Tibetan village	2006	3.31	2009	2015	
民居 Vernacular dwelling	1999	2.91	2014	2017	
藏族民居 Tibetan dwelling	2004	2.81	2014	2015	
民居建筑 Dwelling house	2016	4	2016	2018	
安多藏区 Anduo Tibetan Area	2016	3.74	2016	2018	
康巴藏区 Kangba Tibetan Area	2016	3.28	2016	2017	
甘南藏区 Gannan Tibetan Area	2016	2.99	2016	2017	
传统民居 Traditional dwelling	2000	3.37	2017	2018	
传统村落 Traditional village	2011	6.44	2018	2021	
空间形态 Space form	2019	5.82	2019	2023	
藏族 Tibetan	1998	4.44	2019	2023	
藏区 Tibetan area	2013	3.03	2019	2020	
公共空间 Public space	2014	2.83	2020	2023	
乡村振兴 Rural revitalization	2020	2.74	2020	2023	
空间特征 Spatial feature	2020	2.65	2020	2023	

Figure 11. Top 15 burst keywords with the most citations in Tibetan village research based on the CNKI database

Keywords such as Space form, Tibetan, Public space, Rural revitalization, and spatial feature have become research hotspots, with a shorter duration in the Tibetan area indicating a shift toward subdividing geographical areas. Combined with the mapping analysis, the current stage of Tibetan village research relies on policy support, orientation, and the high-quality development of human settlements. Therefore, rural revitalization and spatial quality improvement appear to be the two core paths of research (Yao et al. 2023).

4. Results and Discussion

4.1. Analysis of Funding Sources and Publishing Institutions for Tibetan Village Research

Analyzing the funding situation in a research field reflects the level of attention it receives. This study analyzed 283 academic journal articles labeled as "funded documents" that were retrieved through CNKI. Among them, 143 articles related to Tibetan village research in China were supported by national-level funds (National Natural Science Foundation, National Social Science Fund, National Science and Technology Support Plan, National Key Research and Development Program, National Key Research and Development Program of China, China Postdoctoral Science Foundation, National Scholarship Council), accounting for 50% of the total funded documents (Figure 12). This indicates the significant level of national attention directed toward research in the field of Tibetan villages in China.

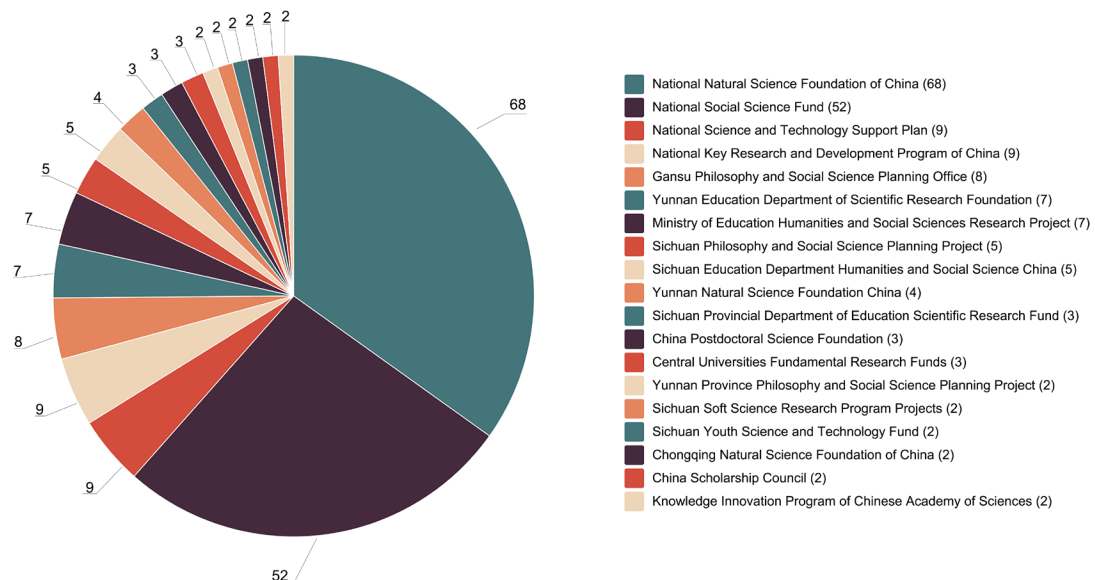


Figure 12. Statistics on the number of research funding sources

Additionally, a significant proportion of funding came from special funds from higher education institutions and local science funds. For instance, documents funded by the Gansu Philosophy and Social Science Planning Office totaled 8, followed by the Yunnan Provincial Department of Education's Scientific Research Foundation and the Ministry of Education Humanities and Social Sciences Research Project, each with 7 published articles. Furthermore,

various funds from Sichuan Province provided strong support for research on Tibetan villages, with as many as 17 articles published with funding from various Sichuan Province funds.

Among funding institutions, Southwest Minzu University leads with 31 articles, followed by Xian University of Architecture and Technology with 23 articles. Sichuan University and Sichuan Minzu University follow closely with 18 and 16 articles, respectively (Figure 13). This geographical concentration of funding organizations aligns with the institutions publishing literature under each foundation. Notably, in the provinces of Sichuan, Gansu, and Yunnan in China, increased attention has been devoted to examining Tibetan villages, which is directly tied to the substantial number of Tibetan settlements falling under the jurisdiction of these three provinces.

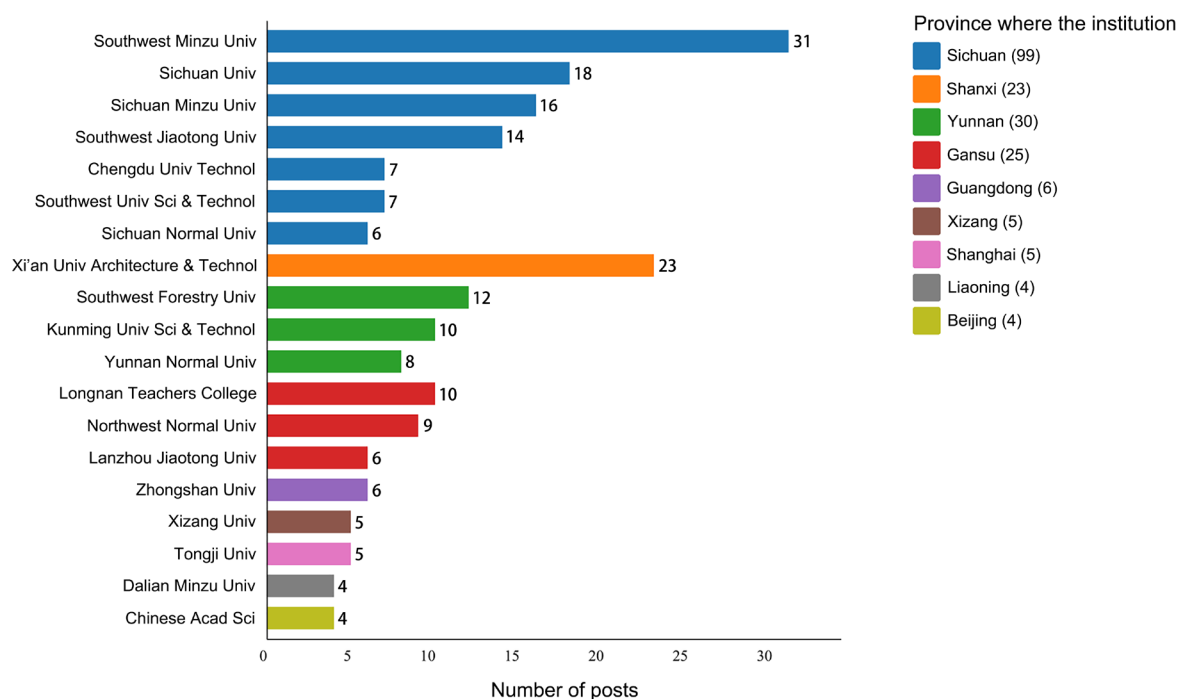


Figure 13. Statistics on institutions publishing papers on Tibetan village research funded by grants, based on the CNKI database

4.2. Guidance on Tibetan Village Research in Chinese Policy

Chinese academics began studying Tibetan villages in the 1990s, with research gaining more depth and breadth following the implementation of the Western Development Strategy proposed during the Fourth Plenary Session of the 15th Central Committee of the Communist Party of China in September 1999 (Qin 2011). Significant developments occurred with the explicit mention of the concept of historical and cultural villages and towns in the newly revised Cultural Relics Protection Law in December 2002 (Wang 2013). The amended constitution in 2004 formally included villages with minority characteristics within the scope of protection (Yang 2018), marking a repositioning of Tibetan villages at the national policy level and a deeper research focus.

The No. 1 Document of the Central Committee in 2006 provided a more comprehensive explanation of the construction of a new socialist countryside, introducing new requirements for rural development, including ethnic minority villages. It proposed that "Chinese ancient villages harmonize with the construction of a new socialist countryside" at the International

Seminar on Ancient Village Protection and the "Ancient Village Protection and New Rural Construction Summit Forum" in November of the same year (Hong 2006).

The "Cultural Heritage Protection Law," revised in December 2007, officially incorporated the protection and planning work of ethnic minority characteristic villages into the legal framework (Yang 2018). The 17th National Congress of the Communist Party of China in the same year proposed effectively utilizing villages and hamlets in the construction of the new countryside (Chen 2022). The Third Plenary Session of the 17th Central Committee of the Communist Party of China, through the "Decision of the Central Committee of the Communist Party of China on Several Major Issues Concerning Promoting the Reform and Development of Agriculture and Rural Areas" in 2008, indicated an acceleration of the construction of a new socialist countryside and the promotion of integrated urban-rural development (China Government Website n.d.), leading to a significant surge in research on Tibetan villages following the introduction of these policies.

Table 2. Representative policies for the protection and development of characteristic villages of ethnic minorities

Year of publication	Publishing Department	Name of Policy Paper
1998	National Ethnic Affairs Commission, National Cultural Heritage Administration	Opinions on Strengthening Ethnic Minority Cultural Relics (National Ethnic Affairs Commission (PRC) and National Cultural Heritage Administration (PRC) n.d.)
2009	National Ethnic Affairs Commission, Ministry of Finance PRC	Guidelines for the Pilot Work on the Protection and Development of Characteristic Villages of Ethnic Minorities (Jiang 2020)
2009	State Council	Opinions on Further Prospering the Development of Ethnic Minority Culture (China Government Website n.d.)
2012	State Council	"Twelfth Five-Year" Plan for Ethnic Minority Affairs
2012	National Ethnic Affairs Commission	Outline of the Plan for the Protection and Development of Characteristic Villages of Ethnic Minorities (2011-2015) (National Ethnic Affairs Commission (PRC) n.d.)
2016	State Council	Thirteenth Five-Year Plan for Promoting the Development of Ethnic Areas and Less-Populated Nationalities (China Government Website n.d.)
2018	The Central Committee of the CPC, State Council	Opinions of the Central Committee of the Communist Party of China and the State Council on the Implementation of the Rural Revitalization Strategy
2018	The Central Committee of the CPC, State Council	Strategic Plan for Rural Revitalization (2018-2022)
2021	State Council	Circular on the Fourteenth Five-Year Plan for Tourism Development (China Government Website n.d.)
2021	State Council	Circular on the "14th Five-Year Plan" for Promoting Modernization of Agriculture and Rural Areas (China Government Website n.d.)
2022	The Central Committee of the CPC, State Council	Rural Building Action Implementation Program (China Government Website n.d.)
2022	The Central Committee of the CPC,	Outline of Strategic Planning for Expanding Domestic Demand

	State Council	(2022-2035) (China Government Website n.d.)
2023	The Central Committee of the CPC, State Council	Opinions of the Central Committee (CPC) and the State Council on Doing a Good Job in Comprehensively Promoting the Key Work of Rural Revitalization in 2023 (China Government Website n.d.)

The Ministry of Finance and the National Ethnic Affairs Commission jointly issued the "Guiding Opinions on Doing a Good Job in the Pilot Work of Protecting and Developing Ethnic Minority Characteristic Villages" on September 8, 2009. This document serves as the action guideline for the pilot work on the protection and development of ethnic minority characteristic villages and the basis for implementing China's policy on ethnic minority villages (Zuo et al. 2023). The "Law on Intangible Cultural Heritage" issued by the state in February 2011 stated that the intangible cultural heritage of ethnic minority villages and the physical objects and spaces constituting intangible cultural heritage were protected under this law (Yang 2018).

In July 2012, the State Council issued the "12th Five-Year Plan for Ethnic Minority Affairs," incorporating the protection and development of ethnic minority villages into the national 12th Five-Year Plan (China Government Website n.d.), greatly promoting Tibetan village research. The Central No.1 Document of 2018 further clarified the need to promote the integrated development of industries in ethnic minority villages (China Government Website n.d.).

The "Strategic Plan for Rural Revitalization (2018-2022)" launched in recent years aimed to protect ethnic villages, traditional villages, and buildings and support the inheritance and development of minority cultures (China Government Website n.d.). Along with the "14th Five-Year Plan" and other series of policy outlines, these initiatives have led to the explosive growth of Tibetan village research in the current stage (Wang and He 2022; Wang et al. 2023). Table 2 lists the representative policy documents on the protection and development of ethnic minority villages issued by the state from 1998 to 2023. An analysis of policy interpretations and publication volumes, combined with the historical context, indicates that the release of national policies on rural revitalization and the protection and development of ethnic minority characteristic villages had a significant pull effect on promoting research.

4.3. Focus and Methods of Tibetan Village Research in China

The analysis of 15 highly cited documents retrieved from the CNKI database, of which 9 were doctoral dissertations (Table 3), revealed that current research on Tibetan villages has integrated disciplines such as architecture, anthropology, sociology, geography, and ecology, employing main research methodologies including qualitative research, quantitative research, and a combination of both, as well as diachronic and synchronic studies. Qualitative research methods included participation observation, field research, and ethnographic fieldwork, while quantitative research included content analysis, questionnaires, and case studies. The combination of qualitative and quantitative research primarily referred to studies that integrated field surveys, questionnaire interviews, and literature research within theoretical frameworks across disciplines.

This approach stemmed from qualitative analysis capturing the main characteristics of Tibetan village studies across different disciplines, while disciplinary theories provided precise

measurements of the influencing factors on Tibetan villages from various perspectives. Therefore, the combined qualitative and quantitative research method, based on an interdisciplinary background, emerged as the main approach in Tibetan village research.

Table 3. Analysis of the top 15 highly cited literature in CNKI

Author	Year	Field	Research methodology	Main findings	Recommendations
Yuzhen Yang	2003	Regional Architectural Cultures	Field research, case study	Qionglong, dry bar, and courtyard are the three main building species corresponding within the SW region.	Architectural design must be based on "locality" (Yang 2003).
Quan He	2009	Tibetan Houses and Culture	Interview, case study	Traditional Tibetan dwellings build an environment that meets people's material and spiritual requirements through local construction techniques and materials.	Integration of solar energy and modern building materials and technologies with residential homes (He 2009).
Yuyuan An	2005	Tibetan Traditional Settlement	Field research, literature research	The traditional settlements of the Gannan Tibetans have formed economic and rational forms of settlements and dwellings with limited resources and technology.	Tapping into the regional identity of the West, respecting and encouraging the diversity of residential cultures (An 2005).
Longzhu Duojie	2011	Tibetan Buddhist Monastery Architecture	Interview, case study	Summarize the characteristics of Tibetan Buddhist monastic architecture through the ages, and the historical context in which it developed and matured.	A multidisciplinary combination of Tibetan studies, architecture, art history, and anthropology (Longzhu 2011).
Zhinong Li	2011	Traditional Village, Public Cultural Space	Content analysis, case study	Revealing the important role of endogenous public cultural space in the construction of village order in villages.	Constructing a village governance model that harmonizes endogeneity and modernity in village governance in ethnic areas (Li and Qiao 2011).
Jie Zhong	2012	Ethnic Village Tourism Products	Interview, case study	Six common factors of recreation quality exist: scenery, socialization, decompression, flavor, learning, and exercise; and provide product optimization strategies.	Build a spectrum of ethnic village tourism products with rich connotations, diversified forms, and reasonable structure (Zhong 2012).
Chang Ding	2011	Tibetan Architectural Color System	Field research, literature research, case study	The concept of the "Tibetan architectural color system" was proposed.	Create a regional system of environmental expression (Ding 2011).

Wenhe Cui	2017	Renewal of Qinghai's Vernacular Dwellings	Field research, analogical analysis, research	Integration of ecological technology, cultural heritage, and appropriate design models to build a theoretical framework and design methodology for residential renewal.	Renewal design of dwellings in accordance with the industrial structure of highland agriculture combined with ecology and ethnology (Cui 2017).
Wenfeng Bai	2011	Building Envelope Materials, Sustainable Building Construction	Field research, design practice	Strategies and techniques for the structural renewal of dwellings and the sustainable development of natural building materials have practical value for Yunnan dwellings as well as for other regions.	Study the micro-mechanisms of the materials to increase the effectiveness and durability of the materials (Bai 2011).
Duanzhi Suo	2006	Cultural Symbols	Literature research	At the top of a mountain god system, there can only be one total god.	The mountain gods symbolize the plurality of Tibetan regional societies (Suo 2006).
Yuliang Yang	2016	Village Cultural Landscape	Field research, literature research, case study	The spatial distribution of industry, settlement, and religion is a complex and gradual law of overall correspondence and local slight differences.	Addressing the realities of village development through research (Yang 2016).
Jiao Xie	2010	Jiarong Tibetan Residence	Field research, literature research, analogical analysis	Analyze the plan features, construction parts, and conservation measures of the Jiaju Residence.	The preservation of traditional settlements should focus on sustainable development (Xie 2010).
Yingzi Zhang	2009	Climate Suitability and Habitat Needs	Interview, case study	Total experience by combining three aspects: solar radiation utilization, envelope insulation capacity, and winter wind protection.	Traditional architectural experience applied to modern architecture (Zhang 2009).
Desheng Lu	2008	Socio-Educational, Educational Mechanisms	Field research, in-depth interview	The mechanisms of socio-educational functioning are described; the idea of constructing schooling in ethnic areas with "historical vitality" is envisaged.	All proposals for education reform and development need to be tested in practice (Lu 2008).
Dongyan Yang	2001	Tibetan Beliefs and Customs	Literature research, interview	The Baima Tibetans practiced the Bonpo religion and embraced the culture of the Han Chinese.	Faith fulfills psychological and spiritual needs (Yang 2001).

5. Conclusion

In conclusion, this study utilized bibliometric statistical methods and CiteSpace for knowledge visualization map analysis to elucidate key characteristics and trends within Tibetan village research in China. The findings demonstrate a growing scholarly interest and an expanding volume of literature in this field, with a notable increase in policy-guided research. Specifically, research within the CNKI database reveals a pronounced policy influence, showcasing a broad array of core nodes and extensive network connections across diverse multidisciplinary attributes, constituting a comprehensive academic framework. Conversely, analysis from the WOS database suggests a predominance of natural science disciplines, indicating a narrower scope of study compared to CNKI.

The findings indicate the formation of a multifaceted institutional collaboration network, characterized by a dominance of intra-institutional collaborations and a relative scarcity of inter-institutional and cross-regional cooperation. Research hotspots identified in the CNKI database encompass a broad range of topics, including public space planning and design, rural revitalization, spatial form and feature analysis, traditional Tibetan residential construction techniques, and Tibetan traditional cultural ecology. Meanwhile, the WOS database highlights research on settlement building energy use and ecological design. A notable gap in international literature underscores the need for enhanced global visibility and impact of Tibetan village studies.

The current phase of Tibetan village research in China presents significant potential for academic advancement. It calls for a deeper interdisciplinary examination of social development trajectories, as well as social, economic, cultural, and environmental development needs across different regions. The establishment of a systematic protection and inheritance system for traditional Tibetan villages is urgently needed, along with comparative analyses of village characteristics across diverse geographic areas. Emphasizing the integration of theoretical and empirical research methods is crucial for fostering the diversity and practical application of Tibetan village studies, thereby enhancing their scholarly relevance and societal impact.

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Exploring Research Progress and Development Trends in Tibetan Villages of China: A Bibliometric Visualization Study

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Cogent Business & Management

Does Board Capital Improve Climate Change Disclosures?

--Manuscript Draft--

Full Title:	Does Board Capital Improve Climate Change Disclosures?
Manuscript Number:	COGENTBUSINESS-2022-1113
Article Type:	Research Article
Keywords:	climate change disclosures; board capital; board networking; board education; board experience
Manuscript Classifications:	50.6.1 Economics; 50.6.3 Finance; 50.6.4 Business, Management and Accounting
Abstract:	<p>Climate change is a global issue faced by many countries that cause enormous damage. This is the biggest challenge for a sustainable economy so firms have to mitigate the risk of climate change. Climate change disclosures can be a way for firms to gain legitimacy from stakeholders. The purpose of the study is to examine the effect of board capital on climate change disclosures. This study consists of 191 firm-year observations of banks listed on the Indonesia Stock Exchange from 2016-2020. Data were obtained from annual reports, sustainability reports, and company websites and were analyzed using regression. The results of the study show that board capital has a positive effect on climate change disclosures. This study examines the dimensions of board capital separately too consisting of networking, education, and experience owned by the board on climate change disclosures. The result shows that networking, education, and experience of the board have a positive effect on climate change disclosures. The board plays a significant role in disclosing information about climate change, so companies need to pay attention to the quality of the board. The board's extensive network, higher education, and background experience will increase climate change disclosures.</p>

Does Board Capital Improve Climate Change Disclosures?

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ABSTRACT

Climate change is a global issue faced by many countries that cause enormous damage. This is the biggest challenge for a sustainable economy so firms have to mitigate the risk of climate change. Climate change disclosures can be a way for firms to gain legitimacy from stakeholders. The purpose of the study is to examine the effect of board capital on climate change disclosures. This study consists of 191 firm-year observations of banks listed on the Indonesia Stock Exchange from 2016-2020. Data were obtained from annual reports, sustainability reports, and company websites and were analyzed using regression. The results of the study show that board capital has a positive effect on climate change disclosures. This study examines the dimensions of board capital separately too consisting of networking, education, and experience owned by the board on climate change disclosures. The result shows that networking, education, and experience of the board have a positive effect on climate change disclosures. The board plays a significant role in disclosing information about climate change, so companies need to pay attention to the quality of the board. The board's extensive network, higher education, and background experience will increase climate change disclosures.

Keywords: climate change disclosures; board capital; board networking; board education; board experience.

1. INTRODUCTION

Climate change is a global issue faced by many countries because it threatens the existence of humans and other living things. The existence of climate change results in extreme weather changes that cause enormous damage in various countries which also have an impact on business activities. In an external press release, the United Nations Framework Convention on Climate Change (UNFCCC) stated that the increase in global carbon emissions of more than 2 billion tons by 2021 was the largest in history. This is the biggest challenge for a sustainable economy, both financial and reputational challenges that companies must address. The long-term impact of climate change has attracted the attention of the governments of 196 countries that have agreed to sign an international agreement on climate change, known as the Paris Agreement.

Countries that signed the Paris Agreement agreed to contribute to reducing global temperature increases by limiting global temperatures to below 2°C or even up to 1.5°C (United Nations, 2015).

In Indonesia, Financial Services Authority has prepared a Sustainable Finance Roadmap to support solving problems caused by climate change. In the Sustainable Finance Roadmap, there is a green taxonomy component which is a classification of business sectors that support environmental protection and management efforts as well as mitigation and adaptation to climate change. Based on the Regulation of Financial Services Authority NO. 51/POJK.03/2017 Article 4(1), financial service institutions are required to prepare a Sustainable Finance Action Plan which is a written document containing the financial industry strategy to implement activities that harmonize economic, social, and environmental aspects. Banks also contribute to the fight against climate change through the use of electronic documents (paperless), water and electricity efficiency (green building), as well as financing environmentally friendly projects (green investing).

Climate change affects business so companies need to adapt and make efforts to reduce risks that may occur (Iriyadi & Antonio, 2021). Businesses can be affected by forest fires, lack of clean water, deteriorating agricultural production, damaged resources, increased risk of infectious disease outbreaks, and also have an impact on economic activity (Ahzar, 2018). Companies are expected to prove that they are careful about environmental pollution and work responsibly to reduce carbon emissions that can trigger climate change (Ahmad & Hossain, 2015). Therefore, many companies in various countries express their views and activities related to climate change issues in annual reports, websites, and sustainability reports (Ahzar, 2018). Companies that contribute to carbon emissions and do not make efforts to overcome them will suffer consequences such as reputation risk, reduced demand, increased operational costs, and fines (Berthelot & Robert, 2011). Companies are under pressure from stakeholders to disclose information related to company activities that affect climate change (Daradkeh et al., 2022). Stakeholders, especially investors, want to know not only how much carbon emissions are issued, but also how the company evaluates the risks, financial

impacts, and whether there is a control system related to carbon emissions. Creditors also consider information related to environmental issues to make funding decisions (Kim et al., 2021).

Previous studies examine the factors that can affect climate change disclosures. Climate change disclosures will be made by companies with good corporate governance (Choi et al., 2013; Daradkeh et al., 2022); larger board size (Ahzar, 2018; Asare et al., 2022; Nasih et al., 2019); the percentage of the number of female boards (Al-Qahtani & Elgharbawy, 2020) and well-known boards (celebrity board) (Shui & Zhang, 2020). Climate change disclosures can also be influenced by the board's background such as education and board experience (Reeb & Zhao, 2013; Brahmana et al., 2019; Elsayih et al., 2021). This study uses companies in Indonesia as a sample with board capital as a factor that is thought to increase climate change disclosures.

The board of the company has the task of overseeing material risks that may be faced by the company and ensuring the identification of these risks is accompanied by risk management. Board groups with a range of abilities, experience, and knowledge are able to initiate strategic change by assessing threats, evaluating alternatives, and making better decisions (Pan et al., 2020). An effective board will seek to reduce the risk of climate change and respond to stakeholder expectations by increasing disclosure related to climate change (Ben-Amar & McIlkenny, 2015). The risks arising from climate change are also opportunities for companies to develop renewable energy sources, introduce low-carbon products, and support customers to manage carbon emissions.

This study aims to examine the effect of board capital on climate change disclosures. In addition, this study examines the dimensions of board capital separately consisting of networking, education, and experience owned by the board on climate change disclosures. This research contributes by providing benefits to the literature on how board capital can increase the disclosure of non-financial information of companies. With climate change as a global issue, this research provides information for regulators to encourage companies to reduce carbon emissions.

In the next section, this study will present a literature review followed by the development of hypothesis. Section 3 describes the sample and research methodology. Section 4 discusses the results. Section 5 is the conclusion.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Board capital and climate change disclosures

The risks arising from climate change will continue to increase from time to time so investors have the right to get information on how the company is dealing with this reality and how the business opportunities from climate change are. This means that the company's response to climate change and environmental degradation is becoming increasingly important (Aggarwal & Dow, 2012). If the company is not able to provide information, there will be a risk that the public will make an assessment of the company based on inaccurate information (Haque & Deegan, 2010). Risks and opportunities related to climate change can be material for companies so the Task Force on Climate-related Financial Disclosures (TCFD) encourages companies to start disclosing financial information related to climate. TCFD provides a framework to help companies create reports to convey information related to climate change.

Theories that can explain the relationship between board capital and climate change disclosures are legitimacy theory and stakeholder theory. The company has contracts with stakeholders as well as with the wider community through the interactions that occur. Companies have rights and authority from the community to access resources (Choi et al., 2013). Because these resources are important for survival, companies must ensure to operate within the boundaries and norms prevailing in society to convince stakeholders that the company is legitimate (Berthelot & Robert, 2011). Climate change disclosures can be a way for companies to gain legitimacy. Companies must pay attention to their activities so as not to cause harm to the community. Every bad action of the company can be a legitimacy gap that can harm the company (Ahmad & Hossain, 2015). Companies exist not only to pay attention to the interests of the company but also to provide benefits to stakeholders. Companies as going-concern entities need resources that can be obtained from stakeholder support to

be able to continue operating (Nasih et al., 2019). With the issue of climate change, companies get pressure from stakeholders to convey information related to climate change (Ahzar, 2018). Disclosure is a form of communication between companies and stakeholders because the company management has more information than the stakeholders (Kurnia, et al., 2021). Legitimacy theory and stakeholder theory are complementary theories.

The board is the highest level in the company management and is also a valuable asset for the company. The board of directors in the company functions to monitor management and provide the resources needed by the company such as advice and suggestion on strategic issues (Ricci et al., 2019) and serves to increase the trust and wealth of shareholders (Brahmana et al., 2019). Meanwhile, the board of commissioners functions to oversee the board of directors in managing the company (Rusli et al., 2020). Board capital is a factor considered by stakeholders because the board is chosen and entrusted to run the company. Stakeholders will benefit if the company has better resources and can also reduce agency costs (Kontesa et al., 2020).

Companies with wider board capital coverage will respond to climate change and allow higher disclosures (Shui & Zhang, 2020). Hillman and Dalziel (2003) interpret board capital as human and social capital owned by the company's board. Human capital includes a range of capabilities and knowledge such as educational background and work experience. While social capital includes potential resources that come from business networks or relationships owned by a person. Boards with high capabilities will maintain their reputation by reducing information asymmetry. The board's experience, education, and business network enable the disclosure of higher-quality information (Reeb & Zhao, 2013). One of the important tasks of the board is to make a policy regarding the company's disclosures.

Companies that can manage assets efficiently will be increasingly encouraged to disclose information because they have optimism and a good reputation (Ariantika & Geraldina, 2019). The board's experience which includes new ways of thinking, beliefs, concepts, and ideas has an impact on the company's strategic decisions including actions in managing risks related to climate change (Elsayih et al., 2021). In

their research, Reeb & Zhao (2013) stated that board capital increases governance efficacy with higher quality disclosures as well. Information in disclosures is needed by stakeholders so that management who can use their abilities, knowledge, and experience is needed to develop and implement business strategies that satisfy stakeholders (Ng & Daromes, 2016). Therefore, this study proposes the following hypothesis:

H₁: Board capital has a positive effect on climate change disclosures.

3. RESEARCH METHOD

Data and sample

This study uses data obtained from annual reports, sustainability reports, and company websites. The object of research is the banking companies listed on the Indonesia Stock Exchange (IDX) from 2016 to 2020 as many as 47 banks. After excluding unique factors from 47 banks, the final sample of this study is 191 firm-year observations.

Variable measurement

Climate change disclosures are measured using an index provided by TCFD. The TCFD recommendations cover four dimensions, namely Governance, Strategy, Risk Management, and Metrics and Targets. Each item in the index disclosed by the company will be given a score of 1, otherwise given a score of 0. With this scoring method, the maximum value that will be obtained by each company is 11, with a minimum value of 0. Previous research using the TCFD index as a climate change disclosures measurement are by Eccles and Krzus (2017), Bose and Hossain (2021), and Achenbach (2021).

GOVERNANCE	1) Describe the board’s oversight of climate-related risks and opportunities.
	2) Describe management’s role in assessing and managing climate-related risks and opportunities.

STRATEGY	1) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.
	2) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.
	3) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.
RISK MANAGEMENT	1) Describe the organization's processes for identifying and assessing climate-related risks.
	2) Describe the organization's processes for managing climate-related risks.
	3) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.
METRICS AND TARGETS	1) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
	2) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
	3) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Measurement of board capital follows the method Reeb & Zhao (2013) with three dimensions: networking, education, and experience. Another research that uses the method of Reeb & Zhao (2013) is the research of Kontesa et al., (2020) and Brahmana et al., (2019). In this measurement, the education dimension uses measurements from Brahmana et al., (2019). Each level of education is represented by a number from 1 to 9, namely: 1) Under a bachelor's degree; 2) Bachelor's degree; 3) MBA degree; 4) Master's degree; 5) Doctoral degree; 7) Best 200 undergraduate degrees based on QS University rankings; 8) Top 200 master's degrees based on QS University ranking; and 9) Best doctoral degree based on QS University ranking. The board capital calculation procedure uses ranking and average value. Each company will be given a score based on three dimensions of board capital. Then the company will be

ranked based on this score from year to year. Finally, the rankings are summed and averaged per dimension. Board capital is the average value of the three dimensions.

Networking of the Board	Educational of the Board	Experience capital of the Board
1. Total current number of boards a director sits on during a given year.	1. Total number of director that obtain bachelor's degree, master's degree, law degree or medical degree, as well as a PhD degree.	1. Working history: the number of directors who have been a partner in a law firm; have investment bank/venture capital firm expertise; management consulting experience; accounting firm expertise; academic experience.
2. Total current number of nonprofit boards a director sits on		2. Director information on professional certification such as CPA, CFA or certified fraud examiner.
3. Total number of corporate board memberships / the total number of commissioners		3. Number of positions higher than vice president (Chemmanur&Paeglis, 2005) that directors have held during their lifetime.
4. Number of non-profit boards that a director has served on in the past but is no longer a current member / the total number of independent commissioners		4. count the number of firms with which the directors have worked during their lifetime.
5. Any current or prior government position		5. Others potential director characteristic such as national level honours and awards and membership in professional or industrial association affiliations.

This study uses 5 control variables, namely firm size, profitability, leverage, firm age, and audit firm. Large companies are expected to have better resources where

management can identify risks and opportunities related to climate change and be able to provide the information needed by stakeholders (Ararat & Sayedy, 2019). Firm size is measured using the natural logarithm of the company's total revenue. Companies with high profitability (ROE) are expected to be able to manage their resources with due regard to environmental issues (Daradkeh et al., 2022). Companies with high levels of leverage tend to be pressured by stakeholders to disclose information in order to manage reputational and legitimacy risks (Bui et al., 2020). Leverage is measured by the ratio of debt to total equity. The greater the age of the company, the higher the disclosure related to climate change because the reputation and environmental and social responsibility of the company will be increasingly formed over time (Kılıç & Kuzey, 2019). Firm age is measured by the number of years since the company was founded. The dummy variable is used to indicate whether a company is audited by the big four audit firm or not. Companies audited by the big four are encouraged to disclose more information (Ding et al., 2021).

The regression model

The regression model used to test hypothesis 1 (H_1) is:

$$CCD_{it} = \alpha + \beta_1 BC_{it} + \beta_2 SIZE_{it} + \beta_3 ROE_{it} + \beta_4 LEV_{it} + \beta_5 AGE_{it} + \beta_6 AUDIT_{it} + \varepsilon$$

Where CCD = Climate Change Disclosures; BC = Board Capital; SIZE = Firm Size; ROE = Profitability ratio as measured by ROE; LEV = Leverage ratio as measured by DER; AGE = Firm Age; AUDIT = big four audit firm or non-big four audit firm

4. RESULTS AND DISCUSSION

Descriptive statistics

The results of the descriptive statistical analysis are shown in table 1. The independent variable board capital (BC) has an average value of 1.8890 with a maximum value of 4.4667 and a minimum value of 1. The average value of climate change disclosures (CCD) is 2.6649 which shows that among companies in the sample, there are still many who have not fully disclosed information related to climate change with a maximum value of 11 and a minimum of 0. For control variables, the average

firm size value is 27.7199 with a maximum value of 32.0341 and a minimum of 23.1657, thus the sample of this study is large companies. The company's performance can be seen from the profitability ratio with an average value of 2.2893 and a maximum and minimum value of 33.6092 and -54.7039, respectively. The sample company can settle its financial obligations with average leverage of 5.2299 from a maximum value of 14.7485 and a minimum value of 0.0553. The maximum age of the sample company is 125 years and the minimum age is 18 years with an average value of 46.5969. The companies in this research sample were audited by both big four and non-big four audit firms with an average score of 0.5497, a maximum score of 1 (big four), and a minimum of 0 (non-big four). In table 2, there are 54.97% of companies audited by big four audit firm, and 45.03% audited by non-big four audit firm.

Table 1. Descriptive statistics

Variable	N	Mean	Std. Dev	Max	Min
CCD	191	2.6649	2.8121	11	0
BC	191	1.8890	0.7953	4.4667	1
NETWORKING	191	2.0471	0.7518	4.8000	1
EDUCATION	191	2.0366	1.1760	5	1
EXPERIENCE	191	1.5832	0.6022	4	1
SIZE	191	27.7199	1.9774	32.0341	23.1657
ROE	191	2.2893	12.1861	33.6092	-54.7039
LEV	191	5.2299	2.5929	14.7485	0.0553
AGE	191	46.5969	23.0425	125	18

Information: **CCD** = Climate change index disclosed by the company; **BC** = Average value of networking, education, and experience board; **SIZE** = Company size; **ROE** = Return on Equity; **LEV** = Leverage; **AGE** = Age of the company since it was founded.

Table 2. Descriptive statistics for dummy variable

Variable	Freq (1)	Freq (0)
AUDIT	54.97%	45.03%

Note: **AUDIT** = dummy variable, 1 if the company is audited by big four audit firm and 0 otherwise.

Regression results

In this study, the estimation model used is the random effect model and does not require a classical assumption test. As shown in table 3, board capital has a positive effect with a coefficient value of 0.7666 ($p < 0.05$). Therefore, the hypothesis in this study is accepted that board capital has a positive effect on climate change disclosures. The results of this study are in line with the research of Reeb & Zhao (2013) and Shui and Zhang (2020) but contradict the research of Al-Qahtani and Elgharbawy (2020). Uncertainties faced by companies such as climate change will be responded by companies with diverse boards by making more disclosures and higher quality disclosures (Shui & Zhang, 2020). Boards with good skills prefer that the public get more information through disclosures to assess the company's actual performance and assess how the company responds to uncertainties such as the risk of climate change. The practice of climate change disclosures will spread more quickly in the industry if the company has a board with good capabilities or a quality board. This matter in line with the demands from stakeholders for companies to convey information related to climate change. Companies that disclose more information will also be more favored by investors.

Table 3. Regression results

	1	2	3	4
BC	0.7666 ** (0.0155)			
NET		0.5872 * (0.0669)		
EDC			0.3827 * (0.0570)	
EXP				0.9320 *** (0.0074)
SIZE	0.5672 (0.0000)	0.6196 (0.0000)	0.6415 (0.0000)	0.5821 (0.0000)
ROE	0.0046 (0.6989)	0.0049 (0.6806)	0.0035 (0.7680)	0.0057 (0.6266)
LEV	-0.0712	-0.0668	-0.0695	-0.0482

	(0.2377)	(0.2750)	(0.2535)	(0.4116)
AGE	0.0211	0.0228	0.022	0.0251
	(0.0088)	(0.0063)	(0.0071)	(0.0012)
AUDIT	-0.7592	-0.7198	-0.7845	-0.7533
	(0.0310)	(0.0436)	(0.0264)	(0.0315)
adj. R2	0.3064	0.2891	0.2992	0.3119
F-Statistics	14.9909	13.8809	14.5215	15.3546
Prob F-Statistic	0.0000	0.0000	0.0000	0.0000
Observation	191	191	191	191

Information: **CCD** = Climate change index disclosed by the company; **BC** = Average value of networking, education, and experience board; **NET** = Board's network value; **EDC** = Board's education value; **EXP** = Board's experience value; **SIZE** = Ln of the company's total revenue; **ROE** = Ratio of profit after tax divided by equity; **LEV** = Ratio of debt divided by assets; **AGE** = number of years since the company was founded; **AUDIT** = Auditor, dummy variable 1 if the company is audited by big four audit firm and 0 otherwise.

Significance levels : *10%, **5%, *1%**

This study also examines the effect of each dimension of board capital separately, namely networking, education, and experience on climate change disclosures. Table 3 shows that networking has a positive effect. This means that the wider the network within the board, the higher the level of climate change disclosures. In their research, Shui and Zhang (2020) argue that boards that have external connections allow companies to respond to climate change through disclosures. The board wants the company to be viewed favorably by investors, the government, and other board connections. The higher the number of board members, the wider the connection, insight, and awareness of the board that can increase climate change disclosures. Furthermore, education has a positive effect, which means that the higher the board's education, the higher the level of climate change disclosures. These results are in line with the research of Chang et al., (2017) where the company benefits from the existence of a highly educated board because the board is free to express opinions and tends to be more committed to disclosures. Boards with higher education have more knowledge and skills to manage the company and make the best decisions for the company such as making climate change disclosures to gain legitimacy. Furthermore, experience has a positive effect where companies with more experienced boards will

be more aware of making climate change disclosures. Based on the results of research by Al-Mamun and Seamer (2021), boards that have expertise in the business field as well as those with international experience are more aware of how the environmental impact of business activities will have an impact on company legitimacy. Boards involved in associations, occupying various positions, or working in different companies or industries have a broader view so that they can compare business strategies, risk mitigation, and disclosures between companies or industries. With the influence of board capital that can increase climate change disclosures, companies can look for boards that have good abilities which can be indicated by high education, a lot of experience, and a wide network of work.

5. CONCLUSION

Climate change which is a global issue attracts the attention of various parties, especially stakeholders, so companies are under pressure to evaluate the impact of the risks that arise and disclose them to stakeholders. Disclosure is part of communication between company management and stakeholders so that the company gains legitimacy. In this study, it was found that board capital has a positive effect on climate change disclosures by examining 191 firm-year observations of banks listed on the Indonesia Stock Exchange from 2016-2020. Companies that have boards with good skills tend to disclose more information such as climate change disclosures. Board knowledge is an aspect that can affect the governance of a company. Boards with human capital and social capital will pay attention to their reputation by reducing information asymmetry between managers and investors and stakeholders so that they will make disclosures (Reeb & Zhao, 2013). The practice of climate change disclosures will be more widespread if the company has a board with good capabilities.

This research provides information for regulators to encourage companies to reduce carbon emissions and make disclosures. This study contributes to the literature on how board capital affects the disclosure of company information. The board plays a significant role in disclosing information about climate change, so companies need to pay attention to quality when selecting a board. This research is limited to the sample

companies, namely the banking sector in Indonesia. Subsequent research can use a wider sample, namely from other countries and other sectors. Subsequent research can also add moderating variables such as foreign ownership or use other measurements of climate change disclosures such as the Carbon Disclosures Project (CDP) Scores.

DISCLOSURE STATEMENT

The author(s) declare no conflict of interest.

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