Journal of Nusantara Studies 2026, Vol 11(1) 116-140 ISSN 0127-9386 (Online)
http://dx.doi.org/10.24200/jonus.vol11iss1pp116-140

DECADES OF CARBON TAX RESEARCH: INSIGHTS FROM A BIBLIOMETRIC ANALYSIS OF SCOPUS DATA (1989-2023)

[1]Nur Aaina Aqilah Jamaluddin, [*1]Nurul Aishah Khairuddin, [2]Raja Solan Somasuntharam, [3]Mohd Rizal Palil & [4]Azwanis Azemi

[1] Centre for Foundation Studies in Science, Universiti Malaya,
50603 Kuala Lumpur, Malaysia.
[2] INTI International University, Persiaran Perdana BBN, Putra Nilai,
71800 Nilai Negeri Sembilan, Malaysia.
[3] Faculty of Economic and Management, Universiti Kebangsaan Malaysia,
43600 Bangi, Selangor, Malaysia.
[4] Institute of Professional Studies, University Poly-Tech Malaysia,
Taman Shamelin Perkasa, 56100 Kuala Lumpur, Malaysia.
*Corresponding author: nurulaishah@um.edu.my

Received: 25.10.2025 Accepted: 09.02.2026

ABSTRACT

Background and Purpose: As climate change intensifies, carbon taxes have become an important policy instrument for reducing greenhouse gas emissions. Understanding the evolution, key contributors, and collaboration patterns in carbon tax research is essential for guiding future studies and supporting effective climate policy. This study examines the development and structure of carbon tax research to identify major trends and influential contributors.

Methodology: This study employs a bibliometric analysis of carbon tax–related publications indexed in the Scopus database from 1989 to 2023. Key indicators analysed include publication trends, leading institutions, influential authors, prominent journals, geographical distribution, and collaboration networks.

Findings: The results show a significant increase in research output, particularly between 2008 and 2022. Major contributions come from institutions such as Tsinghua University and the Chinese Academy of Sciences, with Lin Boqiang and Gilbert E. Metcalf as leading authors. Energy Policy is the most influential journal, and strong international collaboration is evident.

Contributions: This study provides a comprehensive overview of global carbon tax research, offering insights to support future research and evidence-based climate policy development.

Keywords: Carbon tax, carbon pricing, CO2 tax, emission tax, climate policy.

Cite as: Jamaluddin, N. A. A., Khairuddin, N. A., Somasuntharam, R. S., Palil, M. R., & Azemi, A. (2026). Decades of carbon tax research: Insights from a bibliometric analysis of Scopus data (1989-2023). *Journal of Nusantara Studies, 11*(1), 116-140. http://dx.doi.org/10.24200/jonus.vol11iss1pp116-140

1.0 INTRODUCTION

Carbon emissions are a major contributor of climate change, posing significant threats to the environment and global ecosystems. As the world grapples with the urgent need to reduce greenhouse gas emissions, various strategies have been proposed and implemented to mitigate their impact. One such strategy is the imposition of carbon taxes, which aim to reduce carbon emissions by placing a price on activities that generate these emissions.

The concept of carbon taxes has gained traction globally, with numerous countries adopting this approach as part of their environmental policies. Carbon taxes are designed to internalize the external costs of carbon emissions by placing a financial burden on the emission of greenhouse gases. This economic instrument encourages businesses and individuals to reduce their carbon footprint by making it more expensive to engage in activities that produce carbon emissions. By setting a price on carbon, these taxes provide a clear financial incentive to invest in cleaner technologies and adopt more sustainable practices.

Despite the growing popularity of carbon taxes, their implementation and impact vary widely across different regions and sectors. Factors such as economic conditions, political will, and public acceptance play significant roles in shaping the effectiveness of carbon tax policies. Additionally, the specific design of carbon tax schemes, including the tax rate and the method of revenue recycling, can greatly influence their success in achieving emission reduction goals.

The effectiveness of carbon taxes in reducing emissions, stimulating green innovation, and promoting sustainable practices has been the subject of extensive debate and research. Some studies have shown that carbon taxes can significantly reduce greenhouse gas emissions and drive investment in renewable energy and energy efficiency (Aghion et al., 2016). Others highlight potential drawbacks, such as economic burdens on low-income households and industries heavily reliant on fossil fuels (Bruvoll & Larsen, 2002). These diverse outcomes underscore the importance of carefully designing and implementing carbon tax policies to balance environmental benefits with economic and social considerations.

This article seeks to explore the existing literature and trends in carbon tax research through a bibliometric analysis, the study aims to provide a comprehensive overview of this crucial policy tool and its role in addressing climate change. Bibliometric analysis involves the quantitative evaluation of academic literature, allowing for the mapping of the development of research on carbon taxes, identify influential studies and authors, and uncover emerging trends and knowledge gaps. This methodological approach provides valuable insights into the progression of carbon tax research and helps to contextualize our findings within the broader global landscape of climate policy research.

While carbon taxes have been widely recognized as a potential solution to reducing greenhouse gas emissions, their implementation and effectiveness remain contentious. There is a need for a comprehensive analysis of the global research on carbon taxes to understand the varying approaches, successes, and challenges associated with this policy instrument. A bibliometric analysis can provide valuable insights into the progression of carbon tax research, highlighting key themes, influential studies, and future directions. Understanding these trends is essential for policymakers, researchers, and stakeholders to effectively design and implement carbon tax policies.

1.1 Objectives/Aims of the Paper

i. To explore the key themes, trends, and research patterns in carbon tax studies globally.
ii. To identify the most influential institutions, authors, and journals in the field of carbon tax research.
iii. To analyze the geographical distribution and collaboration networks in carbon tax research.

2.0 LITERATURE REVIEW

Bibliometric analysis has emerged as a crucial method for evaluating research trends, productivity, and the influence of scholarly publications. Table 1 presents a selection of studies that have employed bibliometric analysis to investigate carbon taxes, each providing a distinct viewpoint on the research landscape with differences in scope, timeframe, data sources, and specific bibliometric attributes examined. Despite the varied scholarly focus on different facets of carbon taxes, notable gaps in the literature remain that warrant further investigation.

The scope of these studies varies significantly, reflecting different research interests and objectives. For instance, Patel and Jhalani (2023) and Wigantini and Nainggolan (2022) focus on the broader economic and business implications of environmental and carbon taxes, while Tian et al. (2018) and Bashir et al. (2021) delve into more specific aspects, such as greenhouse gas emissions and environmental taxes, respectively. These differences highlight the multifaceted nature of environmental and carbon tax research, encompassing both broad economic impacts and specific environmental outcomes.

The choice of data sources is critical for bibliometric analysis, as it influences the comprehensiveness and accuracy of the results. Most studies, including those by Patel and Jhalani (2023) and Bashir et al. (2021), primarily rely on well-established databases like the Web of Science and Scopus. However, Zhou et al. (2021) expanded the data pool by incorporating additional sources such as Google Scholar and Baidu Scholar, providing a more diverse and potentially inclusive dataset. This variation in data sources, particularly those focusing on non-English publications, could further enhance the global representation of research efforts in the field of carbon taxes. This can affect the scope and depth of the bibliometric analysis, with broader databases potentially capturing a wider range of publications and citations.

The timeframe of analysis is another distinguishing factor among previous studies. Zhang et al. (2016) examine the longest period, analyzing research trends from 1989 to 2014. This long-term timeframe facilitates the identification of enduring trends and shifts within the research landscape. In contrast, Wigantini and Nainggolan (2022) concentrate on the most recent decade (2012-2022), offering insights into the latest developments and emerging trends in the field. By exploring verying timeframes, these studies collectively provide a comprehensive overview of the evolution and current state of research on environmental and carbon taxes.

While previous research has made significant progress in understanding issues related to environmental and carbon tax, notable gaps remain that require attention. To address these gaps, future research should focus on analyzing more recent publications and considering utilizing a single database, such as Scopus, to ensure a thorough and comprehensive examination of the literature. This approach would enable researchers capture a broader range of studies and enhance their understanding of current trends and impacts in this critical area of research.

Table 1: Summary of previous studies

Author	Domain/Search Strategy	Data Source & Scope	Bibliometric Attributes Examined	Timeframe	TDE*
(Patel & Jhalani, 2023)	"Environment* Tax*" OR "Carbon Tax*" *Using TS (= Article title) and TS (= Keywords)* *limit to subject area in searching document - to only three subjects: Economics, econometrics, & finance, Social Science, Business and management*	Scopus	✓ Document type ✓ Source Type ✓ Language ✓ Subject Area ✓ Publication Trend ✓ Active Institutions and countries ✓ Occurrence of keywords source ✓ Productive of journals by publication and citation	2001-2022	590
(Wigantini & Nainggolan, 2022) Focus on the economic and business scope	"carbon tax" OR "carbon tax policy" *Using title for document type, source type is a journal and English language, and limit to subject area (Economics/ Economiertics & Finance/ Business, Management & Accounting/ Social Sciences/ Decision Science/ Computer Science/ Multidisciplinary.*	Scopus	✓ Publication per year ✓ Leading authors ✓ Leading journals ✓ Annual frequently journals ✓ Leading countries ✓ Popular articles ✓ Popular keywords ✓ Co-occurrence keywords	2012-2022	351
(Bashir et al., 2021)	("environment tax(es)" OR "environmental tax(es)" *dataset was obtained from the Web of sci- ence core collection by using field tags TS (=Topic), to create the query.*	Web of Science	✓ Publication trend ✓ Productive countries ✓ Distribution of journal ✓ Performance of high-yielding authors ✓ Citation analysis by productive institutes, journals, and authors ✓ Collaboration network ✓ Research trends	1999-2019	476

(Zhou et al., 2021) Combine Review and bibliometric analysis	doesn't mention the keywords used for searching documents *full-length articles were considered, therefore, meeting reports, editorials, case reports, viewpoints, essays and interviews were precluded from the analysis*	Web of Science, Science Direct, Wiley Library, Google Scholar, Baidu Scholar	✓ Growth trends ✓ Geographical distribution ✓ Publication sources ✓ Top cited articles ✓ High frequency keywords ✓ Co-occurrence of keywords based on	2010-2019	273 articles obtained through keyword search, 140 articles were further selected from leading journals
(Tian et al., 2018)	"Greenhouse gas emission" OR "GHG emission" OR "CO2 emission" OR "carbon emission" OR "carbon dioxide emission" AND "transport emission" OR "transport sector emission" OR vehicle emission"	Web of Science	✓ Performance of selected publications ✓ Performance of countries, institutions, and authors ✓ Performance of journal, citations, and keywords ✓ Top cited article ✓ Co-citing network ✓ Research topics from keywords	1997-2016	754
(Zhang et al., 2016)	"carbon tax*" OR "carbon emission tax*" OR "CO2 tax*" OR "CO2 emission tax*" OR "carbon dioxide tax*" OR "carbon dioxide emission tax*"	Web of Science	✓ Growth trends of literature and quantity references ✓ Explore country of publication, publisher, journal type, and institutions ✓ Prolific author and citation ✓ Current key research area	1989-2014	1224

**TDE=Total documents examined*

3.0 METHODS

This study employed bibliometric analysis as a quantitative methodology to address our research question. Bibliometrics involves the quantitative analysis of scholarly publications, typically using measures such as citation counts, author productivity, and journal impact factors to evaluate the impact and significance of research output. Conducting a literature review through bibliometric analysis has gained popularity as a method of examining previous work (Abdul Rahman et al., 2022; Mansour et al., 2022). This method involves the analysis of

scientific literature to reveal patterns of publication, citation, and collaboration among authors and institutions (Donthu et al., 2021). Figure 1 illustrates the flow process for conducting a bibliometric analysis, which begins with determining the topic of the study. For this study, the focus is on carbon taxes and utilizing the Scopus database to obtain a pool of documents on this topic. After determining the topic of the study, the keywords to be used in the search strategy process were defined. A set of predetermined search terms, which can be found in Figure 1, were used to search the Scopus database for relevant documents in the research area. The search yielded a total of 1,388 documents that met the inclusion criteria and were published within the time frame of 1989 to 2023. Bibliographic data, including author names, publication titles, journal names, publication dates, and citation counts, were then extracted from the Scopus database.

To analyze the bibliographic data extracted from the Scopus database, a range of software tools were utilized. Firstly, Microsoft Excel 365 was used to calculate the frequencies and percentages of the published materials and to generate the relevant charts and graphs. Secondly, VOSviewer (version 1.6.15) was employed to create and visualize the bibliometric networks, enabling the identification of the most prominent authors, publications, and research topics within the field. Finally, Har-zing's Publish or Perish software was used to calculate citation metrics, including h-index and citation counts, which provided valuable insights into the impact of individual publications and authors. By utilizing these software tools, a thorough analysis of the bibliographic data was conducted, and a comprehensive understanding of the literature related to the research topic was obtained.

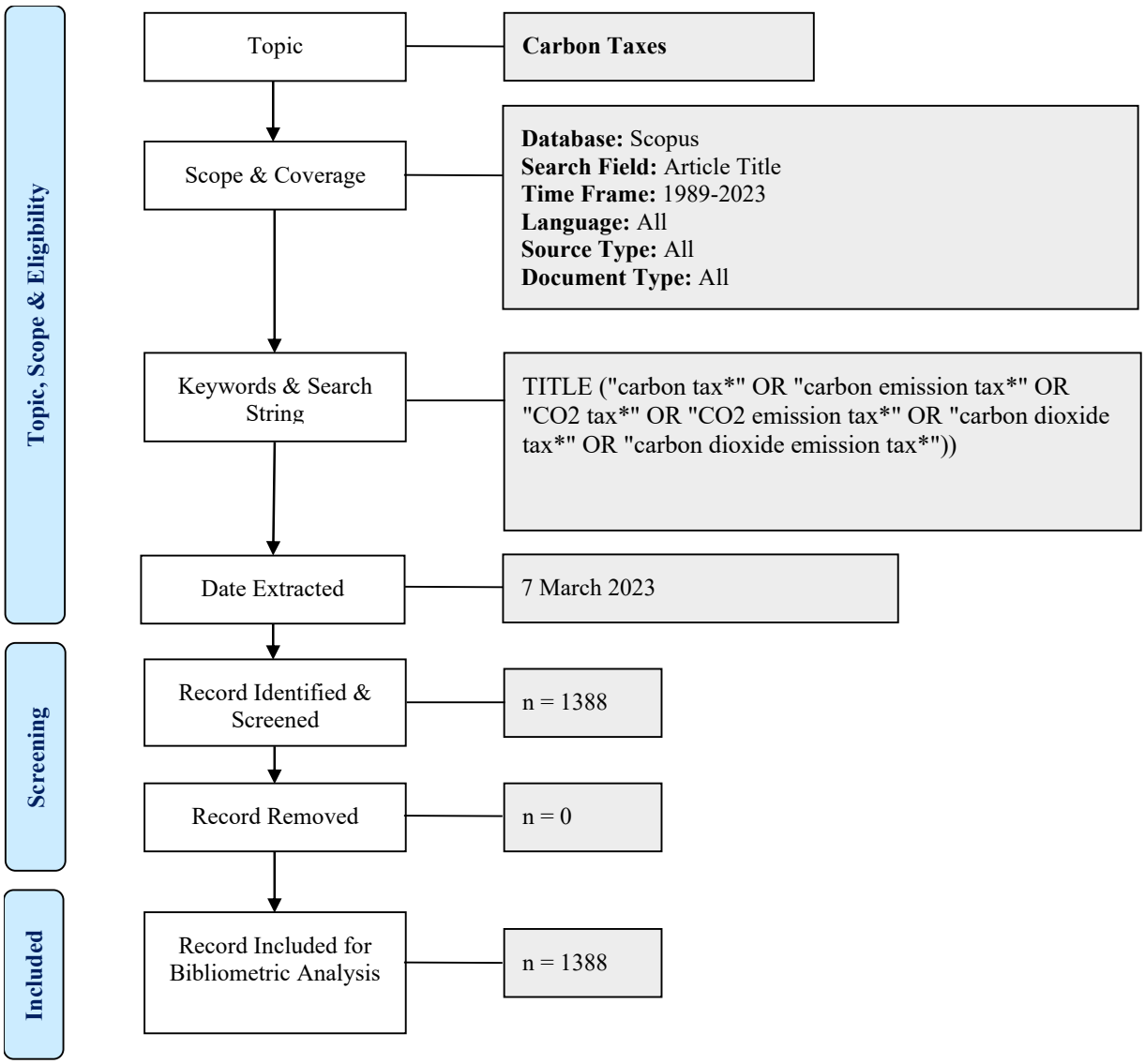

Figure 1: Flow diagram of the search strategy
Source: Moher et al. (2009), Zakaria et al. (2021)

4.0 RESULTS

This section presents the findings of a bibliometric investigation into 1,388 Scopus documents published between 1989 to 2023. The analysis aimed to examine various bibliometric indicators, including documents and source types, subject areas, keywords analysis, citation counts, publication trends, active authors, influential institutions, geographical distribution of publications, and co-authorship patterns. The purpose of this analysis was to gain insights into the scholarly impact and evolution of the research in this field.

4.1 Documents and Source Types

The Scopus database contains an array of indexed documents of different types. Table 2 presents the documents and source analyses from this study. Journal articles represent the most common document type published on the topic of a carbon tax, accounting for 73.27% out of a total of 1388 publications, followed by conference papers (169 total publications) which represent 12.18%. Book chapters make 96 publications (6.92%), while review papers account

for 38 publications (2.74%). The analysis of published articles on carbon tax reveals that multiple document types are available, and various categories of source types have been identified. According to Table 2, most articles were published in journals, as opposed to conference proceedings and books.

Table 2: Document and source types

Description	**Results**	
	Total Publications (TP)	**Percentage (N=1389)**
Document Types		
Article	1017	73.27%
Conference Paper	169	12.18%
Book Chapter	96	6.92%
Review	38	2.74%
Note	21	1.51%
Editorial	12	0.86%
Letter	12	0.86%
Erratum	8	0.58%
Short Survey	8	0.58%
Book	5	0.36%
Retracted	2	0.14%
Source Types		
Journal	1108	79.83%
Conference Proceeding	124	8.93%
Book	90	6.48%
Book Series	39	2.81%
Trade Journal	27	1.95%

4.2 Subject Area

The term of "subject area" denotes a grouping or category of topics that have been designated to a specific source title (Ahmi, 2022). Table 3 summarizes the published documents based on the subject area. Research on carbon taxes is largely conducted by experts in Environmental Science, Energy, and Econometrics, Econometrics and Finance. These subjects account for 43.37%, 31.41%, and 27.88% of the published research, respectively, according to Table 3. However, other subject areas such as engineering, social sciences, and business, management, and accounting have also contributed to the literature on carbon taxes.

Table 3: Subject Area

Subject Area	Total Publications (TP)	Percentage (%)
Environmental Science	602	43.37%
Energy	436	31.41%
Economics, Econometrics and Finance	387	27.88%
Engineering	352	25.36%
Social Sciences	294	21.18%
Business, Management and Accounting	232	16.71%
Computer Science	112	8.07%
Mathematics	75	5.40%
Earth and Planetary Sciences	68	4.90%
Decision Sciences	62	4.47%
Agricultural and Biological Sciences	36	2.59%
Chemical Engineering	35	2.52%
Medicine	27	1.95%
Materials Science	23	1.66%
Multidisciplinary	22	1.59%
Chemistry	15	1.08%
Physics and Astronomy	15	1.08%
Arts and Humanities	13	0.94%
Biochemistry, Genetics and Molecular Biology	7	0.50%
Psychology	6	0.43%
Pharmacology, Toxicology and Pharmaceutics	4	0.29%
Total	2823	203.39%

4.3 Publication Trends

Table 4 and Figure 2 illustrate a general trend of growth in carbon tax research from 1989 to 2023. During the initial period from 1989-2008 (20 years), the total number of publications on carbon tax in the Scopus database exhibited fluctuations. However, from 2008 to 2022 publication trends demonstrated a significant upward trajectory, increasing from 28 publications to 159. The peak number of publications on carbon tax was in 2022. Figure 2 provides a visual representation that showcases the total of publications, citations, and the average citation per publication from 1989 to 2023.

The rising interest in carbon taxes could be attributed to several factors, such as the growing concern over climate change, the necessity to lower greenhouse gas emissions, the implementation of environmental policies, and the acknowledgment of the economic advantages associated with a carbon tax system. As the consequence of climate change become increasingly visible and urgent, policymakers, researchers, and the general public are recognizing the critical need for action to address its impact. Carbon taxation has emerged as a viable solution to encourage reduction in carbon emissions. Consequently, the volume of research on carbon tax studies is on the rise, with the total number of citations growing annually.

Table 4: Year of publication

Year	TP	NCP	TC	C/P	C/CP	*h*	*g*
1989	1	0.07%	1	2	2.00	2.00	1
1990	5	0.36%	4	10	2.00	2.50	2
1991	2	0.14%	1	5	2.50	5.00	1
1992	7	0.50%	6	172	24.57	28.67	6
1993	5	0.36%	2	59	11.80	29.50	2
1994	12	0.86%	10	359	29.92	35.90	7
1995	15	1.08%	11	730	48.67	66.36	9
1996	10	0.72%	9	386	38.60	42.89	5
1997	6	0.43%	5	208	34.67	41.60	5
1998	4	0.29%	3	91	22.75	30.33	3
1999	11	0.79%	9	365	33.18	40.56	7
2000	6	0.43%	6	324	54.00	54.00	4
2001	11	0.79%	9	316	28.73	35.11	7
2002	7	0.50%	6	141	20.14	23.50	6
2003	9	0.65%	8	136	15.11	17.00	5
2004	10	0.72%	7	550	55.00	78.57	5
2005	8	0.58%	7	464	58.00	66.29	6
2006	11	0.79%	10	329	29.91	32.90	8
2007	17	1.22%	12	473	27.82	39.42	9
2008	23	1.66%	18	305	13.26	16.94	9
2009	27	1.95%	20	1001	37.07	50.05	10
2010	39	2.81%	25	825	21.15	33.00	14
2011	48	3.46%	37	922	19.21	24.92	15
2012	48	3.46%	36	708	14.75	19.67	14
2013	58	4.18%	36	1007	17.36	27.97	18
2014	81	5.84%	61	1522	18.79	24.95	20
2015	80	5.76%	71	1807	22.59	25.45	20
2016	54	3.89%	44	1580	29.26	35.91	20
2017	88	6.34%	78	1788	20.32	22.92	23
2018	107	7.71%	90	2650	24.77	29.44	29
2019	110	7.93%	92	2061	18.74	22.40	27
2020	145	10.45%	119	2048	14.12	17.21	26
2021	126	9.08%	106	1318	10.46	12.43	19
2022	159	11.46%	93	508	3.19	5.46	11
2023	38	2.74%	5	8	0.21	1.60	1
Total	**1388**						

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

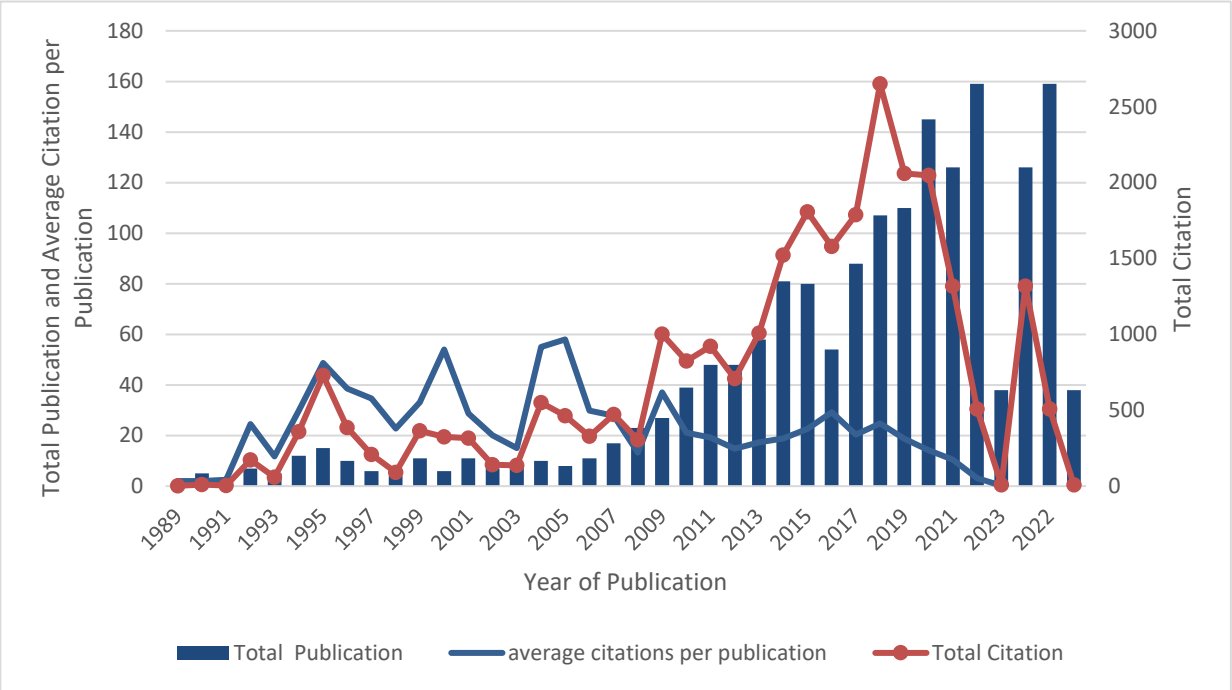

Figure 2: Total publications, citations, and the average of citation per publication from the year 1989 to 2023

4.4 Most Active of Authors

In addition to examining publication trends, this study also identifies the top 10 most productive authors in carbon tax research. According to the data presented in Table 5, Lin, Boqiang and Metcalf, Gilbert E. are among the most productive authors who have actively published documents in the field of carbon tax, each having published a total of 12 papers on the subject. In term of citation, the research conducted by Lin Boqiang has been cited 662 times, followed by Metcalf with 571 citations. Table 5 shows the most active institutions are from the United States and China.

China and the United States are the two largest carbon emitters globally, collectively accounting for 40% of total carbon emissions. Both nations acknowledge the critical need to tackle climate change and have initiated efforts to reduce their carbon footprints. However, their strategies differ significantly, especially regarding the adoption of a carbon tax.

Table 5: Top 10 most productive authors

Author's Name	Affiliation	Country	TP	NCP	TC	C/P	C/CP	*h*	*g*
Lin, Boqiang	Xiamen University	China	12	12	662	55.17	55.17	10	12
Metcalf, Gilbert E.	Tufts University	United States	12	11	571	47.58	51.91	8	12
Shrestha, Ram Manohar	Asian Institute of Technology Thailand	Thailand	8	7	126	15.75	18.00	6	8
Tsai, Wen Hsien	National Central University	Taiwan	8	7	109	13.63	15.57	6	8
Morris, Adele C.	The Brookings Institution	United States	7	7	200	28.57	28.57	6	7
Ho, Mun Sing	Harvard University	United States	6	3	100	16.67	33.33	3	6
Hoel, Michael O.	Universitetet i Oslo, Department of Economics	Norway	6	6	313	52.17	52.17	6	6
Liang, Qiaomei	Beijing Institute of Technology,	China	6	6	377	62.83	62.83	6	6
Mardones Poblete, Cristian	Universidad de Concepcion, Industrial Engineering	Chile	6	5	122	20.33	24.40	5	6
Meng, Sam	University of New England Australia	Australia	6	6	170	28.33	28.33	6	6

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

4.5 Most Influential Institutions

This research analysis, as shown in Table 6, highlights the most active institutions (Top 5) that have contributed to the study on carbon tax, revealing that many authors hail from two of the largest and most influential countries in the world: China and the United States. The data suggest that these institutions are highly committed to advancing research in this field of carbon tax and have made significant contributions to the academic discourse. Tsinghua University has contributed a total of 27 publications, while the Chinese Academy of Sciences has a total of 24 publications. Meanwhile, the National Bureau of Economic Research, Vrije Universiteit Amsterdam, and Beijing Institute of Technology are also among the active institutions that have contributed studies to the carbon tax. The identification of the most active institutions sheds light on the global nature of the research and the diverse perspectives that have been brought to the table. This information provides valuable insight into the trends and patterns that shape the academic landscape and underscores the importance of collaboration and cross-cultural exchange in achieving meaningful progress.

Table 6: Top 5 Most productive institutions with minimum of ten publications

Affiliation	Country	TP	NCP	TC	C/P	C/CP	*h*	*g*
Tsinghua University	China	27	19	426	15.78	22.42	9	20
Chinese Academy of Sciences	China	24	23	923	38.46	40.13	15	24
National Bureau of Economic Research	United States	22	22	1152	52.36	52.36	11	12
Vrije Universiteit Amsterdam	Netherlands	17	17	658	38.71	38.71	13	17
Beijing Institute of Technology	China	17	17	645	37.94	37.94	12	17

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

4.6 Geographical Distribution of Publications

The issue of carbon tax has attracted attention from researchers across the globe, with contributions from a total of 67 countries represented in the published literature. Table 7 highlights the top publishing countries that have contributed to research on carbon tax, with China, the United States, and the United Kingdom leading the way. These countries, known for their significant carbon emissions and economic influence, are at the forefront of global efforts to address climate change and reduce greenhouse gas emissions. The findings from these studies provide valuable insights into the effectiveness of carbon tax policies and the challenges that countries face in implementing them. Identifying the most active countries in this area of research helps to better understand the global landscape of carbon tax policy potential avenues for international collaboration and knowledge exchange. Figure 3 presents a visual representation of global scientific production indexed by Scopus on the topic of the carbon tax, further emphasizing the international nature of this research area and the importance of cross-border cooperation in addressing the global challenge of climate change.

Table 7: Top 20 Countries contributed to the publications

Country	TP	NCP	TC	C/P	C/CP	*h*	*g*
China	447	32.20%	340	8071	18.06	23.74	47
United States	268	19.31%	217	6505	24.27	29.98	45
United Kingdom	104	7.49%	85	3194	30.71	37.58	29
Canada	81	5.84%	70	2320	28.64	33.14	25
Australia	72	5.19%	61	1666	23.14	27.31	23
Japan	59	4.25%	43	625	10.59	14.53	13
France	49	3.53%	36	1011	20.63	28.08	14
Germany	42	3.03%	34	758	18.05	22.29	17
Taiwan	38	2.74%	31	647	17.03	20.87	15
India	34	2.45%	25	557	16.38	22.28	15
Netherlands	33	2.38%	27	844	25.58	31.26	15
Norway	29	2.09%	27	839	28.93	31.07	14
Switzerland	29	2.09%	23	871	30.03	37.87	13
South Africa	28	2.02%	22	216	7.71	9.82	7
Sweden	25	1.80%	22	637	25.48	28.95	12
Spain	23	1.66%	18	505	21.96	28.06	12
Austria	21	1.51%	18	335	15.95	18.61	10
South Korea	20	1.44%	14	235	11.75	16.79	9
Denmark	19	1.37%	16	468	24.63	29.25	10
Thailand	18	1.30%	17	252	14.00	14.82	10

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

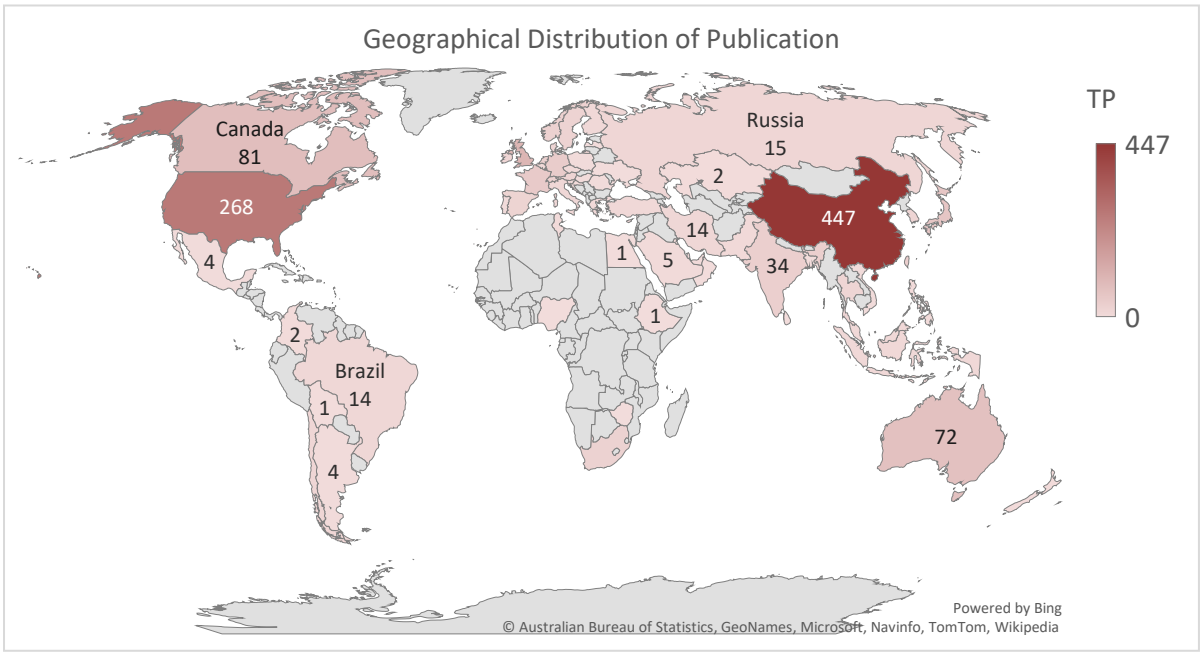

Figure 3: Worldwide scientific production indexed by Scopus on carbon tax
Source: Analysis by authors created using VOSviewer software 2022

4.7 Most Active by Source Titles

The term "sources title" typically refers to the title of a scholarly journal, conference proceeding, or book (Ahmi, 2022). This information is particularly relevant for researchers seeking to accurately cite their sources and locate relevant publications in their field. Based on the analysis presented in Table 8, the Journal of Energy Policy emerges as the leading journal in the field of carbon tax research. With a total of 71 publications and 3,285 citations, this journal has made a significant contribution to the scholarly conversation surrounding this topic. Furthermore, the journal boasts an impressive Scimago Journal Rank (SJR) of 2.126 and a Source Normalized Impact per Paper (SNIP) of 2.034, indicating its high level of influence within the academic community. These findings underscore the importance of the Journal of Energy Policy as a key source for researchers seeking to stay abreast of the latest developments in carbon tax research. The prominent position of the Energy Policy journal in the field of carbon tax research can be attributed to its broad scope, which encompasses the economic, social, planning, and environmental dimensions of energy supply and use. By addressing the policy implications of these issues, the journal provides a comprehensive and multidisciplinary perspective on the topic, making it a valuable resource for researchers and policymakers alike.

Table 8: Top 10 most active source titles

Source Title	TP	TC	Publisher	Cite Score	SJR 2021	SNIP 2021
Energy Policy	71	3285	Elsevier Ltd	12.4	2.126	2.034
Journal Of Cleaner Production	49	1890	Elsevier Ltd	15.8	1.921	2.444
Sustainability Switzerland	42	595	MDPI	5	0.664	1.31
Energy Economics	37	1276	Elsevier B.V.	11.3	2.549	2.347
Climate Policy	24	130	Taylor and Francis Ltd	9.8	1.654	1.648
Applied Energy	21	2176	Elsevier Ltd	20.4	3.062	2.652
Climate Change Economics	19	339	World Scientific Publishing	3.00	0.428	0.381
Ecological Economics	19	1153	Elsevier Ltd	10.9	1.778	2.084
Advanced Materials Research	17	18	Trans Tech Publications Ltd	N/A	0.121	0.185
Computers And Industrial Engineering	16	496	Elsevier Ltd	9.7	1.775	2.215

Notes: TP=total number of publications; TC=total citations; CiteScore = average citations received per document published in the source title; SJR = SCImago Journal Rank measures weighted citations received by the source title; SNIP = source normalised impact per paper measures actual citations received relative to citations expected for the source title's subject field.

4.8 Analysis of Citation Metrics

Citation metrics are quantitative measures of the impact of a research publication based on the number of times it has been cited by other researchers in their own publications. Some common citation metrics include the number of citations, the h-index, and the impact factor. These metrics are an important tool for evaluating the impact and influence of scholarly publications and can provide valuable insights into the reach and significance of research in a given field. Table 9 provides a summary of the citation metrics obtained using Harzing's Publish or Perish Software. Based on the analysis in Table 9, there were 25,178 numbers of citations reported over a 34-year period (1989 – 2023) for the 1,388 retrieved documents. This equates to an average of 740.53 citation per year and 18.14 citation per paper.

Table 9: Citations metrics

Metrics	Data
Papers	1388
Number of Citations	25178
Years	34
Citations per Year	740.53
Citations per Paper	18.14
Citations per Author	11383.74
Papers per Author	688.68
Authors per Paper	2.72
h-index	75
g-index	109

Table 10 reveals the top 20 most cited articles based on the Scopus database. The performance and impact of articles can be analysed by the number of citations within the dataset. Highly cited document analysis can be used to identify key researchers and research groups working in a particular field, as well as to track the evolution of research topics and trends over time. It can also be used to compare the impact of different journals, institutions, or countries in a specific field of study. The study titled "Carbon taxes, path dependency, and directed technical change: evidence from the auto industry," authored by (Aghion et al., 2016), has received the highest number of citations with 344 counts and an average of 49.14 citations per year. This article has been considered as the most impactful based on its citation count per year. Another notable study titled "Effect of carbon taxes and subsidies on optimal forest rotation age and supply of carbon services," written by (Van Kooten et al., 1995), has garnered significant attention within the academic community. This study has received 333 citations to date, with an average of 11.89 citations per year. The paper's findings shed light on the impact of carbon taxes and subsidies on the optimal rotation age of forests and the provision of carbon services. The paper's longevity and continued relevance are evident through its citation count, serving as a testament to the importance of the research within the field of environmental economics.

Table 10: Top 20 highly cited articles

Authors	Title	Cites	Cites per Year
Aghion et al. (2016)	Carbon taxes, path dependency, and directed technical change: Evidence from the auto industry	344	49.14
Van Kooten et al. (1995)	Effect of carbon taxes and subsidies on optimal forest rotation age and supply of carbon services	333	11.89
Lin & Li (2011)	The effect of carbon tax on per capita CO2 emissions	267	22.25
Baranzini et al. (2000)	A future for carbon taxes	249	10.83
Yang & Chen (2018)	Retailer-driven carbon emission abatement with consumer environmental awareness and carbon tax: Revenue-sharing versus Cost-sharing	219	43.8
Goulder (1995)	Effects of carbon taxes in an economy with prior tax distortions: An intertemporal general equilibrium analysis	208	7.43
Bruvoll & Larsen (2002)	Greenhouse gas emissions in Norway: Do carbon taxes work?	204	10.74
Metcalf & Weisbach (2009)	The design of a carbon tax	192	13.71
Chen & Hu (2018)	Using evolutionary game theory to study governments and manufacturersâ€™ behavioral strategies under various carbon taxes and subsidies	187	37.4
Xu et al. (2016)	Joint production and pricing decisions for multiple products with cap-and-trade and carbon tax regulations	184	26.29
Hoel (1996)	Should a carbon tax be differentiated across sectors?	184	6.81
Liu & Lu (2015)	The Economic impact of different carbon tax revenue recycling schemes in China: A model-based scenario analysis	179	22.38
Metcalf (2009)	Designing a carbon tax to reduce U.S. greenhouse gas emissions	170	12.14
He et al. (2015)	Production lot-sizing and carbon emissions under cap-and-trade and carbon tax regulations	166	20.75
Murray & Rivers (2015)	British Columbia's revenue-neutral carbon tax: A review of the latest "grand experiment" in environmental policy	160	20
Wier et al. (2005)	Are CO2 taxes regressive? Evidence from the Danish experience	160	8.89
Lu et al. (2010)	The impacts of carbon tax and complementary policies on Chinese economy	156	12
Yao et al. (2012)	Quantum-inspired particle swarm optimization for power system operations considering wind power uncertainty and carbon tax in Australia	155	14.09
Liang et al. (2007)	Carbon taxation policy in China: How to protect energy- and trade-intensive sectors?	149	9.31
Zhang & Baranzini (2004)	What do we know about carbon taxes? An inquiry into their impacts on competitiveness and distribution of income	148	7.79

4.9 Top Keywords

The bibliometric analysis serves as a valuable tool for identifying the most frequently used keywords within the titles and lists of keywords, allowing the insights into the main themes and topics within a specific field of study. By examining the frequency and co-occurrence of these keywords, researchers can enhance information retrieval and search strategies, pinpointing the most relevant terms and uncovering potential research gaps future investigation. In this study, Table 11 presents the top 20 keywords used by the authors, with "Carbon Tax," "Taxation," and "Emission Control" standing out as the most prevalent terms. These keywords effectively represent the core content of the authors' works and highlight the significance of these concepts within the context of the study. The table offers a comprehensive overview of the key themes and ideas explored in the literature and enriching the understanding of the intellectual landscape of the field.

Table 11: Top 20 author's keywords

Author Keywords	Total Publications (TP)	Percentage (%)
Carbon Tax	606	43.66%
Taxation	496	35.73%
Emission Control	446	32.13%
Carbon Taxes	427	30.76%
Carbon	414	29.83%
Pollution Tax	412	29.68%
Carbon Emission	235	16.93%
Carbon Dioxide	234	16.86%
Environmental Economics	207	14.91%
Climate Change	188	13.54%
Carbon Emissions	152	10.95%
Costs	129	9.29%
Economics	118	8.50%
Environmental Policy	118	8.50%
Greenhouse Gases	116	8.36%
Global Warming	114	8.21%
Gas Emissions	98	7.06%
China	95	6.84%
Supply Chains	85	6.12%
Greenhouse Gas	84	6.05%
Total	**4774**	**343.95%**

4.10 Co-Authorship Analysis

Bibliometric studies provide a framework for exploring the social and intellectual dynamics of a specific field, providing valuable insights into collaboration and knowledge production related to carbon taxes. A key component of this analysis is the assessment of co-authorship patterns, which reveal the collaborative networks and relationships among researchers (Ahmi, 2022). By evaluating these patterns, researchers can identify the most influential and productive authors in the field, as well as understand how research collaborations affect citation trends and overall productivity.

Co-authorship analysis, as highlighted by (Ahmi, 2022), serves as an effective method for assessing the level of collaboration among individuals, institutions, and countries within a specific field of study. This section focuses on analyzing co-authorship patterns between

authors and countries, utilizing VOSviewer software to visualize and identify collaboration trends. By investigating these relationships, we can uncover valuable insights into the networks that exist within the field, enhancing our understanding of knowledge production and dissemination across borders. This analysis can also help identify potential research gaps and emerging trends, ultimately contributing to a more comprehensive understanding of the interconnectedness and evolution of knowledge in the field.

4.11 Co-Authorship by Author

Figure 4 presents a network visualisation map depicting the co-authorship among authors. Created using VOSviewer software 2022, this visualization represents items through their labels and circles, with the size of each circle corresponding to the item's weight. Items with greater weight are displayed with larger labels and circles. Two standard weight attributes are utilized: the Links attribute and the Total Link Strength attribute. For each item, the Links attribute reflects the number of connections it has with other items, while the Total Link Strength attributes indicate the overall strength of those connections. For instance, in the context of co-authorship links between researchers, the Links attribute shows the number of co-authorship connections a specific researcher has with others, whereas the Total Link Strength attribute represent the cumulative strength of these co-authorship links. According to Figure 3, there are a total of 332 authors, 25 clusters (represented by different colours) and 987 network links, resulting in a total link strength of 1,313.

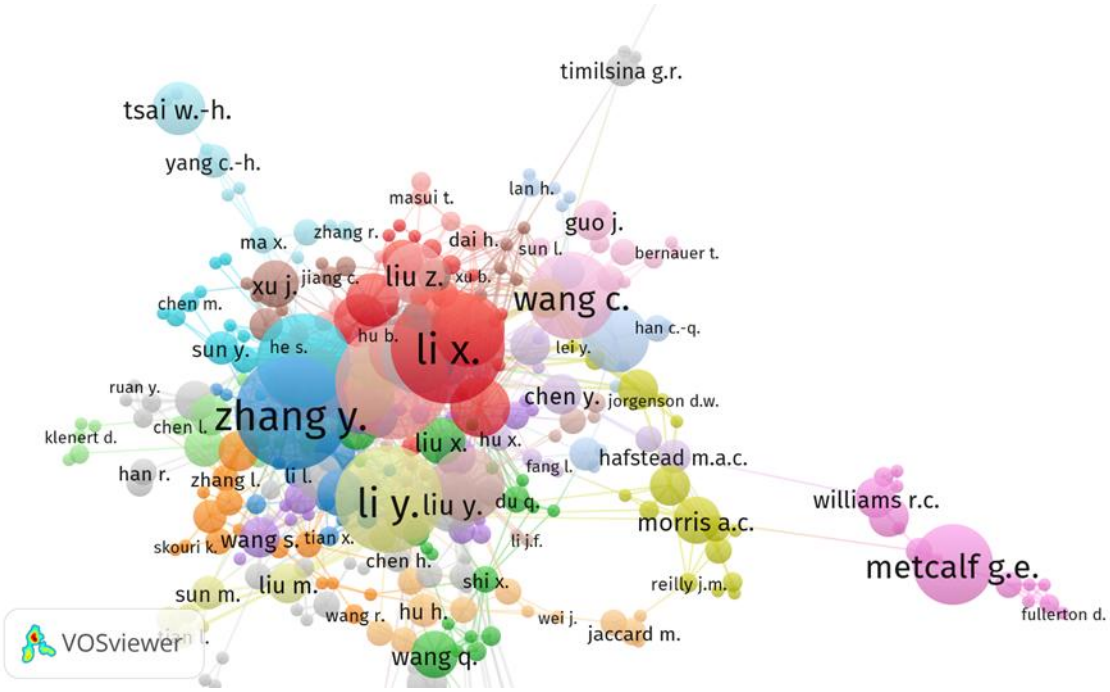

Figure 4: Network visualisation map of the co-authorship by authors
Source: Analysis by authors created using VOSviewer software 2022

4.12 Co-Authorship by Countries

Figure 5 presents a co-authorship analysis of countries in the field of carbon taxes, revealing the extent of international collaboration. The network visualization depicts 39 countries organized into 21 clusters, represented by different colours, with 172 network links. The size of each circle corresponds to the productivity of the respective country, with the largest circle

indicating the most prolific nations in this research area. The thickness and length of the links between circles reflect the strength of the cooperative relationship between countries. China emerges as the leader, with 447 documents and a link strength of 147, signifying a high level of collaboration with other countries in the field of carbon taxes. These findings demonstrate the significance of international cooperation in tackling global environmental challenges, such as climate change, and suggest that countries can achieve greater impact through collaboration and partnership.

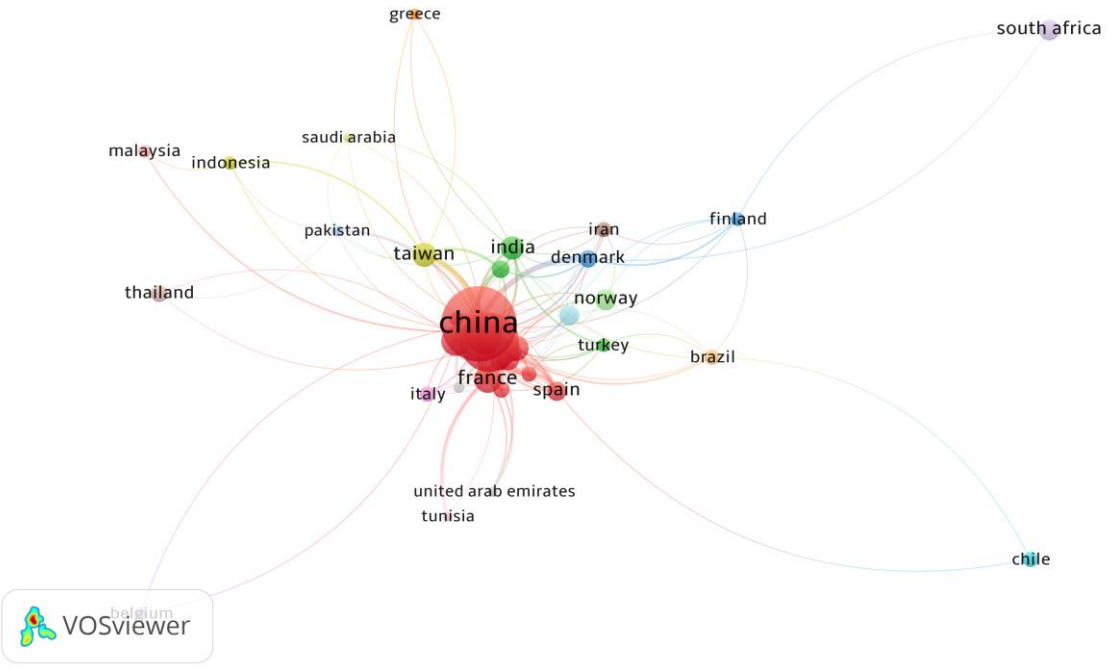

Figure 5: Network visualisation map of the co-authorship by countries

5.0 DISCUSSION

This study utilized a bibliometric approach to examine the current literature on carbon taxes. Its objective was to identify research trends and formulate a future research agenda. Through comprehensive quantitative research methodology, this study deepens our understanding and contributes to the existing body of knowledge on carbon taxation.

5.1 Objective 1: Exploration of Key Themes, Trends, and Research Patterns

The first objective of this study is to explore the key themes, trends, and research patterns within global carbon tax studies. The results indicate a significant upward trend in research output on carbon taxes from 1989 to 2023, as illustrated in Table 4. In the initial period from 1989 to 2008, the number of publications fluctuated, reflecting a nascent interest in the subject. However, between 2008 to 2022, there was a substantial rise in publications, with the count escalating from 28 (2008) to 159 (2022). Notably, 2022 marked the peak in publication volume, as illustrated in Figure 1. This visual representation captures the total number of publications, citations, and the average citation per publication over the years.

The growing interest in carbon tax research can be attributed to several interconnected factors. The increasing impacts of climate change have intensified the search for effective strategies to mitigate its effects, with carbon taxes emerging as a prominent solution due to

their potential to promote reductions in greenhouse gas emissions. Concurrently, the implementation of environmental legislation has spurred increased scholarly focus on evaluating and enhancing carbon tax schemes for greater efficiency. Additionally, the recognition of the economic benefits associated with carbon taxing, such as the generation of new revenue streams and providing economic incentives, has further fueled academic interest in this area. These combined factors emphasized the diverse motivations driving the surge in research on carbon pricing. Overall, the study suggests that the rising number of publications and citations reflects a growing acknowledgement of the critical role carbon taxes play in addressing climate change.

On the subject areas and research contributions, Table 3 indicates that research on carbon taxes is primarily conducted within the fields of Environmental Science, Energy, and Economics, Econometrics, and Finance, contributing 43.37%, 31.41%, and 27.88% of the total published research, respectively. Other disciplines, such as Engineering, Social Sciences, Business, Management, and Accounting also contribute to the literature, albeit to a lesser extent. This distribution of research across various subject areas highlights the interdisciplinary nature of carbon tax studies, with significant contributions from fields directly address environmental and economic impacts.

5.2 Objective 2: Identifying Influential Institutions, Authors, and Journals in Carbon Tax Research

The second objective of this study is to pinpoint the most influential institutions, authors, and journals within the field of carbon tax research. Through bibliometric analysis, this objective seeks to reveal the key contributors to the research landscape and highlight their impact on the academic discourse surrounding carbon taxes. Table 7 presents a comprehensive analysis of the leading institutions in carbon tax research, highlighting a significant presence from both China and the United States. Tsinghua University stands out with 27 publications, emphasizing its crucial role in advancing this field. The Chinese Academy of Sciences also plays a vital part, contributing 24 publications, which showcases China's strong engagement in carbon tax research. Additionally, the National Bureau of Economic Research in the United States, Vrije Universiteit Amsterdam in the Netherlands, and Beijing Institute of Technology are also notable contributors. These findings illustrate the global nature of carbon tax research and the diverse viewpoints provided by institutions across various regions. The impressive publication output from these leading institutions reflects their commitment to advancing carbon tax research and underscores the importance of international collaboration in achieving significant progress within this academic domain.

This study also examines the top 10 most productive authors in carbon tax research, as detailed in Table 5. Lin Boqiang and Gilbert E. Metcalf emerge as the leading contributors; each having authored a substantial 12 papers on the subject. Lin Boqiang's research has received 662 citations, highlighting his considerable impact within the field, while Gilbert E. Metcalf’s work has garnered 571 citations, indicating his significant influence surrounding carbon tax discourse. The prominence of these scholars from China and the United States reflects a broader trend of major contributions from these countries. As significant carbon emitters, both nations are actively addressing the urgent challenges of climate change through various strategies, including the implementation of diverse carbon tax policies.

An analysis of source titles reveals the Journal of Energy Policy is the leading publication in carbon tax research, as shown in Table 8. This journal has published 71 articles and accumulated 3,285 citations, highlighting its substantial influence on the scholarly discussion regarding carbon taxes. With an Scimago Journal Rank (SJR) of 2.126 and Source Normalized Impact per Paper (SNIP) of 2.034, the journal’s high impact within the academic community is further confirmed. The Journal of Energy Policy has earned its reputation as a

leading publication in the field due to its comprehensive approach to energy policy. By examining the economic, social, planning, and environmental aspects of energy policy, the journal provides a multidisciplinary perspective on carbon taxation. This holistic approach makes the journal an essential resource for researchers and policymakers, as it offers a well rounded understanding of the complex issues surrounding carbon taxation. The journal's prominence highlights its crucial role in advancing the field, promoting informed discussion, and shaping policy development through its extensive and influential research contributions.

Identifying the key players in carbon tax research, including influential institutions, authors, and journals, offers a comprehensive understanding of the field's major contributors. The significant contributions from institutions in China and the United States, as well as the impact of leading authors such as Lin Boqiang and Metcalf Gilbert E., emphasize the global nature of carbon tax research. The prominence of the Journal of Energy Policy and its high citation metrics further highlight the significance of ongoing research and collaboration in this area. These insights will prove valuable in guiding future studies and strategies, furthering our knowledge of carbon taxation and its implications for global climate policy.

5.3 Objective 3: Analyzing the Geographical Distribution and Collaboration Networks in Carbon Tax Research

The third objective of this study focuses on investigating the geographical distribution and collaboration networks within the field of carbon tax research. By identifying key regions and countries contributing to this area and examining the level of collaboration among researchers and institutions worldwide, this analysis provides valuable insights into the global landscape of carbon tax re-search. The co-authorship analysis of countries offers a deeper understanding of international collaboration in carbon tax research. Figure 4 showcases a network visualization of 39 countries, grouped into 21 clusters, each represented by a distinct color. The size of circles indicates the productivity of each country, with larger circles signifying higher productivity. The thickness and length of the links between countries represent the strength of their collaborative relationships. The analysis reveals that China is at the forefront of carbon tax research, with 447 documents and a link strength of 147, highlighting its extensive collaboration with other countries.

The network map emphasizes the crucial role of international cooperation in addressing global environmental challenges, such as climate change. Countries making significant contributions and exhibiting strong collaborative ties include the United States, which actively engages in carbon tax research and frequently collaborates with other leading countries; the United Kingdom, which boasts a robust collaborative network and contributes to a substantial number of publications; and Germany, another key player that often partners with other nations in carbon tax research. This widespread international collaboration underscores the vital necessity for concerted efforts in tack-ling the complex issue of carbon emissions and advancing carbon tax policies. These findings high-light the pivotal role of global collaboration in driving research on carbon taxes forward. By collabo-rating, countries can harness diverse perspectives and expertise, resulting in more comprehensive and impactful research outcomes.

The analysis of geographical distribution and collaboration networks in carbon tax research reveals a strong international commitment to address climate change through collaborative research. The study highlights the leading roles of China, the United States, the United Kingdom, and Germany in this field. The network visualizations of co-authorship among authors and countries pro-vide a clear picture of the collaborative landscape, emphasizing the importance of partnerships and cooperation in advancing carbon tax research. The insights gained from this study regarding the geographical distribution and collaboration networks will guide future research strategies, fostering enhanced collaboration and knowledge sharing among researchers worldwide. By strengthening international partnerships, the global

research community can more effectively tackle the complex challenges posed by climate change and carbon emissions.

6.0 CONCLUSION

This study presents an extensive bibliometric analysis of carbon tax research, utilizing data from the Scopus database covering the years from 1989 to 2023. The findings indicate a notable rise in research output during this timeframe, highlighting the increasing significance of carbon taxes as a policy mechanism for addressing climate change. The results underscore the interdisciplinary characteristics of the field, with major contributions from environmental science, energy studies, economics, and other related disciplines. Key contributors and prominent institutions, including Tsinghua University and the Chinese Academy of Sciences, alongside leading authors such as Lin Boqiang and Gilbert E. Metcalf. The Journal of Energy Policy is recognized as a crucial publication, reflecting its substantial influence on the academic dialogue surrounding carbon taxation. Furthermore, the analysis of geographical distribution and collaboration networks illustrates the global nature of carbon tax research, with significant contributions from China, the United States, the United Kingdom, and Germany.

6.1 Limitations of the Study and Directions for Future Research

While the study offers a comprehensive analysis, it has certain limitations. The reliance on the Scopus database may exclude relevant publications, particularly those in less prominent or non-English journals. This could result in an incomplete representation of the global research landscape. Additionally, the primary focus on quantitative metrics, such as publication counts and citation frequencies, may overlook the qualitative aspects and practical implications of individual studies.

To address this limitations, future research should incorporate additional data sources, including other databases and non-English publications, to provide a more comprehensive view of global research efforts. This approach would help capture a wider range of perspective and ensure that the analysis reflects the true diversity of the research landscape. Furthermore, conducting qualitative analyses, such as case studies and evaluations of policy effectiveness, would complement the quantitative data and offer deeper insights into the real-world impact of carbon tax policies. These qualitative assessments would provide a more nuanced understanding of the successes, challenges, and potential improvements of the implementation of carbon tax policies. Additionally, exploring recent advancements in carbon pricing mechanisms and their influence on global climate policy would be valuable for understanding current trends and guiding future research directions. As the field of carbon taxation continues to evolve, it is essential to stay abreast of the latest developments and their implications for addressing climate change. By broadening the scope and methodological approach, future studies can enhance the understanding of carbon tax research and its potential for driving meaningful change in the fight against climate change.

REFERENCES

Abdul Rahman, N. A., Ahmi, A., Jraisat, L., & Upadhyay, A. (2022). Examining the trend of humanitarian supply chain studies: Pre, during and post COVID-19 pandemic. *Journal of Humanitarian Logistics and Supply Chain Management, 12*(4), 594–617.

Aghion, P., Dechezleprêtre, A., Hémous, D., Martin, R., & Van Reenen, J. (2016). Carbon taxes, path dependency, and directed technical change: Evidence from the auto industry. *Journal of Political Economy, 124*(1), 1–51.

Ahmi, A. (2022). *Bibliometric analysis for beginners: A starter guide to begin with a bibliometric study using Scopus dataset and tools such as Microsoft Excel, Harzing's Publish or Perish and VOSviewer software.* UUM Press.

Baranzini, A., Goldemberg, J., & Speck, S. (2000). A future for carbon taxes. *Ecological Economics, 32*(3), 395-412.

Bashir, M. F., Ma, B., Bilal, Komal, B., & Bashir, M. A. (2021). Analysis of environmental taxes publications: A bibliometric and systematic literature review. *Environmental Science and Pollution Research, 28*(16), 20700–20716.

Bruvoll, A., & Larsen, B. M. (2002). Greenhouse gas emissions in Norway: Do carbon taxes work? *Energy Policy, 32*(4), 493-505.

Chen, W., & Hu, Z. H. (2018). Using evolutionary game theory to study governments and manufacturers' behavioral strategies under various carbon taxes and subsidies. *Journal of Cleaner Production, 201*, 123-141.

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research, 133*, 285–296.

Goulder, L. H. (1995). Effects of carbon taxes in an economy with prior tax distortions: An intertemporal general equilibrium analysis. *Journal of Environmental economics and Management, 29*(3), 271-297.

He, P., Zhang, W., Xu, X., & Bian, Y. (2015). Production lot-sizing and carbon emissions under cap-and-trade and carbon tax regulations. *Journal of Cleaner Production, 103*, 241-248.

Hoel, M. (1996). Should a carbon tax be differentiated across sectors? *Journal of Public Economics, 59*(1), 17-32.

Liang, Q. M., Fan, Y., & Wei, Y. M. (2007). Carbon taxation policy in China: How to protect energy-and trade-intensive sectors? *Journal of Policy Modeling, 29*(2), 311-333.

Lin, B., & Li, X. (2011). The effect of carbon tax on per capita CO2 emissions. *Energy Policy, 39*(9), 5137-5146.

Liu, Y., & Lu, Y. (2015). The economic impact of different carbon tax revenue recycling schemes in China: A model-based scenario analysis. *Applied Energy, 141*, 96-105.

Lu, C., Tong, Q., & Liu, X. (2010). The impacts of carbon tax and complementary policies on Chinese economy. *Energy Policy, 38*(11), 7278-7285.

Mansour, A. Z., Ahmi, A., Popoola, O. M. J., & Znaimat, A. (2022). Discovering the global landscape of fraud detection studies: A bibliometric review. *Journal of Financial Crime, 29*(2), 701–720.

Metcalf, G. E., & Weisbach, D. (2009). *The design of a carbon tax* (University of Chicago Public Law & Legal Theory Working Paper No. 254). University of Chicago Law School.

Metcalf, G. E. (2009). Designing a carbon tax to reduce US greenhouse gas emissions. *Review of Environmental Economics and Policy*, 3(1), 1-38.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., Altman, D., Antes, G., Atkins, D., Barbour, V., Barrowman, N., Berlin, J. A., Clark, J., Clarke, M., Cook, D., D'Amico, R., Deeks, J. J., Devereaux, P. J., Dickersin, K., Egger, M., Ernst, E., … Tugwell, P. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Journal of Clinical Epidemiology, 62*(10), 1006-1012.

Murray, B., & Rivers, N. (2015). British Columbia's revenue-neutral carbon tax: A review of the latest "grand experiment" in environmental policy. *Energy Policy, 86*, 674-683.

Patel, S. K., & Jhalani, P. (2023). Formulation of variables of environmental taxation: A bibliometric analysis of Scopus database (2001–2022). *Environment, Development and Sustainability, 26*, 7687–7714.

Tian, X., Geng, Y., Zhong, S., Wilson, J., Gao, C., Chen, W., Yu, Z., & Hao, H. (2018). A bibliometric analysis on trends and characters of carbon emissions from transport sector. *Transportation Research Part D: Transport and Environment, 59*, 1–10.

Van Kooten, G. C., Binkley, C. S., & Delcourt, G. (1995). Effect of carbon taxes and subsidies on optimal forest rotation age and supply of carbon services. *American Journal of Agricultural Economics, 77*, 363–372.

Wier, M., Birr-Pedersen, K., Jacobsen, H. K., & Klok, J. (2005). Are CO2 taxes regressive? Evidence from the Danish experience. *Ecological Economics, 52*(2), 239-251.

Wigantini, G. R., & Nainggolan, Y. A. (2022). Bibliometric analysis of carbon tax literature: Future research for Indonesia. *Jurnal Ekonomi dan Bisnis, 11*(1), 430–438.

Xu, X., Xu, X., & He, P. (2016). Joint production and pricing decisions for multiple products with cap-and-trade and carbon tax regulations. *Journal of Cleaner Production, 112*, 4093-4106.

Yang, H., & Chen, W. (2018). Retailer-driven carbon emission abatement with consumer environmental awareness and carbon tax: Revenue-sharing versus cost-sharing. *Omega, 78*, 179-191.

Yao, F., Dong, Z. Y., Meng, K., Xu, Z., Iu, H. H. C., & Wong, K. P. (2012). Quantum-inspired particle swarm optimization for power system operations considering wind power uncertainty and carbon tax in Australia. *IEEE Transactions on Industrial Informatics, 8*(4), 880-888.

Zakaria, R., Ahmi, A., Ahmad, A. H., Othman, Z., Azman, K. F., Ab Aziz, C. B., Ismail, C. A. N., & Shafin, N. (2021). Visualising and mapping a decade of literature on honey research: A bibliometric analysis from 2011 to 2020. *Journal of Apicultural Research, 60*(3), 359–368.

Zhang, Z., & Baranzini, A. (2004). What do we know about carbon taxes? An inquiry into their impacts on competitiveness and distribution of income. *Energy Policy, 32*(4), 507-518.

Zhang, K., Wang, Q., Liang, Q. M., & Chen, H. (2016). A bibliometric analysis of research on carbon tax from 1989 to 2014. *Renewable and Sustainable Energy Reviews, 58*, 297–310.

Zhou, X., Wei, X., Lin, J., Tian, X., Lev, B., & Wang, S. (2021). Supply chain management under carbon taxes: A review and bibliometric analysis. *Omega, 98*, Article 102295.