Development in Implementation of Carbon Tax: A Bibliographic Study

Harrell Kapila Cahyadi[1*], *Megadea* Marcheila[1†], and *Rosinta Ria* Panggabean[1‡]

[1]Accounting Department, School of Accounting, Bina Nusantara University, Jakarta, Indonesia 11480

Abstract. The purpose of this study is to map various research articles related to development trends in implementation of the carbon tax from 1994 to 2021. This study used a quantitative method with a bibliometric approach. Mapping is based on the level of publisher accreditation, quality of journals, theories used, unit of analysis, research methods, number of years of coverage, dependent & independent variables, and results. The research articles used in this study are as many as 84 that are published by accredited journals and indexed by Scopus. Most of the research used a quantitative method also dependent variables and three independent variables. Most of the result shows the carbon tax is considered to have a positive impact on reducing gas emissions.

1 Introduction

The 4.0 industrial era is the hottest decade ever recorded in human history, the trend of global warming originating from human activities is one of the important ongoing problems, many countries are experiencing an economic deceleration due to extreme climate change which has a high risk of inflation in goods certain conditions due to unstable market demand which is strongly influenced by the level of environmental damage. [1]. The production of CO2, a gas that contributed to climate change causing environmental damage, is created from the combustion of fuels in particular and heat energy is generated from burning fuel oil for the purpose to fulfill human needs and daily activity [2]. Climate change affects river drainage, reduces harvests, destroys critical infrastructure and displaces communities, exacerbates conflict risks and affects the enforcement of equal human rights [3]. Based on environmental considerations and negotiations by the French Foreign Minister Laurent Fabius, announced Paris Climate Agreement COP21 is an international agreement adopted in December 2015, which aims to reduce gas emissions that trigger global warming. The Paris Agreement was created to improve upon and replace the Kyoto Protocol, an international treaty previously designed to curb greenhouse gases. It entered into force on November 4, 2016, and was signed by 195 countries and ratified by 190 countries in January 2021. It's been less than four years since 196 countries negotiated the Paris Agreement, in which they committed to limiting the increase in global average temperatures this century to well below 2 degrees Celsius (3.6 degrees Fahrenheit) above pre-industrial levels, and ultimately to limit that rise to 1.5 degrees C (2.7 degrees F). Based on the agreement, each signatory proposes a determination of emission reductions and the means used to meet these targets.

To overcome environmental problems, the government has an important role and legislation to address climate change. To minimize and curb carbon emissions, many governments have chosen to implement carbon tax policies in their countries [4]. There is a fixed carbon tax to encourage companies to reduce carbon emissions and slow down global climate change [5]. The implementation of a carbon tax is the most direct and effective measure to reduce carbon intensity and can offset the negative economic impact of reducing carbon intensity [6]. When the government imposes a carbon tax on companies, companies will choose to reduce production and increase emission reductions, thereby improving environmental quality, or if the government imposes a carbon tax on consumers, the tax will be passed on to companies through increasing consumer prices and decreasing market demand, which will force companies to reduce carbon production and emissions [7]. However, social welfare may increase or decrease as carbon costs increase [8]. If the carbon tax rate exceeds the economic tolerance range, the company's profits will be severely affected, causing companies to stop production, which is a threat to market developments and economic sustainability [9].

* Corresponding author: harrell.cahyadi@binus.ac.id
† Corresponding author: megadea.marcheila@binus.ac.id
‡ Corresponding author: rosinta_ria_panggabean@binus.ac.id

1.1 Objectives

To prevent the large expenditure burden of the carbon tax policy, producers can also reduce carbon emissions by adopting certain carbon technologies into their carbon reduction alternatives but still add to the burden on these producers. [4]. Therefore, governments should further increase investment in the development, introduction, digestion, and adoption of advanced low-carbon technologies [6]. And the government must also set the same level of subsidies under the government subsidies for consumer policies and government subsidies for producers so that the market can remain stable and provide positive impacts on economic sustainability [10]. Many countries have failed in implementing a carbon tax in their country, such as when implementing a carbon tax the government still does not have regulations and subsidies that can support the implementation of a carbon tax which causes an increase in tax payments to be paid which hinders business growth and investment of a company so that there will be many business actors who carry out production in a closed manner to avoid taxes. Therefore, to support the point of view, drafting and maturation of government regulations. This study aims to map various research articles on a carbon tax from 1994 to 2021 using a bibliometric method. Mapping is based on publisher accreditation, quality of journals, theories used, unit of analysis, research methods, number of years of coverage, dependent & independent variables, and results. The research articles used in this study are as many as 84 published by accredited journals and indexed by Scopus.

2 Literature Review

The definition of a carbon tax has been explained by several experts from previous research because according to [11] Carbon tax has been studied since the late 1980s. [12] stated that the carbon tax as imposed on the use of fuel contains a tax. [11] suggests that a carbon tax is a tax on carbon emissions produced by burning fossil fuels. [11] also shows that if the tax is adopted without any changes in the tax program or other transfers, it will be heavier on lower incomes than on rich households. [12] Affirm that the effect of the carbon tax will affect the behavior of fossil fuel users through the market response to the tax, then the tax should be set equal to the highest marginal cost. [13] stated that the carbon tax is a limitation on carbon-based fuels, [13] also stated that the carbon tax is preferred to reduce CO2 emissions because it is more cost-effective.

Furthermore, [16] defines carbon tax as a form of pollution tax. [17] defines carbon tax as an efficient but underutilized economic instrument to reduce greenhouse gas (GHG) emissions from transportation and housing. The Carbon Tax Policy Paper reveals that there are three basic options for imposing carbon taxes. First, the tax levied on carbon emissions issued. Second, the tax imposed depends on the amount of carbon content. Third, the tax levied on the energy produced.

In 2015, there are three kinds of clarification regarding the purpose of the carbon tax. According to research, [18] confirms that carbon taxes are considered effective for reducing greenhouse gas & carbon dioxide emissions. This statement is relevant to [19] who argue that taxes are imposed on carbon dioxide for the purpose of mitigating climate change. Examples of carbon dioxide taxes that are taxed are coal, oil and natural gas. [20] assert that the goal of carbon is to be income neutral, meaning that all income generated from taxes is recycled to BC households and businesses, mostly in the form of tax cuts.

Furthermore, [21] suggest that Carbon taxes are a promised way of reducing carbon and other greenhouse gas emissions while avoiding unnecessary costs. From [22] research that too high a carbon tax rate can harm several sectors, one of which is a detrimental effect on the economy, therefore they suggest that carbon taxes should start with a lower rate low. [22] also found that low-carbon taxes and low-carbon energy subsidies can be implemented simultaneously. [23] reveal a different definition, namely Carbon tax is an alternative form of environmental policy based on carbon cap-and-trade.

Furthermore, according to the [24], a carbon tax is considered a Pigouvian tax. [25] explains that the Pigouvian Tax is a market-based instrument for controlling pollution. In the sense that consumers who buy goods made through carbon-intensive processes must incur additional costs which are carbon taxes from the manufacture of these goods. [26] defines a tax as a levy on the carbon content of fossil fuels. [27] assert that tax is the most effective policy for limiting carbon emissions but is less favored by society because it imposes costs on consumers.

The theory that is most often discussed in the carbon tax article which is the object of this research is the General Equilibrium Theory. [28] The purpose of the General Equilibrium Theory is to find the endogenous variables, namely, equilibrium price, value, and income. General Equilibrium Theory is also considered simple because it requires fewer data & data from the year to be discussed in the study. The articles that are the object of this research also discuss sustainable development because carbon taxes are expected to reduce gas emissions, and carbon taxes are also expected to improve the sustainability economy.

3 Methods

This study uses a qualitative method. [29] explains that qualitative research is used to explain the privilege or quality of social influences that cannot be explained through a quantitative approach. The author checks the quality of the paper that the author has collected through the web scimagojr. This study is bibliographic approach. [30] explained that the bibliographic approach is to analyze certain topics in scientific publications as analytical materials. [31] So the purpose of this study is to determine the development of a research topic. One of the studies that discuss carbon taxes & the use of a bibliographic approach is the research of [22] entitled A bibliometric analysis of research on carbon tax from 1989 to 2014. All the papers are from scopus with search string “Carbon Tax”.

4 Data Collection

This research begins with a search of various research results through the Scopus web. all the journals that the author uses are Scopus indexed journals, and the keyword that the author uses is Carbon Tax, which produces 4,147 documents. Furthermore, the selected criteria are all open access. Then in the subject area, the category chosen was business, management & accounting and got a result of 561 documents, in the document type category that was selected namely articles and there were 3,104 documents, the source type selected was the journal category, there were 3260 documents, then in Language using Bahasa English, the result is 4,000 documents. After making the selection, the results obtained were 359 documents. Of the 359 documents, the further selection was carried out, namely by reading the journal as a whole because the journal that could be the object of this research must cover the fields of business, management, and economics. After making the selection, the article data collected were 84 articles that would be used as research objects. Furthermore, the data is processed & analyzed for mapping. Data mapping is carried out based on the name of the journal, journal affiliation, year of publication, length of the article, Scopus accreditation, google scholar accreditation, keywords, research methods, research approach, research theory, unit of analysis, numbers of samples, research variables, research results, & suggestions for future research.

Fig. 1. Research Framework

5 Results and Discussion

5.1 Mapping Based on Year of Publication

This study presents 84 articles that discuss carbon taxes from various countries. most of the articles collected used quantitative methods and all articles collected were in English. Articles collected from 1994-2021. Based on Figure 1, in 2015 studies on carbon taxes have begun to increase, the article that discusses the most carbon taxes is in 2020. The latest research on carbon taxes was conducted by [32-38, 9,7].

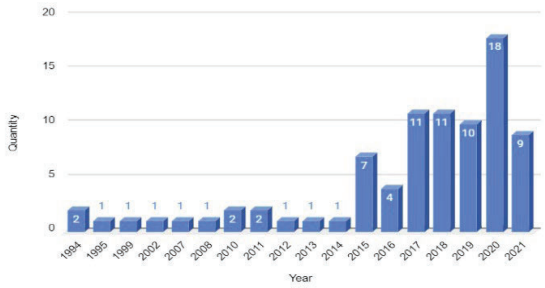

Fig. 2. Mapping Based on Year of Publication

5.2 Mapping Based on Publisher

The first stage that the author did was mapping by the publisher. Based on table 1, the discussion on the carbon tax was published in the Journal of Cleaner Production, with 38 articles. From table 1 it can also be concluded that publishers who publish articles on carbon taxes are very diverse.

Table 1. Mapping Based on Publisher

Publisher	Total
Journal of Cleaner Production	38
International Journal of Production Economics	6
Electricity Journal	4
Journal of Hospitality and Tourism Management	2
Others	34
Grand Total	**84**

5.3 Mapping Based on Quality of Journal

In the second stage, the writer conducted a mapping based on the quality of the journal. As the author explained earlier, all articles used as objects in this study were only sourced internationally, Scopus Accreditation. Of the 84 articles that the author uses as an object, there is 1 article that does not yet have a Quality of Journal. Based on Table 2, it can be concluded that on average the articles discussed by the authors are published by publishers that have Q1 accreditation, which means that the articles that are the object of this research have a major influence on Carbon Tax research.

Table 2. Mapping Based on Quality of Journal

Quality of Journal	Total
Q1	67
Q2	12
Q3	4
Grand Total	**83**

5.4 Mapping Based on Theory

This study presents 84 articles that discuss carbon taxes from various countries. most of the articles collected used quantitative methods and all articles collected were in English. Articles collected from 1994-2021. Based on Figure 1, in 2015 studies on carbon taxes have begun to increase, the article that discusses the most carbon taxes is in 2020. The latest research on carbon taxes was conducted by [32, 33, 34, 9, 35, 7, 36, 37, 38].

Table 3. Mapping Based on Theory

Theory	Total
General Equilibrium Theory	10
Game Theory	6
Stackelberg Game Theory	4
Equilibrium Theory	4
Economic Theory	3
Random Utility Theory	2
Others	35
Grand Total	**64**

5.5 Mapping based on Unit Analytic

Table 4 shows the results of the unit analysis that is most widely used in research on the development trends in the application of carbon tax, which is the enterprise facility. 3 unit analysis articles cannot be identified. Research using enterprises facility as unit analysis began in 2015, there are two studies analyzed enterprises facility that related to development trends in the application of carbon tax, created by [39,40]. In 2020, three studies were using enterprises facility as unit analyses, that conducted by [4, 41, 5], Finally, in 2021, 3 studies analyzed development trends in the application of carbon tax in enterprises facility, namely [35, 7, 38].

Table 4. Mapping Based on Unit Analysis

Unit Analytic	Total
Enterprises Facility	8
China	6
Manufacture Facility	4
Australia	2
Othera	61
Grand Total	**81**

5.6 Mapping Based on Research Method

Next, we did the mapping based on the research method. It can be concluded in Table 5 that the articles that have been collected by the author mostly use the quantitative method, many as 65 articles. Most research using quantitative methods was carried out in 2017 & 2020, with 10 each. In 2017 research using the quantitative method was conducted by [42 – 50]. Then in 2020 there were 10 studies written by [51, 52, 5, 53, 10, 41, 4, 54, 55, 56].

Table 5. Mapping Based on Research Method

Research Method	Total
Quantitative	65
Qualitative	18
Qualitative & Quantitative	1
Grand Total	**84**

5.7 Mapping based on the Number of Years of Coverage

Table 6 shows the results of the number of years of coverage, the year of coverage is the years that were used to analyze the research that related to development trends in the application of carbon tax in many various years. However, there are ten articles whose number of years of coverage cannot be identified.

Table 6. Mapping Based on Number of Years of Coverage

Analytic Year	Total
2012-2019	3
2007-2014	2
2005-2020	2
Others	67
Grand Total	**74**

Based on the table 6, 2012 -2019 is the most widely used as number of year of coverage, analyzed by [53, 5, 51]

5.8 Mapping Based on the Dependent Variables

Based on table 7 in this study, the authors mapped scientific articles based on the dependent variable. The most widely used dependent variable is Carbon Tax, which amounts to 10. The first time this carbon tax variable was used was in 2015. In 2015 there were 2 articles that used the dependent variable carbon tax by [57, 58]. In 2016 & 2017 there was only one article using the dependent variable carbon tax conducted by [59]. Then in 2017, it was carried out by [43]. This variable was most widely used in 2020. Three studies used this variable in that year by [60, 52, 4]. In 2021 2 articles were using this variable conducted by [7, 35, 43]. Last, there are about 4 articles that do not have the dependent variable.

Table 7. Mapping Based on Dependent Variables

Dependent Variables	Total
Carbon Tax	10
Climate Change	5
Carbon Emission Reduction	5
Sustainable Management	4

Carbon Emission	2
Others	54
Grand Total	**80**

5.9 Mapping Based on the Independent Variables

This study also concluded mapping of used independent variables, that related to development trends in the application of carbon tax. Table 8 shows that the most widely founded independent variable are carbon tax, first conducted in 1995 by [15]. Next in 2011 by [61]. There are three studies in 2015 with this variable, [58], [40] and [1]. In 2016, there are also three studies with this variable, [62, 63, 64]. In 2017, Carbon tax variable was also founded in two studies, [49, 65]. There are two studies with this variable in 2018, conducted by [66]. This variable was most used in 2020, there are eleven studies founded used this variable, [56, 67, 54, 41, 68, 5, 52, 69, 51, 70]. And this variable was recently used in 2021 by two studies [9, 38].

Table 8. Mapping Based on Independent Variables

Independent Variable	Total
Carbon Tax	25
Carbon emission	6
Environmental Issues	6
Supply Chain	4
Emission reduction	4
Cap and trade policies	3
Carbon tax rate	2
Carbon pricing	2
Climate Change	2
Government Legislation	2
Firms sustainability	2
Greenhouse gas emissions	2
Others	177
Grand Total	**237**

5.10 Mapping Based on Test Results

Table 9. Mapping Based on Test Results

Testing Results Overall	Total
Possitive Effect	36
Negative Effect	30
Possitive & Negative Effect	18
Grand Total	**84**

The final mapping carried out in this research is the mapping of the test results. Mapping of test results based on the impact of the carbon tax discussed in the articles became the object of this research in general. Based on table 9, the positive results show the highest result, there are 36 articles. The articles conclude that the carbon tax has a positive impact in terms of being able to reduce gas emissions. The articles were written by [15, 71, 8] [39, 40], [57, 58], [63, 50, 49, 48, 47, 43, 66], [72-81], [60, 55, 41, 53, 82, [32-35], [7, 36, 38]. [34] Concluded that optimally applying a carbon tax can reduce emotional carbon so that economic growth will increase. [38] also concluded that a convex carbon tax strategy is the most appropriate as long as available green technologies have good environmental performance and lower costs than the usual ones.

Furthermore, for the negative results the article shows that the carbon tax does not work well or does not change anything towards reducing gas emissions, the articles are written by [83-88], [61], [89-91], [1], [64]. [65], [92], [46], [42], [93-98], [54], [4], [68], [10], [69], [51], [37]. [98] finding that carbon tax collection has a negative effect on GTFP (Global Trade Finance Program), this study suggests the government should not achieve its CO2 reduction targets at the expense of green growth. GTFP is recommended to be considered in future assessment criteria in the process of transformation to a low carbon economy.

For negative & positive results, the articles discuss 2 possibilities if implementing a carbon tax. The articles that discuss the negative & positive of the carbon tax by [99], [100], [44], [59], [45], [44], [101-104], [56], [105], [67], [52], [5], [6], [70], [9]. The results of the study [106] concluded that collecting a carbon tax would incur significant economic costs for China's tourism industry. In terms of output, employment and demand, most of China's tourism industry contracts under the carbon tax scenario. On the other hand, most industries experienced an increase in production prices, except for service businesses and sports activities.

6 Conclusion

This paper examines the carbon tax literature review from 1994 to 2021 using a bibliometric method based on the science citation index database. This scientific article aims to map the scientific articles related to development trends in the application of carbon tax and document those in order to contribute to the form of a research gap to provide input for the government and regulator so that it can be used as material for further research, which referring to the development and progress of carbon taxes in countries that implement carbon taxes. Mapping is based on the level of publisher accreditation, quality of journals, theories used, unit of analysis, research methods, number of years of coverage, dependent & independent variables, and results. The research articles used in this study are as many as 84 published by accredited journals and indexed by Scopus.

The results show that most of the sampled scientific articles have a publisher accreditation level of Q1 and have been indexed by Scopus. The theory widely used as the basis for the research is the General Equilibrium Theory. Enterprises facility became the most widely

used unit analysis used in research. Most studies use a carbon tax as the dependent variable and three independent variables. The most widely used independent variables are carbon tax, carbon emissions, environmental issues, supply and emissions reduction. Most of the test results show that the carbon tax is considered to have a positive impact on reducing gas emissions, and The articles in 2021 mostly talk about the positive impact of implementing carbon taxes. This shows that implementing carbon taxes is needed. In future research, we suggest using quantitative methods through observation or documentation or qualitative methods through interviews.

Furthermore, future researchers can use dependent variables such as Carbon Emission Reduction, Climate Change, and Carbon Dioxide Emissions. For the Independent variables such as Economic Tourism Impact. By using the SLR method, we can quickly identify relevant research and reliable studies so that this research can provide maximum support for the drafting of carbon tax regulation.

References

[1] Y. Hou, M. Jia, X. Tian, F. Wei, and K. Wei, "Optimal decisions of countries with carbon tax and carbon tariff," *J. Ind. Eng. Manag.*, vol. 8, no. 3, pp. 981–1001, 2015.

[2] R. S. Tol, "The economic effects of climate change," *J. Econ. Perspect.*, vol. 23, no. 2, pp. 29–51, 2009.

[3] United Nations, ".," 2021. [Online]. Available: https://www.un.org/press/en/2021/sc14445.doc.htm. [Accessed: 23-Feb-2021].

[4] K. Cao, B. Xu, Y. He, and Q. Xu, "Optimal carbon reduction level and ordering quantity under financial constraints," *Int. Trans. Oper. Res.*, vol. 27, no. 5, pp. 2270–2293, 2020.

[5] Y. Shi, Z. Zhang, S.-C. Chen, L. E. Cárdenas-Barrón, and K. Skouri, "Optimal replenishment decisions for perishable products under cash, advance, and credit payments considering carbon tax regulations," *Int. J. Prod. Econ.*, vol. 223, no. October, 2020.

[6] J. Zhang and Y. Zhang, "Examining the economic and environmental effects of emissions policies in China: A Bayesian DSGE model," *J. Clean. Prod.*, vol. 266, p. 122026, 2020.

[7] W. Tang, H. Li, and J. Chen, "Optimizing carbon taxation target and level: Enterprises, consumers, or both?," *J. Clean. Prod.*, vol. 282, p. 124515, 2021.

[8] S. J. Park, G. P. Cachon, G. Lai, and S. Seshadri, "Supply Chain Design and Carbon Penalty: Monopoly vs. Monopolistic Competition," *Prod. Oper. Manag.*, vol. 24, no. 9, pp. 1494–1508, 2015.

[9] H. Zhang, P. Li, H. Zheng, and Z. Y, "Impact of carbon tax on enterprise operation and production strategy for low-carbon products in a co-opetition supply chain," *J. Clean. Prod.*, vol. 287, p. 125058, 2021.

[10] X. Zhen, S. Xu, D. Shi, and F. Liu, "Pricing decisions and subsidy preference of government with traditional and green products," *Nankai Bus. Rev. Int.*, vol. 11, no. 3, pp. 459–482, 2020.

[11] Rausch, Sebastian, and John Reilly. 2012. Carbon Tax Revenue and the Budget Deficit: A WinWin Solution?" MIT Joint Program on the Science and Policy of Global Change.

[12] Hoeller, Peter & Wallin, Markku. (1991). Energy Prices, Taxes and Carbon Dioxide Emissions. OECD Economic Studies. 17. 10.1787/356365310851.

[13] J. Poterba, "Tax policy to combat global warming on desigining a carbon tax," *NBER Work. Pap. Ser.*, no. 3, p. 42, 1991.

[14] A. Sanghi and A. Joseph, "Taxing pollution instead of labor: Is it a prudent CO2 reduction policy?," *Electr. J.*, vol. 6, no. 1, pp. 51–57, 1993.

[15] Z. Zhang and F. H, "The choice of policy instruments for the control of carbon dioxide emissions," *Intereconomics*, vol. 30, no. 3, pp. 133–142, 1995.

[16] E. Elgar, "Environmental law and economics," in The Handbook of Environmental Economics, J. D. Heyes and B. G. Norton, Eds. Blackwell Publishers, 2001, pp. 49-86.

[17] E. Laurent, "Carbon taxes: A review of experience and policy design considerations," Energy & Environment, vol. 20, no. 6, pp. 853-876, 2009.

[18] IBFD International Tax Glossary, "Carbon tax," IBFD, 2015. [Online]. Available: https://www.ibfd.org/IBFD-Tax-Portal/News/IBFD-International-Tax-Glossary#C.

[19] J. Zang, B. Zhang, S. Liu, Y. Zhang, and R. Wang, "Does a carbon tax reduce CO2 emissions: Empirical evidence from OECD countries," Renewable and Sustainable Energy Reviews, vol. 42, pp. 1267-1276, 2015.

[20] M. Murray and N. Rivers, "British Columbia's revenue-neutral carbon tax: A review of the latest 'grand experiment' in environmental policy," Energy Policy, vol. 86, pp. 674-683, 2015.

[21] B. Marron, D and C. Morris, A, "Tax Policy Center," 2016. [Online]. Available: http://www.taxpolicycenter.org/sites/default/files/alfresco/publication-pdfs/2000624-how-to-use-carbon-tax-revenues.pdf.

[22] B. Zhang, S. Liu, J. Zang, and Y. Zhang, "Carbon tax, subsidy policies and the low-carbon transition of China's energy system," Applied Energy, vol. 184, pp. 1093-1102, 2016.

[23] H. M. Horowitz, J. P. Koomey, C. A. Loper, and N. R. Madrigal, "Carbon pricing in climate policy: seven reasons, complementary instruments, and political economy considerations," Climate Policy, vol. 17, no. 8, pp. 972-985, 2017.

[24] C. C. Drenkard, "Carbon Taxes," Tax

Foundation, 2019. [Online]. Available: https://taxfoundation.org/publications/carbon-taxes/.

[25] G. E. Metcalf, “On the economics of a carbon tax for the united states,” *Brookings Pap. Econ. Act.*, pp. 405–484, 2019.

[26] A. Parry, "How Does a Carbon Tax Work?," IMF Blog, 2019. [Online]. Available: https://blogs.imf.org/2019/05/08/how-does-a-carbon-tax-work/.

[27] M. Hagmann, S. Steffen, and T. Sterner, "Why are carbon taxes so unpopular? A review of empirical evidence on factors affecting public acceptability of carbon taxes," Wiley Interdisciplinary Reviews: Climate Change, vol. 10, no. 3, 2019, Art. no. e584.

[28] S. Moosavian, R. Zahedi, and H. A, “Economic, environmental and social impact of carbon tax for iran: a computable general equilibrium analysis,” *Energy Sci. Eng.*, vol. 10, no. 1, pp. 13–29, 2022.

[29] Saryono, "Metodologi penelitian kualitatif dan kuantitatif serta kombinasinya dalam penelitian psikologi," Jurnal Ilmu Keluarga & Konsumen, vol. 3, no. 1, pp. 1-10, 2010.

[30] F. A. Arham, M. Hanif, and I. Cholisin, "Isomorphic pressures in local government financial management reforms in Indonesia: A bibliometric analysis," Journal of Public Administration and Governance, vol. 10, no. 3, pp. 152-165, 2020.

[31] F. Villas, "Use of bibliographic material in information science research: A study of doctoral dissertations," Library & Information Science Research, vol. 30, no. 4, pp. 233-243, Oct. 2008. doi: 10.1016/j.lisr.2008.04.004.

[32] C. Rout, A. Paul, R. S. Kumar, D. Chakraborty, and A. Goswami, “Integrated optimization of inventory, replenishment and vehicle routing for a sustainable supply chain under carbon emission regulations,” *J. Clean. Prod.*, vol. 316, no. July, p. 128256, 2021.

[33] J. Zhang, “Impacts of the emissions policies on tourism: An important but neglected aspect of sustainable tourism,” *J. Hosp. Tour. Manag.*, vol. 47, no. January, pp. 453–461, 2021.

[34] Y. Sun, X. Mao, X. Yin, G. Liu, J. Zhang, and Y. Zhao, “Optimizing carbon tax rates and revenue recycling schemes: Model development, and a case study for the Bohai Bay area, China,” *J. Clean. Prod.*, vol. 296, p. 126519, 2021.

[35] S. Wei, “A sequential game analysis on carbon tax policy choices in open economies: From the perspective of carbon emission responsibilities,” *J. Clean. Prod.*, vol. 283, p. 124588, 2021.

[36] U. Mishra, J.-Z. Wu, and B. Sarkar, “Optimum sustainable inventory management with backorder and deterioration under controllable carbon emissions,” *J. Clean. Prod.*, vol. 279, p. 123699, 2021.

[37] Y. Wu *et al.*, “Government-led low carbon incentive model of the online shopping supply chain considering the O2O model,” *J. Clean. Prod.*, vol. 279, p. 123271, 2021.

[38] A. Chelly, I. Nouira, A. B. Hadj-Alouane, and Y. Frein, “A comparative study of progressive carbon taxation strategies: impact on firms’ economic and environmental performances,” *Int. J. Prod. Res.*, pp. 1–25, 2021.

[39] J. M. C. Martí, J.-S. Tancrez, and R. . Seifert, “Carbon footprint and responsiveness trade-offs in supply chain network design,” *Int. J. Prod. Econ.*, vol. 166, pp. 129–142, 2015.

[40] A. Choudhary, S. Sarkar, S. Settur, and M. . Tiwari, “A carbon market sensitive optimization model for integrated forward-reverse logistics,” *Int. J. Prod. Econ.*, vol. 164, pp. 433–444, 2015.

[41] J.-Y. Lee, “Investing in carbon emissions reduction in the EOQ model,” *J. Oper. Res. Soc.*, vol. 71, no. 8, pp. 1289–1300, 2020.

[42] A. Gurtu, C. Searcy, and J. M.Y, “Emissions from international transport in global supply chains,” *Manag. Res. Rev.*, vol. 40, no. 1, pp. 53–74, 2017.

[43] S. Meng and T. Pham, “The impact of the Australian carbon tax on the tourism industry,” *Tour. Econ.*, vol. 23, no. 3, pp. 506–522, 2017.

[44] H. Liu and B. Lin, “Energy substitution, efficiency, and the effects of carbon taxation: Evidence from China’s building construction industry,” *J. Clean. Prod.*, vol. 141, pp. 1134–1144, 2017.

[45] Z. Zhang, A. Zhang, D. Wang, A. Li, and H. Song, “How to improve the performance of carbon tax in China?,” *J. Clean. Prod.*, vol. 142, pp. 2060–2072, 2017.

[46] B. Lin and I. Ahmad, “Analysis of energy related carbon dioxide emission and reduction potential in Pakistan,” *J. Clean. Prod.*, vol. 143, pp. 278–287, 2017.

[47] N. Vedachalam, r S. Surenda, and S. S, “An assessment of decarbonization in the strategic Indian electricity generation sector,” *Electr. J.*, vol. 30, no. 5, pp. 47–53, 2017.

[48] M. . Fikru and L. Gautier, “Environmental taxation and mergers in oligopoly markets with product differentiation,” *J. Econ. Zeitschrift fur Natl.*, vol. 122, no. 1, pp. 45–65, 2017.

[49] Y. Li and B. Su, “The impacts of carbon pricing on coastal megacities: A CGE analysis of Singapore,” *J. Clean. Prod.*, vol. 165, pp. 1239–1248, 2017.

[50] M. Hariga, R. As’ad, and A. Shamayleh, “Integrated economic and environmental models for a multi stage cold supply chain under carbon tax regulation,” *J. Clean. Prod.*, vol. 166, pp. 1357–1371, 2017.

[51] N. Chang and C. Han, “Cost-push impact of taxing carbon in China: A price transmission perspective,” *J. Clean. Prod.*, vol. 248, p. 119194, 2020.

[52] J. Zhang and Y. Zhang, “Chinese tourism economic change under carbon tax scenarios,” *Curr. Issues Tour.*, vol. 23, no. 7, pp. 836–851,

2020.

[53] Y. T. Chan, "On the impacts of anticipated carbon policies: A dynamic stochastic general equilibrium model approach," *J. Clean. Prod.*, vol. 256, p. 120342, 2020.

[54] L. Zhao, C. Yang, B. Su, and S. Zeng, "Research on a single policy or policy mix in carbon emissions reduction," *J. Clean. Prod.*, vol. 267, p. 122030, 2020.

[55] C. Rout, A. Paul, R. S. Kumar, D. Chakraborty, and A. Goswami, "Cooperative sustainable supply chain for deteriorating item and imperfect production under different carbon emission regulations," *J. Clean. Prod.*, vol. 272, p. 122170, 2020.

[56] B. Rengs, M. Scholz-Wäckerle, and J. Van Den Bergh, "Evolutionary macroeconomic assessment of employment and innovation impacts of climate policy packages," *J. Econ. Behav. Organ.*, vol. 169, pp. 332–368, 2020.

[57] X. Liu, C. Wang, D. Niu, S. Suk, and C. Bao, "An analysis of company choice preference to carbon tax policy in China," *J. Clean. Prod.*, vol. 103, no. 2015, pp. 393–400, 2015.

[58] H. Du, B. Li, M. A. Brown, G. Mao, R. Rameezdeen, and H. Chen, "Expanding and shifting trends in carbon market research: A quantitative bibliometric study," *J. Clean. Prod.*, vol. 103, pp. 104–111, 2015.

[59] S. Yang and J. Yu, "Low-carbonization game analysis and optimization in a two-echelon supply chain under the carbon-tax policy," *J. Chinese Econ. Foreign Trade Stud.*, vol. 1, no. 3, 2008.

[60] Y. Sun, X. Mao, G. Liu, X. Yin, and Y. Zhao, "Greener economic development via carbon taxation scheme optimization," *J. Clean. Prod.*, vol. 275, p. 124100, 2020.

[61] C. L. Kwan and K. T.J, "The financials of constructing a solar PV for net-zero energy operations on college campuses," *Util. Policy*, vol. 19, no. 4, pp. 226–234, 2011.

[62] X. Xu, X. Xu, and P. He, "Joint production and pricing decisions for multiple products with cap-and-trade and carbon tax regulations," *J. Clean. Prod.*, vol. 112, pp. 4093–4106, 2016.

[63] Q.-M. Liang, T. Wang, and M.-M. Xue, "Addressing the competitiveness effects of taxing carbon in China: Domestic tax cuts versus border tax adjustments," *J. Clean. Prod.*, vol. 112, pp. 1568–1581, 2016.

[64] T. C. Kuo, I.-H. Hong, and S. . Lin, "Do carbon taxes work? Analysis of government policies and enterprise strategies in equilibrium," *J. Clean. Prod.*, vol. 139, pp. 337–346, 2016.

[65] Z. Liu, S. Abhayawansa, C. Jubb, and L. Perera, "Regulatory impact on voluntary climate change–related reporting by Australian government-owned corporations," *Financ. Account. Manag.*, vol. 33, no. 3, pp. 264–283, 2017.

[66] L. K. Saxena, P. K. Jain, and A. K. Sharma, "A fuzzy goal programme with carbon tax policy for Brownfield Tyre remanufacturing strategic supply chain planning," *J. Clean. Prod.*, vol. 198, pp. 737–753, 2018.

[67] Z. Jia and B. Lin, "Rethinking the choice of carbon tax and carbon trading in China," *Technol. Forecast. Soc. Change*, vol. 159, no. December 2019, p. 120187, 2020.

[68] W. Qian, A. W. Suryani, and K. Xing, "Does carbon performance matter to market returns during climate policy changes? Evidence from Australia," *J. Clean. Prod.*, vol. 259, 2020.

[69] C. Xu, C. Wang, and R. Huang, "Impacts of horizontal integration on social welfare under the interaction of carbon tax and green subsidies," *Int. J. Prod. Econ.*, vol. 222, no. November 2018, p. 107506, 2020.

[70] T. K. Datta, P. Nath, and K. Dutta Choudhury, "A hybrid carbon policy inventory model with emission source-based green investments," *OPSEARCH*, vol. 57, no. 1, pp. 202–220, 2020.

[71] C. Jeffrey and J. . Perkins, "The association between energy taxation, participation in an emissions trading system, and the intensity of carbon dioxide emissions in the European Union," *Int. J. Account.*, vol. 50, no. 4, pp. 397–417, 2015.

[72] V. F. Yu, R. Maglasang, and Y.-C. Tsao, "Shelf space allocation problem under carbon tax and emission trading policies," *J. Clean. Prod.*, vol. 196, pp. 438–451, 2018.

[73] J. Jackson and L. Belkhir, "Assigning firm-level GHGE reductions based on national goals - Mathematical model & empirical evidence," *J. Clean. Prod.*, vol. 170, pp. 76–84, 2018.

[74] Q. Shi, H. Ren, W. Cai, and J. Gao, "How to set the proper level of carbon tax in the context of Chinese construction sector? A CGE analysis," *J. Clean. Prod.*, vol. 240, p. 117955, 2019.

[75] J. Lv, F. Gu, W. Zhang, and J. Guo, "Life cycle assessment and life cycle costing of sanitary ware manufacturing: A case study in China," *J. Clean. Prod.*, vol. 238, 2019.

[76] P. J. Valayer, O. Vidal, N. Wouters, and M. C. . van Loosdrecht, "The full energy cost of avoiding CO2: A clean-energy booking provision for a vigorous energy transition," *J. Clean. Prod.*, vol. 237, p. 117820, 2019.

[77] M. Parsa, A. S. Nookabadi, S. . Flapper, and Z. Atan, "Green hub-and-spoke network design for aviation industry," *J. Clean. Prod.*, vol. 229, pp. 1377–1396, 2019.

[78] Z. Chen and B. Bidanda, "Sustainable manufacturing production-inventory decision of multiple factories with JIT logistics, component recovery and emission control," *Transp. Res. Part E Logist. Transp. Rev.*, vol. 128, no. 6, pp. 356–383, 2019.

[79] A. Shamayleh, M. Hariga, R. As'ad, and A. Diabat, "Economic and environmental models for cold products with time varying demand," *J. Clean. Prod.*, vol. 212, pp. 847–863, 2019.

[80] M. Budolfson *et al.*, "Optimal Climate Policy and the Future of World Economic

Development," *World Bank Econ. Rev.*, vol. 33, no. 1, pp. 21–40, 2019.
[81] W.-H. Tsai and S.-Y. Jhong, "Production decision model with carbon tax for the knitted footwear industry under activity-based costing," *J. Clean. Prod.*, vol. 207, pp. 1150–1162, 2019.
[82] P. . Wesseh and B. Jr., Lin, "Does improved environmental quality prevent a growing economy?," *J. Clean. Prod.*, vol. 246, p. 118996, 2020.
[83] P. Roberts, "Systems and the problematique. The case of a carbon tax," *Futures*, vol. 26, no. 7, pp. 730–740, 1994.
[84] X. Labandeira and J. . Labeaga, "Combining Input-Output Analysis and Micro-Simulation to Assess the Effects of Carbon Taxation on Spanish Households," *Fisc. Stud.*, vol. 20, no. 3, pp. 305–320, 1999.
[85] T. Winters, "CO2 Cap-and-Trade: Should Industry Speak Up or Sign On?," *Electr. J.*, vol. 21, no. 4, pp. 11–18, 2008.
[86] H. L. Kee, H. Ma, and M. Mani, "The effects of domestic climate change measures on international competitiveness," *World Econ.*, vol. 33, no. 6, pp. 820–829, 2010.
[87] B. . Sovacool, "Building Umbrellas or Arks? Three Alternatives to Carbon Credits and Offsets," *Electr. J.*, vol. 23, no. 2, pp. 29–40, 2010.
[88] M. Hoel, "The green paradox and greenhouse gas reducing investments," *Int. Rev. Environ. Resour. Econ.*, vol. 5, no. 4, pp. 353–379, 2011.
[89] L. Dwyer, P. Forsyth, and R. Spurr, "Wither Australian tourism? Implications of the carbon tax," *J. Hosp. Tour. Manag.*, vol. 19, no. 1, pp. 15–30, 2012.
[90] L. Dwyer, P. Forsyth, R. Spurr, and S. Hoque, "Economic Impacts of a Carbon Tax on the Australian Tourism Industry," *J. Travel Res.*, vol. 52, no. 2, pp. 143–155, 2013.
[91] L. Luo and Q. Tang, "Carbon tax, corporate carbon profile and financial return," *Pacific Account. Rev.*, vol. 26, no. 3, pp. 351–373, 2014.
[92] R. . Procter, "Cutting carbon emissions from electricity generation," *Electr. J.*, vol. 30, no. 2, pp. 41–46, 2017.
[93] G. J. . Micheli and F. Mantella, "Modelling an environmentally-extended inventory routing problem with demand uncertainty and a heterogeneous fleet under carbon control policies," *Int. J. Prod. Econ.*, vol. 204, no. 11, pp. 316–327, 2018.
[94] M. Linnenluecke, T. Smith, and R. . Whaley, "The unpaid social cost of carbon: Introducing a framework to estimate 'legal looting' in the fossil fuel industry," *Account. Res. J.*, 2017.
[95] H. Yang and W. Chen, "Retailer-driven carbon emission abatement with consumer environmental awareness and carbon tax: Revenue-sharing versus Cost-sharing," *Omega (United Kingdom)*, vol. 78, pp. 179–191, 2018.
[96] A. Abdi, S. Taghipour, and H. Khamooshi, "A model to control environmental performance of project execution process based on greenhouse gas emissions using earned value management," *Int. J. Proj. Manag.*, vol. 36, no. 3, pp. 397–413, 2018.
[97] Z. Borghei, P. Leung, and J. Guthrie, "Does voluntary greenhouse gas emissions disclosure reduce information asymmetry? Australian evidence," *Afro-Asian J. Financ. Account.*, vol. 8, no. 2, pp. 123–147, 2018.
[98] B. Lin and M. Xu, "Exploring the green total factor productivity of China's metallurgical industry under carbon tax: A perspective on factor substitution," *J. Clean. Prod.*, vol. 233, pp. 1322–1333, 2019.
[99] T. Ikwue and J. Skea, "Business and the genesis of the European Community carbon tax proposal," *Bus. Strateg. Environ.*, vol. 3, no. 2, pp. 1–10, 1994.
[100] M. L. Piattelli, M. A. Cuneo, N. P. Bianchi, and G. Soncin, "The control of goods transportation growth by modal share re-planning: The role of a carbon tax," *Syst. Dyn. Rev.*, vol. 18, no. 1, pp. 47–69, 2002.
[101] X. Meng, Z. Yao, J. Nie, Y. Zhao, and Z. Li, "Low-carbon product selection with carbon tax and competition: Effects of the power structure," *Int. J. Prod. Econ.*, vol. 200, pp. 224–230, 2018.
[102] Y. Yuyin and L. Jinxi, "The effect of governmental policies of carbon taxes and energy-saving subsidies on enterprise decisions in a two-echelon supply chain," *J. Clean. Prod.*, vol. 181, pp. 675–691, 2018.
[103] M. Jin, X. Shi, A. Emrouznejad, and F. Yang, "Determining the optimal carbon tax rate based on data envelopment analysis," *J. Clean. Prod.*, vol. 172, pp. 900–908, 2018.
[104] V. Yilanci, O. Ozgur, and M. . Gorus, "The asymmetric effects of foreign direct investment on clean energy consumption in BRICS countries: A recently introduced hidden cointegration test," *J. Clean. Prod.*, vol. 237, 2019.
[105] S. Sree Kumar, B. Banerjee, F. D. P. Duarte, and A. Dadich, "The business - Government nexus: Impact of government actions and legislation on business responses to climate change," *J. Manag. Organ.*, vol. 26, no. 6, pp. 952–974, 2020.
[106] Y. Zhang, X. Li, Y. Zhao, and H. Li, "The impact of carbon tax on China's tourism industry," Journal of Cleaner Production, vol. 254, p. 120069, 2020.