

Sustainable Marketing in line with SDGs: An Extensive Bibliometric Analysis

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ABSTRACT

This study focuses on providing a holistic picture of the relevant research in the area of sustainable marketing from the lens of United Nations's Sustainable Development Goals (SDGs). This research is unique since it involves an extensive bibliometric analysis of the research in the area of sustainable marketing in line with UN SDGs spanned across a decade from the years 2013-2022. The study analysed 864 articles published in 470 journals by 2503 authors from 922 organisations from 81 countries which was extracted from Dimensions database and further analysed using VosViewer software. The research study has identified the most influential journals, authors, institutions, countries, and research papers focusing on the area of sustainable marketing in line with UN SDGs. This study will be of immense help to researchers, marketers and policy makers working in the area of sustainable marketing.

Keywords: Sustainable Marketing, Sustainability, UN Sustainable Development Goals (SDGs), Bibliometric analysis, Co-citation analysis, VosViewer.

1. INTRODUCTION

Sustainability is one of the most crucial ways to mark a future for upcoming generations (Modgil et al., 2020). Marketing is also seen as the antithesis to sustainability (Lim, 2016). Marketing generally propels consumption while sustainability emphasises on satisfying the needs of the current generations without compromising the quality of life and needs of

future generations. Assessing the relationship between marketing and sustainability is gaining traction among researchers.

A number of researchers perceive "Sustainable Marketing", to have emerged from the relationship of social, green and ethical marketing transgressing the product orientation to a broader societal view (Gordon et al., 2011). Sustainable companies are those that create value for customers through socially, environmentally, and ethically responsible actions. Sustainable Marketing has been conceptualised by a number of researchers. Fuller(1999) conceptualised sustainable marketing as the process of planning, implementing and controlling the development, pricing and distribution of products in a manner that fulfils the three criteria viz., (i) needs of the customers are met; (ii) organisational goals are achieved and (iii) process is compatible with eco-systems. Joya & Ballantine (2019) have outlined three conceptualisations of sustainability marketing: Auxiliary Sustainable Marketing which focusses on the production of sustainable products, Reformative Sustainable Marketing focuses on promoting sustainable lifestyles and behavioural changes and Transformative Sustainable Marketing aims to change laws, regulations and social norms that inhibit sustainable consumption and a transition to a

sustainable society. According to Kotler & Armstrong(2020), sustainable marketing involves caring not only for the needs and wants of today's customers but also for tomorrow's customers and ensuring the survival and success of the business, shareholders, employees, and the broader world in which they all live. It means pursuing the mission of shared value and a triple bottom line: people, planet, profits.

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, improve the lives and prospects of everyone, everywhere and ensure that by 2030 all people enjoy peace and prosperity. This agenda is a plan of action for people, planet, and prosperity (Sebhatu & Enquist, 2022). According to UNDP, the 17 SDGs are integrated - they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability. The 17 UN SDGs are: No Poverty; Zero Hunger; Good health and well-being; Quality education; Gender equality; Clean water and sanitation; Affordable and clean energy; Decent work and economic growth; Industry innovation and infrastructure; Reduced inequalities; Sustainable cities and communities; Responsible consumption and production; Climate action; Life below water; Life on land; Peace, justice and strong institutions and Partnerships for the goals.

This research paper focused on the previous research on Sustainable Marketing whose field of research was in line with the UN Sustainable Development Goals i.e. the research papers were reviewed from the lens of the UN SDGs.

Research studies viz., McDonagh & Prothero (2014) and Purani et al. (2014) found

sustainable marketing to be an understudied area. Purani et al. (2014) found that only 2% of articles in 10 of the most highly ranked marketing journals were devoted to sustainability. Therefore, this study aims to provide a comprehensive overview of extant publications on sustainable marketing in line with SDGs through an extensive bibliometric analysis of the area of sustainable marketing based on a sample of 864 articles extracted from Dimensions database for the decade of 2013 to 2022 and further analysed using VosViewer.

This study tries to address the following research question:

RQ: What are the most influential journals, authors, countries, and research papers on Sustainable Marketing?

2. MATERIALS & METHODS

This study aims to identify, evaluate and analyse relevant studies from the existing literature on sustainability marketing using bibliometric analysis.

2.1. Bibliometric Analysis

Bibliometric analysis is a quantitative method to retrospect and describe published papers, which is helpful for researchers to evaluate academic studies in a focal field (Rey-Martí et al., 2016). Bibliometric analysis is one of the mature and effective statistical methods which examines secondary data acquired on digital database from a quantitative and objective perspective and offers researchers a comprehensive overview of a certain domain of research from a holistic perspective (Wang et al., 2021). The bibliometric analysis of a specific research area involves systematic process of document search using defined keywords and criteria to carry out a qualitative and quantitative assessment of the area of interest - sustainable marketing in this paper.

2.2. Dimensions database

Dimensions database is the world’s largest linked research information dataset which covers 132 million research publications from 104k journals, connected by more than 1.7 billion citations.

2.3. Vosviewer

Vosviewer developed at Leiden University is a software tool used to generate, visualize and analyse bibliometric networks. These

networks include research authors, journals, institutions and individual publications.

2.4. Database search strategy

“Dimensions” database was used as a data source to extract “articles” which were “open access and others” in “English” published during the time frame of the year “2013 – 2022” for the keyword “Sustainable Marketing”.

Table 1. Database search strategy

Filtering Step	Criteria	Number of resultant filtered articles
(I) Search using keyword	“Sustainable Marketing”	8036
(II) Publication type	Article	3210
(III) Publication years	2013 - 2022	2718
(IV) Research Category	Sustainable development goals	864 Publications

3. RESULT

The 864 research articles culled out from Dimensions database were analysed using Vosviewer and the results generated are presented in this section.

3.1. Distribution of publications on the topic in a decade from years 2013 - 2022

Fig.1. shows the growth of number of articles on Sustainable Marketing from the lens of UN Sustainable Development Goals from 22 articles in 2013 to 171 articles in 2022.

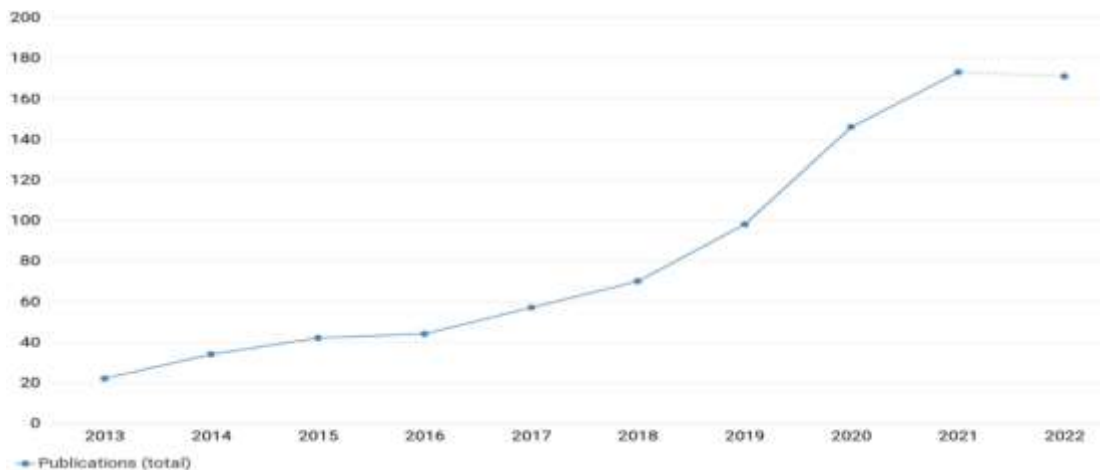


Fig.1. Number of articles over years
Source: Dimensions database

3.2. Most impactful journals: Top ten journals in the area of Sustainable Marketing in line with UN SDGs during the decade 2013 - 2022

470 Journals had published at least one research paper in the area of Sustainable

Marketing in line with UN SDGs in the past one decade out of which the top ten journals which carried maximum number of articles on sustainability are shown in Table 2.

Table 2. Top ten journals

Rank	Journal	Number of Publications	Citations	Average citation per publication
1	Sustainability	66	1618	24.52
2	Journal of cleaner production	21	851	40.52
3	Journal of macromarketing	20	309	15.45
4	Journal of business research	18	519	28.83
5	International journal of consumer studies	12	259	21.58
6	Fuel	10	680	68.00
7	Business strategy and the environment	10	291	29.10
8	Sustainable production and consumption	9	220	24.44
9	Journal of marketing management	8	184	23.00
10	Industrial marketing management	8	425	53.13

Source: Bibliometric Analysis using Dimensions database and Vosviewer software

3.3. Most cited articles: Top ten articles in the area of Sustainable Marketing in line with UN SDGs during the decade 2013 - 2022

79% of the total of 864 articles in the area of Sustainable Marketing in line with UN SDGs

had received at least one citation. However, the prominent research articles of the decade identified based on their citations are presented in Table 3.

Table 3. Top ten articles

Rank	Title of paper and doi	Journal	Year	Citation count
1	Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? https://doi.org/10.1016/s0140-6736(13)60843-0	The Lancet	2013	1042
2	Application of the Extended Theory of Planned Behavior Model to Investigate Purchase Intention of Green Products among Thai Consumers https://doi.org/10.3390/su8101077	Sustainability	2016	274
3	Review of studies on the public–private partnerships (PPP) for infrastructure projects https://doi.org/10.1016/j.ijproman.2018.03.004	International Journal of Project Management	2018	246
4	Reactor technologies for biodiesel production and processing: A review https://doi.org/10.1016/j.peccs.2019.06.001	Progress in Energy and Combustion Science.	2019	237
5	Mapping out the sharing economy: A configurational approach to sharing business modeling https://doi.org/10.1016/j.techfore.2017.03.035	Technological Forecasting and Social Change	2017	228
6	Feelings that Make a Difference: How Guilt and Pride Convince Consumers of the Effectiveness of Sustainable Consumption Choices https://doi.org/10.1007/s10551-013-1841-9	Journal of Business Ethics	2014	221
7	Sustainability of direct biodiesel synthesis from microalgae biomass: A critical review https://doi.org/10.1016/j.rser.2019.02.012	Renewable and Sustainable Energy Reviews	2019	219
8	Comparing linear and circular supply chains: A case study from the construction industry https://doi.org/10.1016/j.ijpe.2016.06.008	International Journal of Production Economics	2017	216
9	Application of nanoparticles in biofuels: An overview https://doi.org/10.1016/j.fuel.2018.10.030	Fuel	2019	193
10	Sustainable tourism, justice and an ethic of care: toward the Just Destination https://doi.org/10.1080/09669582.2013.786084	Journal of Sustainable Tourism	2013	182

Source: Bibliometric Analysis using Dimensions database and Vosviewer software

3.4. Most influential scholars in the field: Top ten authors in the area of Sustainable Marketing in line with UN SDGs during the decade 2013 - 2022

82% of the total of 2503 authors who had published in the area of Sustainable

Marketing in line with UN SDGs had received at least one citation. The most prolific and highly cited authors out of them are given in Table 4:

Table 4. Top ten authors

Rank	Author	Number of Publications	Citations	Average citation per publication
1	Pugazhendi Arivalagan	14	1101	78.64
2	Mathimani Thangavel	11	1048	95.27
3	Ko Eunju	7	242	34.57
4	Kim Kyung Hoon	6	180	30.00
5	Kumar Gopalkrishnan	5	135	27.00
6	Minton Elizabeth	5	127	25.40
7	Chou Sheng - Fang	5	96	19.20
8	Kim Juran	4	133	33.25
9	Hornng Jeou-Shyan	4	96	24.00
10	Tseng Ming-Lang	4	52	13.00

Source: Bibliometric Analysis using Dimensions database and Vosviewer software

3.5. Most influential institutions: Top ten institutions contributed to the area of Sustainable Marketing in line with UN SDGs during the decade 2013 - 2022

922 organisations were identified by Dimensions database who have worked in

the area of Sustainable Marketing in line with UN SDGs. Table 5 depicts the most influential institutions who have contributed the maximum number of highly cited publications to the area.

Table 5. Top ten institutions

Rank	Institution	Country	Number of Publications	Citations	Average citation per publication
1	Ton Duc Thang University	Vietnam	18	1237	68.72
2	Yonsei University	South Korea	15	458	30.53
3	National Institute of Technology, Trichy	India	11	965	87.73
4	University of Auckland	New Zealand	7	229	32.71
5	University of Canterbury	New Zealand	7	141	20.14
6	University of Sheffield	England	6	412	68.67
7	Ming Chuan University	Taiwan	6	197	32.83
8	Changwon National University	South Korea	6	180	30.00
9	University of Nottingham	United Kingdom	5	290	58.00
10	Jeonju University	South Korea	5	133	26.60

Source: Bibliometric Analysis using Dimensions database and Vosviewer software

3.6. Most impactful country: Top ten countries contributed to the area of Sustainable Marketing in line with UN SDGs during the decade 2013 - 2022

The Dimensions database lists 81 countries who have worked in the area of Sustainable

Marketing in line with UN SDGs. India figures as a leading country publishing 108 publications followed by USA with 96 publications but having the maximum citations (Refer Table 6).

Table 6. Top ten countries

Rank	Country	Number of Publications	Citations	Average citation per publication
1	India	108	2944	27.26
2	USA	96	3299	34.36
3	United Kingdom	73	2789	38.21
4	China	66	1509	22.86
5	Australia	45	1075	23.89
6	South Korea	36	882	24.50
7	Spain	27	722	26.74
8	Malaysia	27	669	24.78
9	Italy	26	828	31.85
10	Vietnam	23	1456	63.30

Source: Bibliometric Analysis using Dimensions database and Vosviewer software

3.7. Co-citation analysis

Co-citation analysis explores how closely items such as authors, journals, and papers are cited together. The relatedness of the authors, journals, and papers is determined on the basis of the number of the times they are cited together. Co-citation analysis finds links between cited authors, articles and journals and in turn identify influential or focal authors, articles and journals in the specific research area.

3.7.1. Co-citation analysis on cited reference

Co-citation analysis of the 37,387 cited references of 864 articles was constrained to a cited reference having at least 20 citations resulting in 25 references meeting this threshold. Three clusters emerged (Refer Fig.2). Cluster 1 depicted in red colour comprises of 10 references, Cluster 2

depicted in green colour comprises of 9 references and Cluster 3 depicted in blue colour comprises of 6 references. Ajzen (1991) research paper dealing with various aspects of the Theory of Planned Behavior in Cluster 1 is the most co-cited reference having 59 citations and 126 link strength indicating researchers linking consumer behaviour pertaining to sustainable products with the theory of planned behavior. Saravanan et al. (2018) paper on policy barriers in sustainable marketing of biofuel in India emerges as the most co-cited reference in Cluster 2 having 99 citations and 7 link strength. Cluster 3 has Fornell & Larcker (1981) paper on evaluating structural equation models having 58 citations and 129 link strength as the most co-cited reference indicating researchers using structural equation modelling in their data analysis on their research on sustainable marketing.

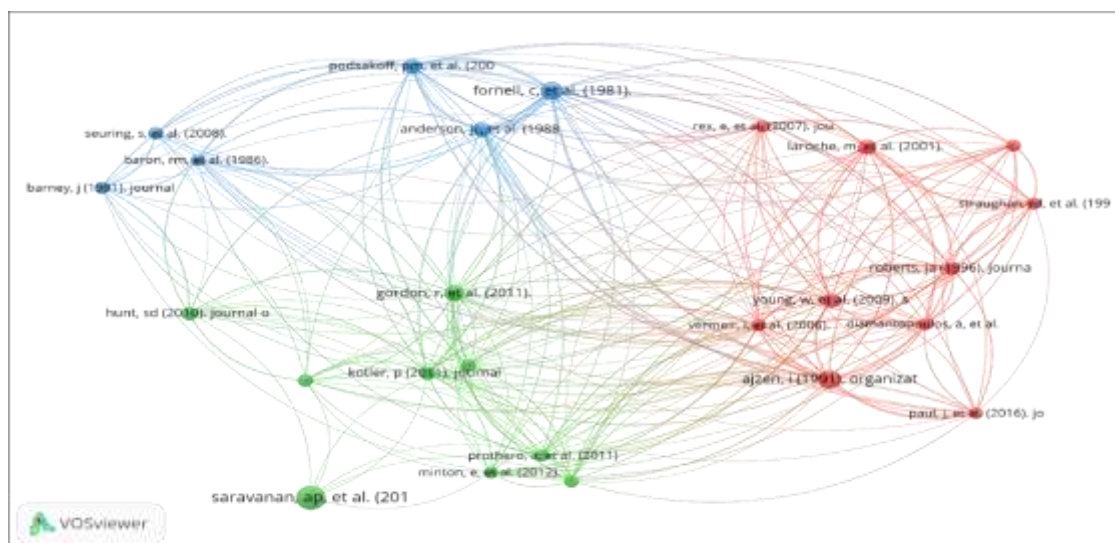


Fig.2. Co-citation analysis on cited reference
Source: Bibliometric Analysis using Dimensions database and Vosviewer software

3.7.2. Co-citation analysis on cited authors

Co-citation analysis of authors aims to identify eminent authors working on the area of Sustainable Marketing. Co-citation analysis of the 83,221 authors was constrained to authors who had at least 60 citations resulting in 39 authors meeting this

threshold. Three clusters were identified (Refer Fig.3). Cluster 1 depicted in red colour comprises of 26 authors, Cluster 2 depicted in green colour comprises of 8 authors and Cluster 3 depicted in blue colour comprises of 5 authors.



Fig.3. Co-citation analysis on cited authors

Source: Bibliometric Analysis using Dimensions database and Vosviewer software

Prof. Peattie Ken of Cardiff Business School, UK in cluster 1 has the maximum 132 citations with a link strength of 1158. Cluster 2 has Prof. Pugazhendi Arivalagan (234 citations, 2877 link strength) and Cluster 3 has Prof. Sarkis Joseph of WPI Business School, US (153 citations, 1337 link strength) as authors having maximum citations.

3.7.3. Co-citation analysis on cited journals

Co-citation analysis of journal helps in understanding related journals focusing on Sustainable Marketing. Co-citation analysis of the 6282 cited sources was constrained to

a cited source having at least 200 citations resulting in 38 journals meeting this threshold. Three clusters were identified. (Refer Fig.4). Cluster 1 depicted in red colour comprises of 25 journals, Cluster 2 depicted in green colour comprises of 10 journals and Cluster 3 depicted in blue colour comprises of 3 journals. Journal of cleaner production in cluster 1 has the maximum 2183 citations with a link strength of 60715. The journals having highest citations in Cluster 2 and Cluster 3 are Bioresource Technology (931 citations, 43921 link strength) and Tourism Management (385 citations, 12542 link strength) respectively.

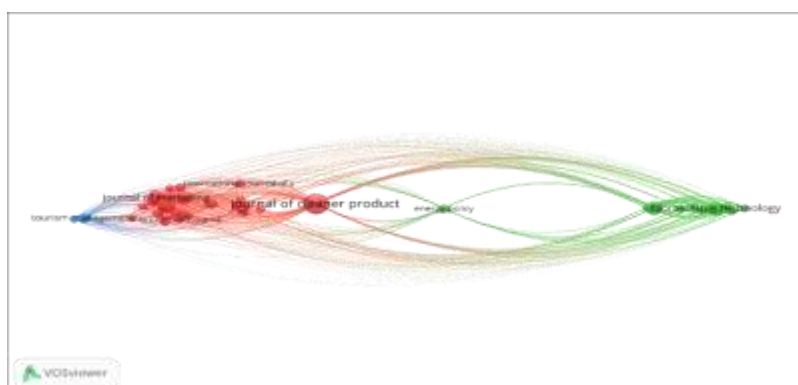


Fig.4. Co-citation analysis on cited journals

Source: Bibliometric Analysis using Dimensions database and Vosviewer software

DISCUSSION

Sustainability marketing has attracted attention of a number of research scholars

and has emerged as an important area of research. This study aimed to provide a holistic picture of the relevant research in the

area of Sustainable Marketing from the lens of UN SDGs. This research is unique since the author did not find any research which involved a bibliometric analysis of the research in the area of Sustainable Marketing from the lens of UN SDGs spanned across a decade from the years 2013-2022. This study contributes to the body of knowledge by analysing the research development trend and identifying the prominent research papers, authors, journals, research institutions and countries which have contributed to the area of Sustainable Marketing in line of UN SDGs in the past one decade. Sustainability journal emerged as the most impactful journal which published 66 research papers which had 1618 citations followed by Journal of cleaner production with 21 papers having 851 citations. The paper by Ruel, et.al (2013) published in Lancet analysed the nutritional effects of programmes in four sectors--agriculture, social safety nets, early child development, and schooling emerged as the most cited paper with 1042 citations followed by the paper by Maichum, et.al (2016) in Sustainability journal which analysed the consumer's purchase intention towards green products in developing countries received 274 citations. Prof. Arivalagan Pugazhendhi is most prolific and highly cited author in the area with 14 publications and 1101 citations. Ton Duc Thang University of Vietnam emerged as the Top institution which contributed to the area with 18 publications receiving 1237 citations. However, National Institute of Technology, Trichy's 11 publications received the highest average citation per publication of 87.73. India figures as a leading country publishing 108 publications indicating enormous interest of the Indian researchers in the area of Sustainable Marketing in line of UN SDGs. Three clusters emerged each in the Co-

citation analysis on cited reference, author and journal. Ajzen (1991); Saravanan et al. (2018) and Fornell & Larcker (1981) were the most co-cited reference in each of the three clusters. The Co-citation analysis on cited authors identified Prof. Peattie Ken, Prof. Pugazhendhi Arivalagan and Prof. Sarkis Joseph as eminent authors working on the area of Sustainable Marketing. Co-citation analysis of journal revealed Journal of cleaner production; Journal of Bioresource Technology and Journal of Tourism Management as co-cited journals focusing on Sustainable Marketing.

Declaration by Authors

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REFERENCES

1. Antonetti, Paolo & Maklan, Stan. (2014). Feelings that Make a Difference: How Guilt and Pride Convince Consumers of the Effectiveness of Sustainable Consumption Choices. *Journal of Business Ethics*, 124, 117-134.
2. Ajzen, Icek. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
3. Cui, Caiyun & Liu, Yong & Hope, Alex & Wang, Jianping. (2018). Review of studies on the public-private partnerships (PPP) for infrastructure projects. *International Journal of Project Management*. 36(5), 773-794.
4. Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50.
5. Fuller, D. A., & Ottman, J. A. (2004). Moderating unintended pollution: the role of sustainable product design. *Journal of Business Research*, 57(11), 1231-1238.
6. Goh, B. H. H., Ong, H. C., Cheah, M. Y., Chen, W. H., Yu, K. L., & Mahlia, T. M. I. (2019). Sustainability of direct biodiesel synthesis from microalgae biomass: A critical review. *Renewable and Sustainable Energy Reviews*, 107, 59-74.

7. Gordon, R., Carrigan, M., & Hastings, G. (2011). A framework for sustainable marketing. *Marketing Theory*, 11(2), 143–163.
8. Haneef Abdul Nasir, M., Genovese, A., Acquaye, A.A. (2017). Comparing linear and circular supply chains: A case study from the construction industry. *International Journal of Production Economics*, 183 (B), 443-457.
9. Jamal, Tazim & Camargo, Blanca. (2013). Sustainable tourism, justice and an ethic of care: toward the Just Destination. *Journal of Sustainable Tourism*, 22(1), 11-30.
10. Joya A. Kemper & Paul W. Ballantine (2019). What do we mean by sustainability marketing? *Journal of Marketing Management*, 35:3 - 4, 277-309.
11. Kotler, Philip, & Armstrong, Gary. (2020). *Principles of marketing*, 17th ed. (Global Ed.). Pearson.
12. Lim, W. M. (2016). A blueprint for sustainability marketing: Defining its conceptual boundaries for progress. *Marketing Theory*, 16(2), 232–249.
13. Maichum, K., Parichatnon, S., & Peng, K.-C. (2016). Application of the Extended Theory of Planned Behavior Model to Investigate Purchase Intention of Green Products among Thai Consumers. *Sustainability*, 8(10), 1077.
14. McDonagh, P., & Prothero, A. (2014). Sustainability marketing research: Past, present and future. *Journal of Marketing Management*, 30(11-12), 1186 - 1219.
15. Modgil, S., Gupta, S., & Bhushan, B. (2020). Building a living economy through modern information decision support systems and UN sustainable development goals. *Production Planning & Control*, 31(11/12), 967–987.
16. Munoz, P and Cohen, B (2017). Mapping out the Sharing Economy: A Configurational Approach to Sharing Business Modeling. *Technological Forecasting and Social Change*, 125, 21-37.
17. Purani, K., Sahadev, S., & Kumar, D. S. (2014). Globalization and academic research: The case of sustainability marketing. *IIM Kozhikode Society & Management Review*, 3(1), 93 - 99.
18. Rey-Martí, A., Ribeiro-Soriano, D., & Palacios-Marqués, D. (2016). A bibliometric analysis of social entrepreneurship. *Journal Business Research*, 69(5), 1651–165
19. Ruel, M. T., Alderman, H., & Maternal and Child Nutrition Study Group (2013). Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? *Lancet* (London, England), 382(9891), 536–551.
20. Saravanan, Azhaham & Mathimani, Thangavel & Garlapati, Deviram & Rajendran, Karthik & Pugazhendhi, Arivalagan. (2018). Biofuel policy in India: A review of policy barriers in sustainable marketing of biofuel. *Journal of Cleaner Production*, 193,734-747.
21. Sebhatu, S. P., & Enquist, B. (2022). Values and Multi-stakeholder Dialog for Business Transformation in Light of the UN Sustainable Development Goals. *Journal of Business Ethics*, 180(4), 1059–1074.
22. Sekoai, Patrick & Moro, Naphtaly & du Preez, Stephanus & Modisha, Phillimon & Engelbrecht, Nicolaas & Bessarabov, Dmitri & Ghimire, Anish. (2018). Application of nanoparticles in biofuels: An overview. *Fuel*, 237, 380 - 397.
23. Tabatabaei, M., Aghbashlo, M., Dehghani, M., Panahi, H. K. S., Mollahosseini, A., Hosseini, M., & Soufiyan, M. M. (2019). Reactor technologies for biodiesel production and processing: a review. *Progress in Energy and Combustion Science*, 74, 239-303.
24. Wang, X., Xu, Z., Su, S.-F., & Zhou, W. (2021). A comprehensive bibliometric analysis of uncertain group decision making from 1980 to 2019. *Information Sciences*, 547, 328 - 353.

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