

Leyva-Hernández, Sandra Nelly; Arango-Ramírez, Paola Miriam; Gaviria-Marin, Magaly

Article

Analysis green consumption concept from a bibliometric

Cogent Business & Management

Provided in Cooperation with:

Taylor & Francis Group

Suggested Citation: Leyva-Hernández, Sandra Nelly; Arango-Ramírez, Paola Miriam; Gaviria-Marin, Magaly (2024) : Analysis green consumption concept from a bibliometric, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 11, Iss. 1, pp. 1-25, <https://doi.org/10.1080/23311975.2024.2422168>

This Version is available at:

<https://hdl.handle.net/10419/326658>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Analysis green consumption concept from a bibliometric

Sandra Nelly Leyva-Hernández, Paola Miriam Arango-Ramírez & Magaly Gaviria-Marin

To cite this article: Sandra Nelly Leyva-Hernández, Paola Miriam Arango-Ramírez & Magaly Gaviria-Marin (2024) Analysis green consumption concept from a bibliometric, Cogent Business & Management, 11:1, 2422168, DOI: [10.1080/23311975.2024.2422168](https://doi.org/10.1080/23311975.2024.2422168)

To link to this article: <https://doi.org/10.1080/23311975.2024.2422168>



© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 08 Nov 2024.



Submit your article to this journal [↗](#)



Article views: 1162



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 3 View citing articles [↗](#)

Analysis green consumption concept from a bibliometric

Sandra Nelly Leyva-Hernández^a , Paola Miriam Arango-Ramírez^b  and Magaly Gaviria-Marin^c 

^aFacultad de Ingeniería y Negocios, Universidad Autónoma de Baja California, San Quintín, México; ^bDepartamento de Ciencias Económico Administrativas, Instituto Tecnológico del Valle de Etla, Oaxaca, México; ^cFacultad de Ciencias Económicas y Administrativas, Universidad Católica de la Santísima Concepción, Concepción, Chile;

ABSTRACT

The aim of this manuscript is to provide a comprehensive overview of the existing literature on green consumption. Moreover, it proposes future research directions to further expand our understanding of the evolution of the field of green consumption through a bibliometric study approach. The analysis encompasses the period between 1975 and 2021, and employs base data from the Web of Science (WOS). The study scrutinizes publications through a range of bibliometric indicators such as the most cited articles, the most prominent authors, institutions, countries, and the most productive journals. The h-index, productivity, and citations are some of the bibliometric indicators used to assess the publications. Additionally, graphic mapping is presented through the VOS viewer, which facilitates an analysis of authors' co-citation and the keywords' co-occurrence. The findings demonstrate the evolution, integration, and scope of the concept, wherein individuals, communities, and governments play a pivotal role in embracing new practices, policies, and resource utilization. The study concludes that various theories, approaches, and causal variables present challenges concerning consumption and purchasing habits.

ARTICLE HISTORY

Received 13 March 2023
Revised 21 April 2024
Accepted 18 October 2024

KEYWORDS

Ethical consumption;
consumer citizenship;
green behavior;
empowerment; green
washing

SUBJECTS

Consumer Psychology;
Sustainable Development;
Business, Management
and Accounting

1. Introduction

In recent decades, there has been a significant increase in the literature associated with environmentally conscious behavior, and a strong relationship exists between green consumption within marketing (Catlin & Wang, 2013; Haws et al., 2014; Nguyen et al., 2019; Leonidou et al., 2013), politics (Anantharaman, 2022; Ramzan et al., 2022), global organizations (Gasper et al., 2019; Pimonenko et al., 2020; Sharma et al., 2021), and certifications such as organic food (Hengboriboon et al., 2022; Nguyen et al., 2019; Testa et al., 2019; Zheng et al., 2022), fair trade (Bürgin & Wilken, 2022; Kutaula et al., 2022; Robichaud & Yu, 2022), and Forest Stewardship Council (Brusselaers et al., 2020; So & Laforzezza, 2022). This consequently has economic and social impacts at the country level, such as the development of forest management with indicators such as carbon storage, use of wood in primary and secondary transformation for the manufacture of furniture, recreational forest services, and an increase in jobs (Luján-Álvarez et al., 2021; Pacheco-Aquino et al., 2015). The transition from conventional agriculture to organic or agroecological methods has led to the alleviation of rural poverty, achievement of food security and sovereignty, productive diversification, and development of local markets (Altieri & Nicholls, 2012; Cáceres, 2003; Daza et al., 2020; Martínez, 2010), among other benefits.

In the 90s, Sparks and Shepherd (1992) associated green consumerism with potential effects on health, the environment, animals, and vulnerable groups. Other authors explain the concept's relevance by reducing the consumption of material resources in producing goods and generating feelings of responsibility and empowerment towards consumers and the environment (Connolly & Prothero, 2008).

CONTACT Arango-Ramírez Paola Miriam  paola.am@itvalletla.edu.mx  Departamento de Ciencias Económico Administrativas, Instituto Tecnológico del Valle de Etla, Oaxaca, México

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

This consumption involves buying organic, fair trade, and sustainable products (Gilg et al., 2005). Therefore, green consumers are characterized by assessing the impact of their purchases on the environment to cause the least possible environmental damage (Gleim et al., 2013). Information on the environmental impact is the primary determinant for a green purchase, followed by consideration of the social impact (Shao & Ünal, 2019). However, product quality, price, convenience, and durability influence purchasing decisions (Sharma & Foroapon, 2019). Emotional aspects, such as passion, intimacy, and commitment to nature, have positively influenced ecological purchases (Dong et al., 2020), with environmental protection emotions affecting attitudes and intentions toward ecological purchases (Lavuri, 2022).

The analysis of this field of study is necessary for three fundamental reasons. Firstly, population growth has led to several environmental problems, as noted by Nguyen et al. (2019). Secondly, there is an urgent need to combat environmental deterioration and support the objectives proposed by the 2030 Agenda for Sustainable Development (Leyva-Hernández et al., 2021; Nguyen et al., 2019; United Nations (UN), 2015). Lastly, uncontrolled consumption in developed countries affects not only their resources but also those of others, given their resource management practices that do not consider consumption demand (Yu et al., 2013). Several questions arise to deepen the analysis of green consumption:

- How and to what extent has the field of green consumption research grown?
- What are the main investigations on green consumption?
- Who are the main researchers of green consumption?
- What are the relationships between concepts and research trends around green consumption?
- How has the concept of green consumption evolved?
- How do governments encourage green consumption?
- How can the understanding of the explanation of green consumption be improved?

Similar questions have been used to analyze fields such as innovation-sustainability (Maier et al., 2020), knowledge management (Gaviria-Marin et al., 2018), tourism and hospitality (Muritala et al., 2020; Sustacha et al., 2022), and socially responsible consumption (Nova-Reyes et al., 2020) through bibliometrics. Bibliometrics, through performance analysis and graphic mapping, helps represent the main trends of a discipline (e.g., research with more impact) while also showing structural and dynamic aspects (Adriaanse & Rensleigh, 2013; Chabowski et al., 2017; Gaviria-Marin et al., 2019). A summary of the landscape of green consumption is equally important to identify some of the adverse effects of consumerism on the environment (Bravo et al., 2022). Unlike other studies that conduct bibliometrics on green consumption (Bravo et al., 2022; Yao et al., 2022), this study aims to analyze the evolution of the concept and its conceptual associations considering individual and collective participation. This document is structured with methodology, results, and discussions, followed by proposals for future investigations and conclusions.

2. Methodology

The use of bibliometric methodology has significantly aided in developing a comprehensive understanding of the knowledge structure represented by analyzing specific literature (Ellegaard & Wallin, 2015). The social and thematic connections pertaining to green consumption are systematically organized into knowledge nodes, design approaches, and trend groups. These structures enable the identification of topics under discussion, significant trends, and interactions among authors and institutions regarding the subject matter, as well as the influence of these actors in the field.

In this study, two stages are undertaken. Firstly, the articles with the most significant impact on green consumption are examined. This stage focuses on gathering information concerning authors, documents, productivity, and impact indicators such as the H-index, with the aim of delineating the trajectory of scientific advancement using a measurable and conclusive approach (Cancino et al., 2020; Merigó & Yang, 2017). Subsequently, in the second stage, a mapping of the field's current state is conducted to identify patterns and uncover emerging trends. Bibliometric techniques, such as co-words, co-citations, and thematic maps, are employed to achieve this (Valenzuela-Fernández et al., 2020).

Figure 1 provides an overview of the two stages undertaken in this study. The first stage involves a comprehensive analysis of articles with the most significant impact on green consumption, while the second stage involves mapping the current state of the field. The combination of these two stages enables a better understanding of the field's trajectory and the identification of emerging trends.

2.1. Data collection

The keywords utilized in the initial search are derived from prior knowledge of the literature concerning the subject. Concurrently, a preliminary word search was conducted in the Clarivate Analytics Web of Science (WoS) database on July 19, 2022. Besides functioning as a digital library renowned for its internationally recognized metrics reflecting high-quality standards among researchers (Merigó et al., 2015), WoS serves as a crucial tool for searching and evaluating various publications and periodicals (Thelwall, 2008). However, a decision was made to explore the Scopus database to compare potential disparities in the detected information. The data indicated a lower number of results compared to those in WoS.

It is worth noting that keywords associated or closely related to 'green consumption' include: 'responsible* consum*' or 'green* consum*' or 'green consumerism*' or 'ethic* consum*' or 'ethic* consumerism*' or 'social* responsibl* consum*' or 'green* wash*'. The second search yielded 3089 results until 23 August 2022. However, in the final search, only 2678 results were considered, as certain academic products such as review articles, letters, and notes were filtered out. These academic products have undergone critical review and have attained a certain level of knowledge (Ramos-Rodríguez & Ruíz-Navarro, 2004). 30 study areas were then examined to identify the areas of Business, Environmental Sciences, Green Sustainable Science Technology, Environmental Studies, and Management, which feature the most publications.

The present study examines the articles that occupy the top 50 positions based on the results obtained, while taking into account the total number of citations. The list is accompanied by specific data, including the year of publication, the objectives, author(s), methodology, keywords, potential research directions, and generated results, as highlighted in the studies conducted by Lahiri et al. (2020) and Lim et al. (2021). The bibliometric details were exported to an Excel spreadsheet for analysis, which included the journal title, publication date, author details (name and affiliation), article title, keywords, abstract, and the number of citations received (refer to Figure 1).

2.2. Data analysis and visualization

The visualization and clustering software VOS Viewer were employed to map the collected data. This software utilizes various indicators to extract and visualize networks within a field of study, including bibliographic linkage (Kessler, 1963), co-citation (Small, 1973), and keyword co-occurrence (Valenzuela-Fernández et al., 2020).

Specific reports, such as co-citation, measure the most cited papers by considering when two papers receive a citation from the same third paper, while keyword co-occurrence, or a co-occurrence network, refers to the group of keywords that co-occur in at least two different articles over a period of time, aiming to analyze the most frequently used keywords in the documents (Li et al., 2017). Co-citation and co-occurrence are employed within a longitudinal framework to analyze and track the evolution of a research field over consecutive periods of time (Garfield, 1994).

Moreover, impact indicators were utilized: the total number of citations received and the H-index, which incorporates both productivity and author influence and captures explicitly the performance of a scientific field with a high degree of precision. Four articles from the top 50 that introduced bias due to a weak relationship with the field under analysis were eliminated.

Finally, it was observed that the graph visualization is represented by a network of elements, where the size of connections indicates the proximity between elements, and the diameter of the circle varies according to the significance of each element. The elements are organized through circles and colors (Silva & Moreira, 2022).

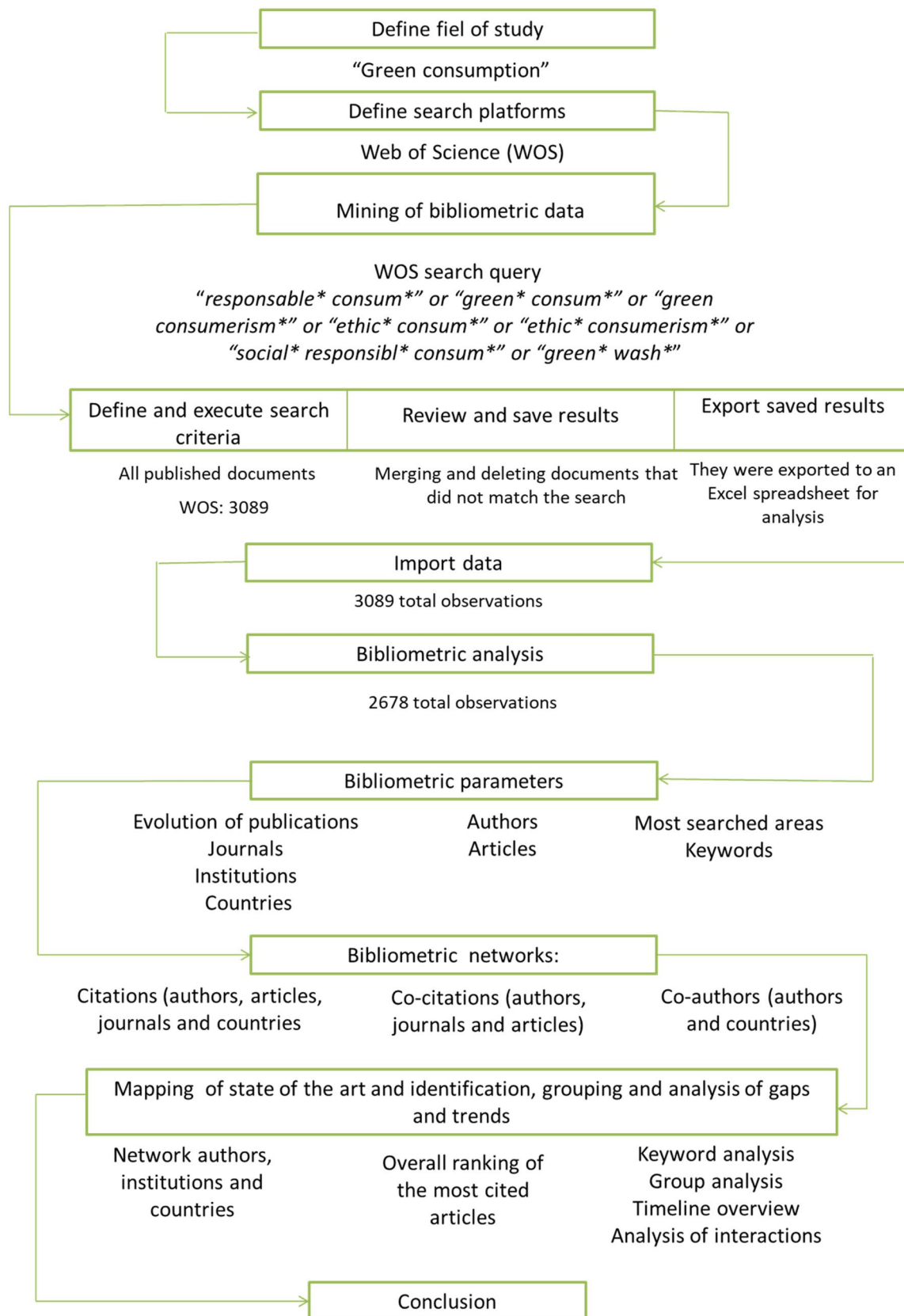


Figure 1. Process of the method.
Source: Adapted from Silva and Moreira (2022).

3. Results

3.1. Performance analysis

Figure 2 illustrates the annual increase of an average of 100 articles published concerning green consumption. Moreover, Table 1 demonstrates that from 2012 to 2021, publications experienced a surge of over 500% compared to 2002 to 2011. The average annual total citation substantially increased by 83.9% (2012–2021). Furthermore, it is noteworthy that productivity during this period amounted to 2240 publications, with an H-index of 90.

The information obtained provides evidence of 16,165 citations, with an average of 32,350 citations per document and 8082.3 per year per document (see Table 2). The 20 most cited articles correspond to 52.49% of the total citations of the entire analyzed collection.

Table 2 highlights by presenting most of the documents cited. We found the articles by Schroeder, Anggraeni, Weber, U of 2019; Yadav R., and Pathak GS of 2017 and Curls, V; Behrens, A; van der Gast, W; Hofman, E Ioannou, A; Kafyeke, T; Flamos, A; Rinaldi, R; Papadelis, S; Hirschnitz-Garbers, M; Topi, C of 2016. These articles are recent and have privileged positions within the Top 50. The most recent article is by Schroeder, P; Anggraeni, K; Weber, U of 2019 at position 16 with 333 citations. These authors analyze circular economy practices to implement sustainable development objectives. Yadav R and Pathak GS of 2017 have position 14 with 343 citations. These authors analyze green buying behavior to identify the factors that explain buying from the theory of planned behavior.

It is crucial to note that, using this analysis, it was discovered that one of the most frequently cited works is by the authors Diamantopoulos, A.; Schlegelmilch, BB; Sinkovics, RR; Bohlen, GM, with the article 'Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation,' with the lead author belonging to the University of Vienna in Austria.

Table 3 identifies the 30 most relevant authors in the field. These researchers exhibit an H-Index equal to or greater than 9. Notably, Spaargaren Gert, Idakis, Andreas Fuentes, Christian Gilg, Andrew Shaw Deirdre, Testa Francesco, D'souza, and Clare are among the researchers with the most significant impact on citations in green consumption. Spaargaren, Gert from Wageningen University & Research boasts the highest H-index, while Testa, Francesco from the University of Mauritian Umberto I Hospital has 3724 citations and an H-index of 8. Malpass, Alice has accrued 46 citations in the analyzed areas,

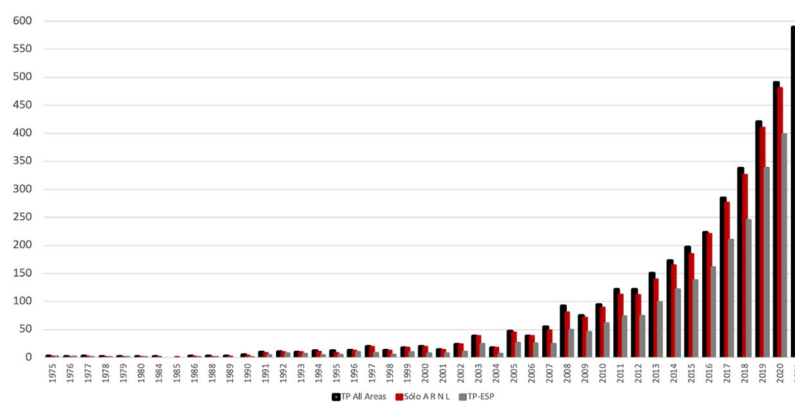


Figure 2. Historical evolution of growth of the field.

Table 1. Productivity and impact of publications by decade.

Decades	TP all areas	%TP	ARNL	%TP	TP	%TP	TC	H-I
1975–1981	8	0.2%	8	0.2%	7	0.3%	24	3
1982–1991	20	0.5%	18	0.5%	7	0.3%	269	3
1992–2001	134	3.6%	128	3.5%	70	2.6%	4961	31
2002–2011	596	15.9%	560	15.5%	347	13.0%	23051	86
2012–2021	2982	79.7%	2892	80.2%	2240	83.9%	34727	90
TOTAL	3740	100%	3606	100%	2671	100%	63032	

Source: WoS; Abbreviations: TP: total paper; ARNL: A: article; R: review; Note; L: letter; TC: total cites; HI: H-index.

Table 2. Top 50 authors.

R	TI	AU	SO	DT	TC	PY	VL	IS
1	Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation	Diamantopoulos, A; Schlegelmilch, BB; Sinkovics, RR; Bohlen, GM	JBR	R	803	2003	56	6
2	Green consumers in the 1990s: Profile and implications for advertising	Roberts, JA	JBR	A	722	1996	36	3
3	Sustainable consumption: green consumer behaviour when purchasing products	Young, W; Hwang, K; McDonald, S; Oates, CJ	SDE	A	706	2010	18	1
4	Self-identity and the theory of planned behavior - assessing the role of identification with green consumerism	Sparks, P; Shepherd, R	SPQ	N	617	1992	55	4
5	Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers	Carrington, MJ; Neville, BA; Whitwell, GJ	JBE	A	558	2010	97	1
6	Consumers' perceptions of corporate social responsibilities: A cross-cultural comparison	Maignan, I	JBE	A	514	2001	30	1
7	Do green products make us better people?	Mazar, N; Zhong, CB	PSC	A	425	2010	21	4
8	Green consumption or sustainable lifestyles? identifying the sustainable consumer	Gilg, A; Barr, S; Ford, N	FUT	A	407	2005	37	6
9	An exploratory study into the factors impeding ethical consumption	Bray, J; Johns, N; Kilburn, D	JBE	A	396	2011	98	4
10	A revised approach to water footprinting to make transparent the impacts of consumption and production on global freshwater scarcity	Ridoutt, BG; Pfister, S	GEC-H	A	396	2010	20	1
11	Consuming ethics: Articulating the subjects and spaces of ethical consumption	Barnett, C; Cloke, P; Clarke, N; Malpass, A	ANT	A; PP	381	2005	37	1
12	Green consumption: behavior and norms	Peattie, K	ARE	R; BC	368	2010	35	
13	Against the green: a multi-method examination of the barriers to green consumption	Gleim, MR; Smith, JS; Andrews, D; Cronin, JJ	JRE	A	348	2013	89	1
14	Determinants of consumers' green purchase behavior in a developing nation: applying and extending the theory of planned behavior	Yadav, R; Pathak, GS	EEC	A	343	2017	134	
15	What will consumers pay for social product features?	Auger, P; Burke, P; Devinney, TM; Louviere, JJ	JBE	A	341	2003	42	3
16	The relevance of circular economy practices to the SDE Goals	Schroeder, P; Anggraeni, K; Weber, U	JIE	A	333	2019	23	1
117	The influence of consumers' environmental beliefs and attitudes on energy saving behaviours	Gadenne, D; Sharma, B; Kerr, D; Smith, T	CPO	A	311	2011	39	12
18	Implementation of circular economy business models by small and medium-sized enterprises (SMEs): Barriers and enablers	Rizos, V; Behrens, A; van der Gaast, W; Hofman, E; Ioannou, A; Kafyeke, T; Flamos, A; Rinaldi, R; Papadelis, S; Hirschnitz-Garbers, M; Topi, C	SUS	A	307	2016	8	11

(Continued)

Table 2. Continued.

R	TI	AU	SO	DT	TC	PY	VL	IS
19	Buyer characteristics of the green consumer and their implications for advertising strategy	Shrum, LJ; Mccarty, Ja; Lowrey, Tm	JAD	A	304	1995	24	2
20	Greenwash and Green Trust: The mediation effects of green consumer confusion and green perceived risk	Chen, YS; Chang, CH	JBE	A	302	2013	114	3
21	Seeing the world through green-tinted glasses: Green consumption values and responses to environmentally friendly products	Haws, KL; Winterich, KP; Naylor, RW	JCP	A	294	2014	24	3
22	Forest certification - an instrument to promote sustainable forest management?	Rametsteiner, E; Simula, M	JEM	A	294	2003	67	1
23	The citizen-consumer hybrid: ideological tensions and the case of whole foods market	Johnston, J	TSO	R	287	2008	37	3
24	What affects green consumer behavior in China? A case study from Qingdao	Zhao, HH; Gao, Q; Wu, YP; Wang, Y; Zhu, XD	JCP	A	280	2014	63	
25	Lost in translation: Exploring the ethical consumer intention-behavior gap	Carrington, MJ; Neville, BA; Whitwell, GJ	JBR	A	275	2014	67	1
26	Sustainable consumption: A theoretical and environmental policy perspective	Spaargaren, G	SNR	A	275	2003	16	8
27	Beyond ecolabels: what green marketing can learn from conventional marketing	Rex, E; Baumann, H	JCP	A	274	2007	15	6
28	Social acceptance of renewable energy sources: A review of contingent valuation applications	Stigka, EK; Paravantis, JA; Mihalakakou, GK	RSE	R	269	2014	32	
29	Voluntary simplicity and the ethics of consumption	Shaw, D; Newholm, T	PMK	A	266	2002	19	2
30	Consumer behaviour in tourism: Concepts, influences and opportunities	Cohen, SA; Prayag, G; Moital, M	CIT	R	259	2014	17	10
31	Re-examining green purchase behaviour and the green consumer profile: new evidences	Akehurst, G; Afonso, C; Goncalves, HM	MDE	A	258	2012	50	5
32	Theories of practices: Agency, technology, and culture Exploring the relevance of practice theories for the governance of sustainable consumption practices in the new world-order	Spaargaren, G	GEC-H	A	254	2011	21	3
33	Selling to socially responsible consumers: Competition and the private provision of public goods	Bagnoli, M; Watts, SG	JEM	A	254	2003	12	3
34	A re-examination of socially responsible consumption and its measurement	Webb, DJ; Mohr, LA; Harris, KE	JBR	A	253	2008	61	2
35	Green consumption life-politics, risk and contradictions	Connolly, J; Prothero, A	JCC	A	251	2008	8	1
36	River-watershed exchange: Effects of riverine subsidies on riparian lizards and their terrestrial prey	Sabo, JL; Power, ME	ECO	A	246	2002	83	7
37	The harm of symbolic actions and green-washing: Corporate Actions and Communications on Environmental Performance and Their Financial Implications	Walker, K; Wan, F	JBE	A	244	2012	109	2

(Continued)

Table 2. Continued.

R	TI	AU	SO	DT	TC	PY	VL	IS
38	Sustainable consumption and production for Asia: sustainability through green design and practice	Tseng, ML; Chiu, SF; Tan, RR; Siriban-Manalang, AB	JCP	A	235	2013	40	
39	Postassimilationist ethnic consumer research: Qualifications and extensions	Askegaard, S; Arnould, EJ; Kjeldgaard, D	JCR	A	232	2005	32	1
40	Creating the Responsible Consumer: Moralistic Governance Regimes and Consumer Subjectivity	Giesler, M; Veresiu, E	JCR	A	227	2014	41	3
41	Tele-connecting local consumption to global land use	Yu, Y; Feng, KS; Hubacek, K	GEC-H	A	223	2013	23	5
42	Hotel customers' environmentally responsible behavioral intention: Impact of key constructs on decision in green consumerism	Han, H; Yoon, HJ	IJH	A	218	2015	45	
43	Behavioural attitudes towards water saving? Evidence from a study of environmental actions	Gilg, A; Barr, S	EEC	A	218	2006	57	3
44	Consumer preferences for additional ethical attributes of organic food	Zander, K; Hamm, U	FQP	A	217	2010	21	5
45	Smart cities and green growth: outsourcing democratic and environmental resilience to the global technology sector	Viitanen, J; Kingston, R	EPE	A	211	2014	46	4
46	Political ecologies of gentrification	Quastel, N	UGE	R	201	2009	30	7
47	Consumption as voting: an exploration of consumer empowerment	Shaw, D; Newholm, T; Dickinson, R	EJM	A	199	2006	40	09-oct
48	Environmental certification in tourism and hospitality: progress, process and prospects	Font, X	TMA	A	195	2002	23	3
49	Green Consumption Behavior Antecedents: Environmental Concern, Knowledge, and Beliefs	Pagiaslis, A; Krontalis, AK	PMK	A	189	2014	31	5
50	Examining green consumerism motivational drivers: does premium price and demographics matter to green purchasing?	Chekima, B; Wafa, SAWSK; Igau, OA; Chekima, S; Sondoh, SL	JCP	A	185	2016	112	

Source: WoS; Abbreviations: TI: Title, AU: Author, SO: Source, DT: Document type, TC: Total Citations, PY: Publication year, VL: Volume, IS: Issue, A: Article, R: Review article, N: Note, PP: Proceedings Paper, BC: Book Chapter.

Acronyms: ANT: Antipode; ARE: Annual Review of Environment and Resources; BIO: Biotropica; CIT: Current Issues in Tourism; CPO: Energy Policy; ECO: Ecology; EEC: Ecological Economics; EJM: European Journal of Marketing; EPE: Environment and Planning Economy and Space; FQP: Food Quality and Preference; FUT: Futures; GEC-H: Global Environmental Change-Human and Policy Dimensions; IJH: International Journal of Hospitality Management; JAD: Journal of Advertising; JBE: Journal of Business Ethics; JBR: Journal of Business Research; JCB: Journal of Consumer Behaviour; JCC: Journal of Consumer Culture; JCP: Journal of Consumer Psychology; JCR: Journal of Consumer Research; JEM: Journal of Environmental Management; JIE: Journal of Industrial Ecology; JMA: Journal of Marketing; JRE: Journal of Retailing; MDE: Management Decision; PMK: Psychology & Marketing; PNA: Proceedings of the National Academy of Sciences of The United States of America; PSC: Psychological Science; RSE: Renewable & Sustainable Energy Reviews; SDE: Sustainable Development; SNR: Society & Natural Resources; SPQ: Social Psychology Quarterly; SUS: Sustainability; TMA: Tourism Management; TSO: Theory and Society; UGE: Urban Geography.

demonstrating a consolidated research trajectory with 30 publications as the lead author, 42 as the last author, 36 documents as the corresponding author, and 1655 published book chapters.

Testa, Francesco follows with 30 citations across different areas, with 29 citations as the lead author, 21 as the last author, and 28 as the corresponding author, in addition to 3724 published book chapters. Furthermore, four authors stand out for their substantial citations within green consumption: Gilg Andrew, Barr Stewart, Oates Caroline, and Spaargaren Gert, ranging between 740 and 1090 citations. Notably, these authors significantly contribute to the scientific community through their research efforts.

Table 3. Top 30 authors.

R	Author	TP	University	H-I	TC-GRE	FP	AVE	HI-ALL	TP-ALL	T_CITED
1	Spaargaren, Gert	11	Wageningen U. & Research	9	741	2003	41.17	21	45	1988
2	Chatzidakis, Andreas	10	Royal Holloway U. London	7	444	2007	29.60	13	46	947
3	Fuentes, Christian	8	U. Boras	7	495	2014	55.00	12	24	379
4	Gilg, Andrew	8	U. Exeter (2017)	8	1089	2005	57.32	20	64	2231
5	Shaw, Deirdre	8	U. Glasgow	8	495	2006	26.05	18	34	1224
6	Testa, Francesco	8	Mauritian Umberto I Hospital	7	301	2015	27.36	30	129	3724
7	D'souza, Clare	7	La Trobe Business Sch	4	24	2017	2.40	17	73	1156
8	Hamm, Ulrich	7	Universitat Kassel	6	339	2010	18.83	29	83	3075
9	Johnston, Josee	7	U. Toronto	6	307	2011	17.06	20	84	1596
10	Valor, Carmen	7	U. Comillas Pontifical	4	42	2012	2.33	14	47	741
11	Antonetti, Paolo	6	St Salvatore Hosp	6	257	2014	15.12	14	44	753
12	Barr, Stewart	6	U. Exeter	6	962	2004	34.36	17	33	2332
13	Clarke, Nick	6	U. Southampton	6	703	2005	25.11	18	28	1537
14	Iraldo, Fabio	6	Scuola Superiore Sant'Anna	6	200	2015	10.53	29	84	3222
15	Malpass, alicie	6	U. Bristol	6	703	2015	0.35	42	36	1655
16	Menrad, Klaus	6	Technical U. Munich	5	72	2018	4.00	17	56	1244
17	Papaioikonomou, Eleni	6	U. Rovira i Virgili	5	134	2011	5.15	12	24	433
18	Andorfer, Veronika A.	5	U. Gottingen (2016)	4	217	2012	8.35	6	7	284
19	Barnett, Clive	5	U. Exeter	5	663	2005	19.50	25	99	2684
20	Cloke, Paul	5	U. Exeter	5	328	2007	9.94	27	56	1922
21	Durif, Fabien	5	U. Quebec Montreal	5	75	2016	3.00	10	28	258
22	Hawkins, Roberta	5	U. Guelph	4	70	2011	2.26	13	27	775
23	Jansson, Johan	5	Umea U.	5	310	2011	9.69	14	21	1444
24	Liebe, Ulf	5	U. Warwick	4	210	2012	6.56	18	68	1350
25	Nguyen, Ninh	5	Charles Darwin U.	5	179	2016	6.17	17	53	952
26	Osburg, Victoria-Sophie	5	U. Sheffield	5	63	2017	2.17	13	24	543
27	Oates, Caroline	4	U. Sheffield	4	785	2009	14.81	15	39	1629
28	Balderjahn, Ingo	4	U. Potsdam	4	342	1988	5.80	8	18	534
29	Maklan, Stan	4	Cranfield U.	4	227	2014	5.04	18	29	1875
30	Brunk, Katja H.	4	European U. Viadrina Frankfurt Oder	4	231	2010	6.08	10	12	454

Source: WoS; Abbreviations: R: rank, Author; TP: total publication; University: university, H-I: H-Index; TC-GRE: total citations only on green consumption; FP: first publication; AVE: average; HI-ALL: H-Index of all areas; TP-ALL: Total publications of all areas; T_CITED: total cited.

3.2 Science mapping of green consumption

In this section, performance parameters and indicators are utilized for science mapping. These results are drawn from the entire literature extracted from the WoS database. To begin with, the parameters utilized in this phase are derived from various visualizations that allow us to see the words used by researchers in the context of consumption phenomena. These graphs act as supplementary tools to demonstrate the significance attributed to these selected words by the most cited researchers.

Figure 3 serves as the initial visualization in this study, representing the historical evolution of words frequently used between 1975 and 2021. The figure delineates four distinct clusters: the green cluster located in the bottom right, where keywords such as 'green consumption' and 'consumer behavior' exhibit the highest repetition rates; following this cluster, the words 'sustainability' and 'ethical consumption' dominate the coffee-colored cluster; at the top, there are gray and pink clusters. Within the pink cluster, noteworthy words include 'sustainable consumption,' 'sustainable development,' and 'responsible consumption,' whereas, in the gray cluster, 'corporate social responsibility' and 'greenwashing' are the most frequently co-occurring words. Notably, one of the two most significant clusters (green) pertains to marketing, consumer behavior, and the theory of planned behavior. The latter keyword, 'the theory of planned behavior,' elucidates green behavior, willingness to pay, and factors underlying them, such as environmental consciousness, attitudes, and trust.

Conversely, the second largest coffee-colored cluster predominantly centers on consumption ethics, encompassing concepts like fair trade, responsibility, citizen consumer, and values. The gray cluster is associated with corporate social responsibility. In contrast, the pink cluster encompasses words related to

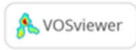


Figure 3. Map co-occurrences 1975–2021



Figure 4. Map co-occurrences decade 1 (1975–2001).

sustainability, including circular economy, responsible consumption, food waste, energy efficiency, sustainable tourism, and sustainable development.

Figure 4 illustrates the co-occurrence map from 1975 to 2001. The blue cluster prominently features 'green consumerism,' whereas the green cluster places greater emphasis on 'environmental policy.' In the brown cluster, no specific word stands out; instead, all words within it share a similar level of significance. These include terms like 'stakeholder,' 'new ecological paradigm,' 'ecological modernization,' 'public policy,' and 'business ethics.' Notably, during this decade, the study of the green consumer emerged, with the green cluster focusing on environmental policy, the brown on business, and the blue on consumerism.

The co-occurrence maps reveal several differences. Particularly in the co-occurrence map from 2002 to 2011, terms such as 'organic food, sustainability, fair trade, lifestyle, and governance emerged for the first time compared to the previous decade (Figure 5). Similarly, words like ethical consumption,

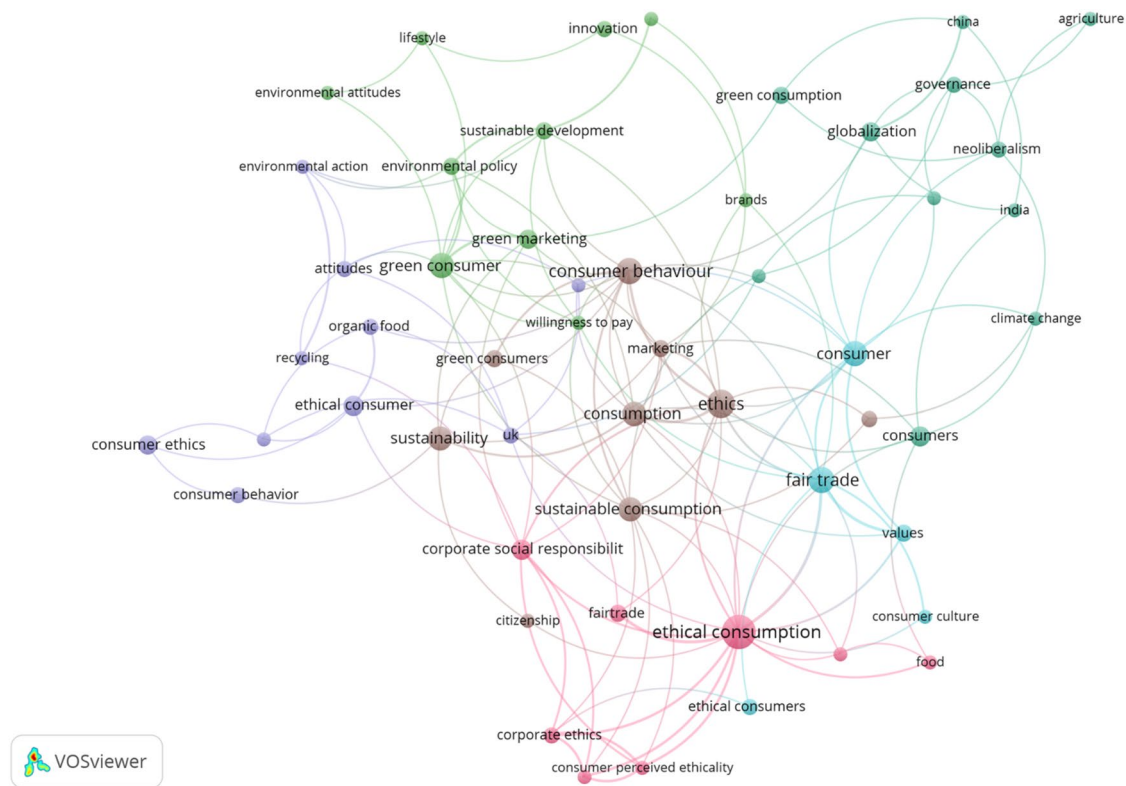


Figure 5. Map co-occurrences decade 2 (2002–2011).

consumer behavior, sustainable consumption, consumption, and ethics only appeared in 1975 to 2001. Furthermore, during this period, consumer analysis revolves around lifestyle, sustainability, ethics, and other factors.

The study produced 129 findings between 2012 and 2021, with at least ten co-occurrences noted. Of particular interest were the keywords 'ethical consumption,' 'sustainability,' and 'sustainable consumption,' which were highlighted in Figures 5 and 6. While these keywords appeared a decade earlier, as depicted in Figure 5, it is in the last decade that these nodes exhibit notable differences from others. Specifically, the emergence of the term 'theory of planned behavior' references a theory proposed by Ajzen (1991) to elucidate consumption behavior and purchase intention through attitudes, subjective norms, and perceived behavioral control. This advancement in the last decade has facilitated exploration into green behavior and the identification of determinants of green consumption (Yadav & Pathak, 2017), enabling further academic progress in understanding green behavior and devising market-focused strategies.

Notably, terminology situated at the margins plays a significant role in identifying nascent themes within the ambit of the study. In this regard, there has identified a cluster of terms, including sustainable development goals, circular economy, local consumption, local food, altruism, social influence, e-commerce, green hotel, food waste, renewable energy, and political participation, that shed light on emergent topics in the field. Additionally, this figure highlights specific terminology, such as cluster analysis, conjoint analysis, choice experiment, segmentation, and ethnography, which identify various research methodologies employed in the literature, encompassing quantitative and qualitative approaches.

The graphical mapping in Figure 7 shows the 115 authors who possess at least 80 co-citations. In this group of authors, Ajzen stands out; this may be because he is the author responsible for postulating the theory of planned behavior. A comparative analysis with Table 3 of the most cited authors allows us to provide evidence of the presence of some of these authors. Remember that this is due to the indicator dating threshold in Vos viewer. Also, the cluster on the correct links with the academic Roberts (1996) stands out for proposing the profile of green consumers. Nonetheless, the most specific literature on green consumption from the norm's perspective is associated with Peattie, K (2010). Authors related to

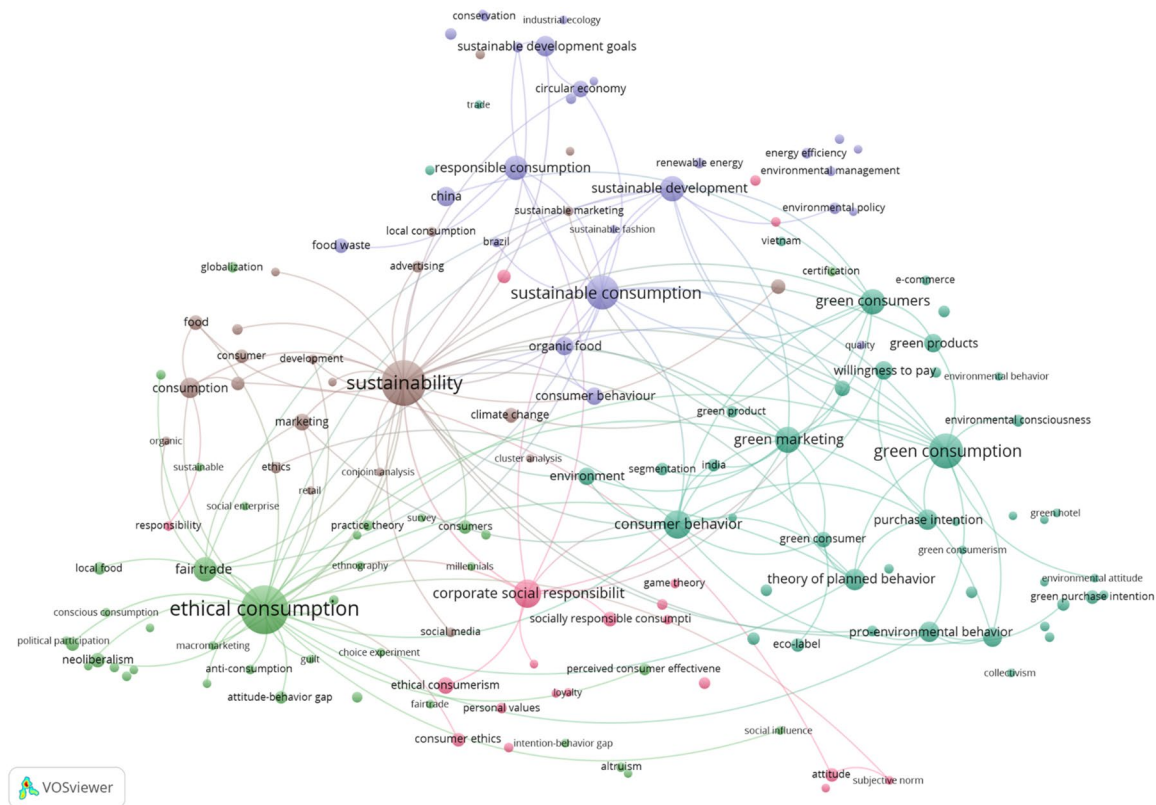


Figure 6. Map co-occurrences decade 3 (2012–2021).

ethical consumption and consumer empowerment cite Shaw, D are presented on the left side of the graph.

Figure 7 shows the journals with at least one hundred co-citations; in other words, it shows which ones have the most publications and the impact generated by the citations. Visually, the node size is significant in the Journal of Business Ethics, Journal of Cleaner Production, Journal of Business Research, Journal of Consumer Research, International Journal of Consumer Studies, Journal of Consumer Marketing, and Sustainability, among others. The results show that environmental issues, ethical issues, and marketing issues are the most frequently cited, and this can also be associated with research-derived possibilities of people to attend to the considerable resource challenges that countries have.

As shown in Figure 8, a total of 71 results were found to show researchers with at least 60 co-citations. Here, the researchers Ajzen (1991) and Fornell and Larcker (1981) present the most co-citations. The latter researcher is associated with a methodological paper in which structural equation modeling is analyzed, which implies that the theory of planned behavior and structural equation modeling has addressed the analysis of green buying behavior. The pink cluster is integrated by the most cited authors on the environmental topic, such as Roberts (1996), Diamantopoulos et al. (2003), and Young et al. (2010).

The field of green consumption research saw a significant upswing in the early 2010s, as seen in Figure 9. The progression of this research area is visible (Figure 10). However, the notion of environmentally conscious consumers was first introduced in 1988, marking the idea's inception (Balderjahn, 1988). It was not until 1992 that the concept of green consumerism was proposed, considering factors such as consumer health, adverse environmental impact, energy associated with production, food origins, animal welfare, and third-world problems (Sparks & Shepherd, 1992). More recent definitions suggest that green consumerism encompasses the consumption, production, and promotion of pro-environmental goods and services (Akenji, 2014).

It has been pointed out that green consumption involves issues of ethical interest or is related to ethical choices in ethical activity, just like ethical consumption (Barnett et al., 2005). Therefore, it is considered that green consumption is a type of ethical consumption.

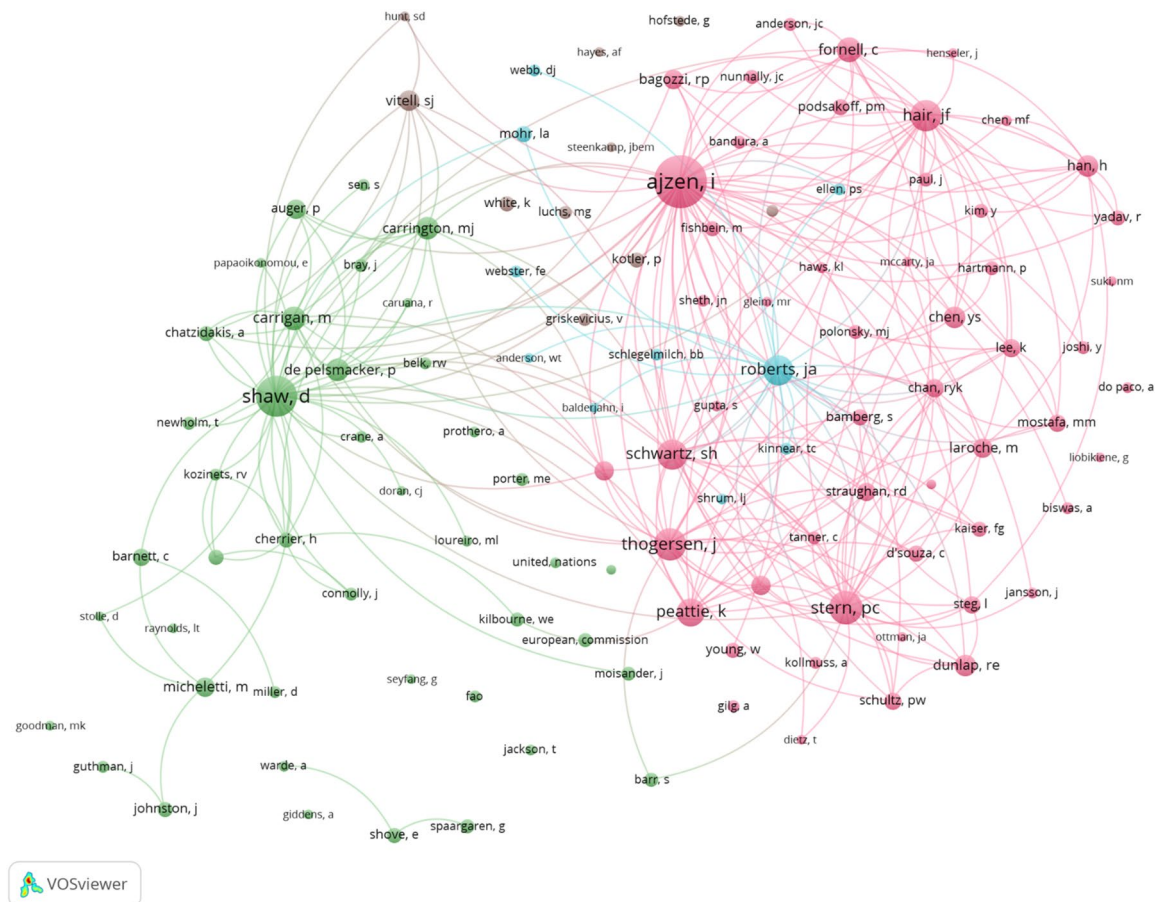


Figure 7. Author co-citations map.

Therefore, this paper defines ethical consumption based on the interest generated from the ethical perspective and about ethical choices in daily activity. The first perspective relates to fair trade, environmental sustainability, animal welfare, human rights, working conditions, and health, although it also involves rejecting and boycotting goods companies that do not go in line with their principles (Barnett et al., 2005; Szmigin et al., 2009). It can be seen as an activist movement that seeks to produce and disseminate knowledge on labor solidarity, environmental advocacy, and trade justice (Clarke et al., 2007). In the second perspective, ethical consumption is understood as conscious and deliberate everyday consumption to integrate altruistic, humanitarian, solidarity, and environmental commitments following personal moral beliefs and values rather than group or social norms (Barnett et al., 2005; Chatzidakis et al., 2007; Clarke et al., 2007; Crane & Matten, 2004).

In the words of Johnston (2008), ethical consumption seeks to find a form of consumption that caters to environmental conservation, poverty, and democracy. From an individual perspective, the ethical consumer is characterized by a great desire to guarantee his health and happiness; therefore, when choosing products, he is more likely to select those that generate sustainability, social welfare, and environmental conservation. These criteria are fundamental to their buying behavior (De Pelsmacker et al., 2005; Johnston, 2008). Ethical consumerism is a social movement that highlights social and non-traditional components of products and processes, such as environmental protectionism for strategic business success (Auger et al., 2003; Carrington et al., 2014).

Similarly, responsible consumption relates to environmental conservation and social welfare. However, on this occasion, it is due to awareness that their consumption affects the environment, health, and society (Schor, 1998). Responsible food consumers consider ecological sustainability, biodiversity, energy conservation, and the job and economic security of farmers when making their decisions regarding their consumption (Thompson & Coskuner-Balli, 2007).

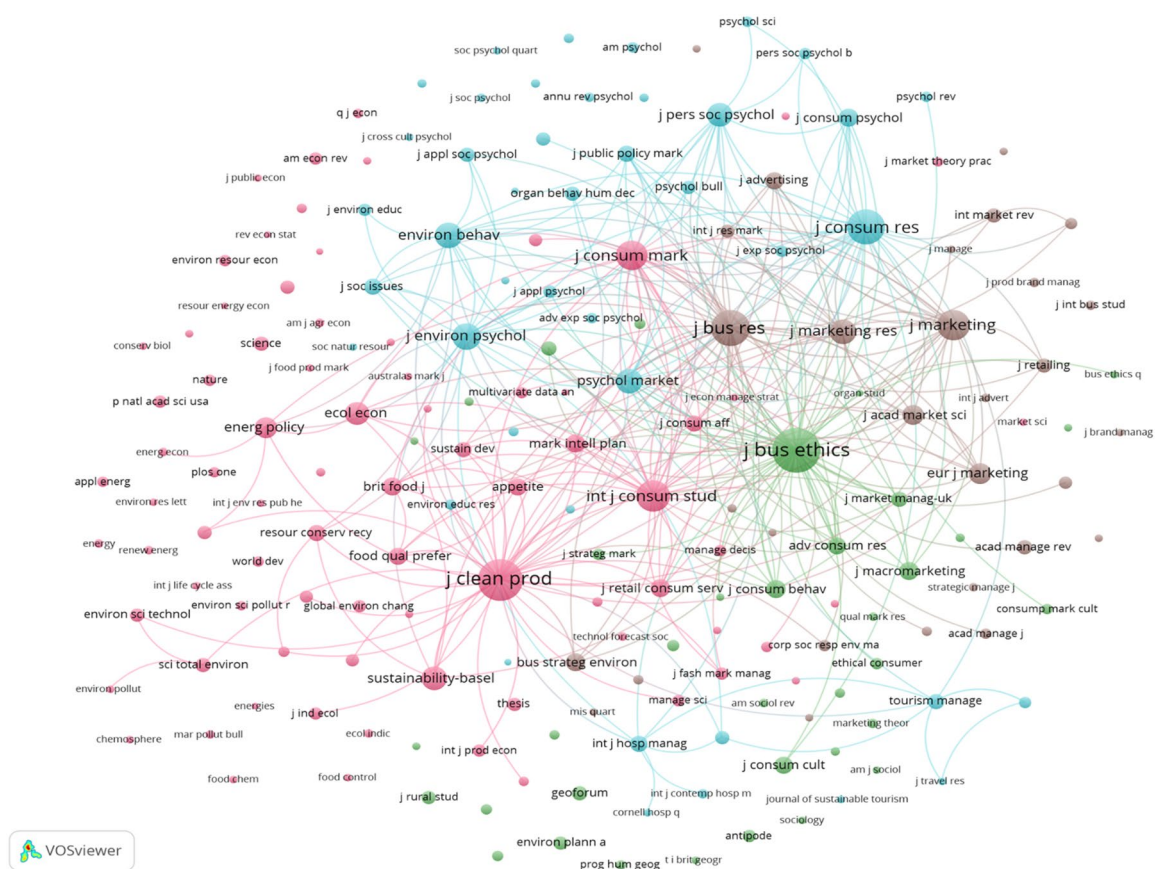


Figure 8. Map co-citation sources.

The socially responsible consumer was initially conceptualized as one who considers the public impact of his consumption or seeks, with his economic resources, a social change (Webster, 1975). Further, it was modified to include individuals purchasing products and services or sponsoring businesses that cause less harm and greater benefits to the environment (Roberts, 1993).

From a more general perspective, socially responsible behavior has been visualized in corporate social responsibility, considering economic, legal, ethical, and philanthropic responsibilities and, alongside these, social marketing in business engagement to reduce or eliminate harms and increase benefits to society (Carroll, 1991; Kotler & Armstrong, 1994; Mohr et al., 2001).

More recent concepts are characterized by the hybrid nature of citizen-consumers, who seek their self-interest, environmental, and social (Johnston, 2008). Similar concepts, such as 'Consumer citizenship,' are defined in the context of thriving consumer societies as a moral lifestyle in which consumption is a way to incise the identity of the consumer and the collective (Andorfer & Liebe, 2012).

However, it is essential to pay attention to those actions that seem environmentally friendly, even if they are not. For example, 'greenwashing' represents business actions, such as when companies report sustainability reports with positive results, even when their performance is deficient (Yu et al., 2020).

The following [Table 4](#) summarizes the main highlights of the bibliometric analysis, which can concretely illustrate this study's contribution.

4. Discussion

One of the study's main results was the evolution of green behavior analysis. This concept has gone from only involving production to being related to the promotion of pro-environmental goods and services (Akenji, 2014). In addition to the negative impact on the environment, third-world problems, local consumption, and the effect on the individual, as well as on society and animals, are considered (Sparks & Shepherd, 1992; Zander & Hamm, 2010). In turn, green consumption empowers consumers to confront

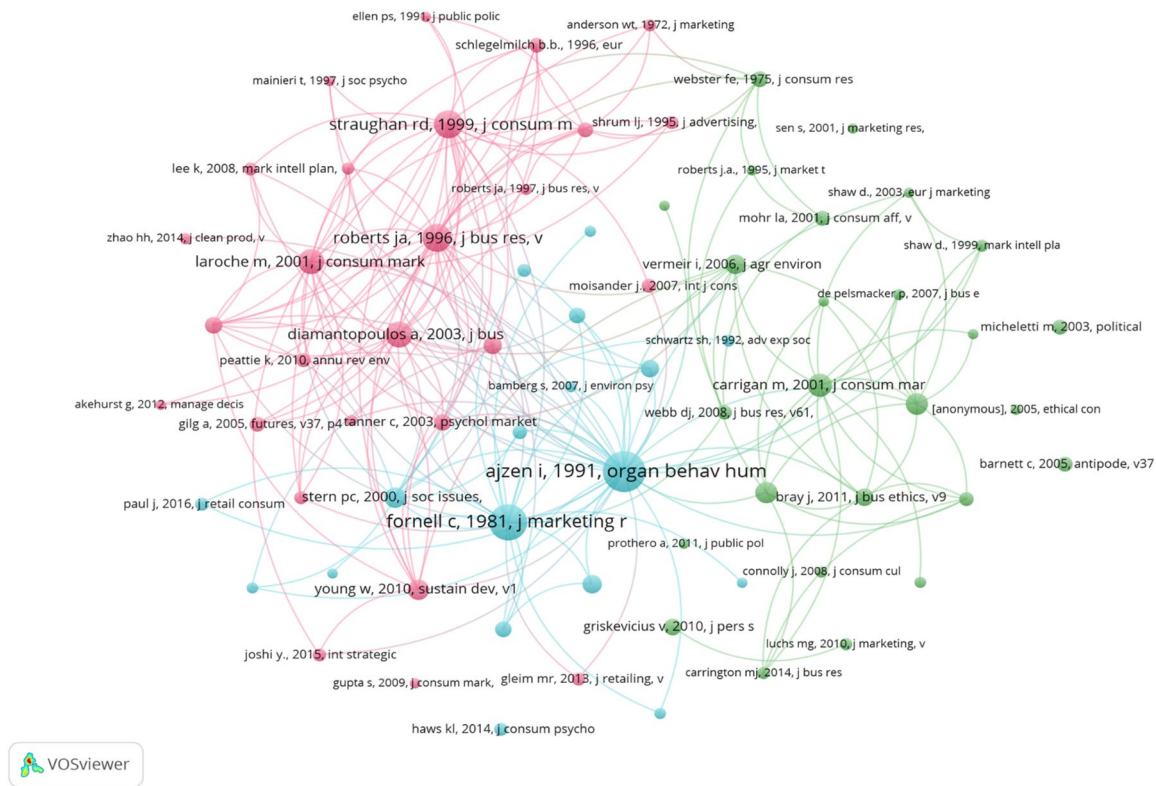


Figure 9. Reference co-citations map.

Table 4. Highlights.

Type of analysis	Highlight
Performance analysis	The major topics cited were circular economy practices, sustainable development goals, analysis of green purchasing behavior, and the theory of planned behavior.
Science mapping	<p>From the historical analysis, the largest grouping of words is related to consumer behavior, marketing, and the theory of planned behavior.</p> <p>The second largest group in the historical analysis shows topics related to ethical consumption such as responsibility, fair trade, values and citizen consumer.</p> <p>From 2002 to 2011, consumer analysis focused on ethical consumption.</p> <p>From 2012 to 2021, the analysis of consumer behavior begins under the theory of planned behavior.</p> <p>The new topics observed in the last decade have to do with local consumption, political participation, sustainable development goals and technology.</p> <p>The graphical mapping of authors allows us to see that the most related authors analyze the theory of planned behavior, green consumption, empowerment and ethical consumption.</p>
Evolution of the concept	The concept of consumer empowerment appears in the last decade as does socially responsible consumption.

environmental risks to the planet and themselves (Connolly & Prothero, 2008), since the green consumer is informed. This consumer is an opinion leader, careful buyer, and cautious information seeker (Shrum et al., 1995). It is important to bear in mind that the world is constantly changing in terms of eco-friendly purchases. Nowadays, people rely heavily on social networks, green thinking, and social media marketing to buy sustainable products. (Nekmahmud et al., 2022a).

The historical analysis of green consumption showed that green consumer behavior is one of the most cited topics. Understanding consumer behavior covers various aspects; demographic factors such as age, gender, lifestyle, and ethnicity play a crucial role (Auger et al., 2003). Demographic factors stand out in older articles, and recent articles have demonstrated their relevance in determining sustainable behavior patterns using novel methodologies such as machine learning (Rezapouraghdam et al., 2021). Each of these factors is closely associated with consumption. Furthermore, the study's results show that social identity is an essential predictor of purchasing behavior (Sparks & Shepherd, 1992). Other studies indicate that attitudes significantly predict purchasing behavior (Zhao et al., 2014). Beyond attitudes, psychological factors such as values, motivations, self-image, personality, expectations, perceptions, satisfaction, trust, loyalty, ethics of simplicity, and emotional ties and place attachment and satisfaction have

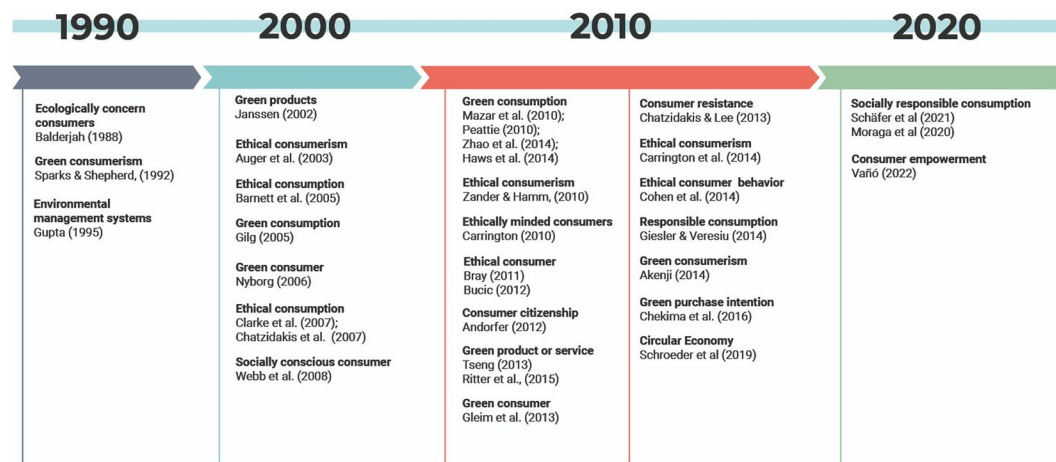


Figure 10. Evolution of the concept.

also been identified (Cohen et al., 2014; Haws et al., 2014; Yadav & Pathak, 2017; Ramkissoon et al., 2013a, Ramkissoon et al., 2013b; Shaw & Newholm, 2002). Consumer behavior is a complex subject involving the analysis of various factors that influence how people make decisions regarding purchasing goods and services. One critical aspect contributing to the understanding of consumer behavior is the study of the psychological factors that shape their decision-making processes. These factors include the individual's personality traits, attitudes, beliefs, and emotions, which can significantly impact their consumption decisions. Researchers can better understand consumer behavior and tailor marketing strategies by examining psychological dimensions. Therefore, the study of psychological factors in consumer behavior is crucial in developing effective marketing strategies that cater to the needs and wants of consumers, ultimately leading to increased sales and customer loyalty.

At the core of our analysis of consumer behavior lies the Theory of planned behavior (TPB), a pivotal theoretical framework. Developed by Ajzen (1991), the TPB posits that behavioral intentions are shaped by three key factors: attitudes toward the behavior, subjective norms, and perception of behavioral control. While the TPB has been the mainstay in understanding consumer behavior, recent studies have expanded the discourse by exploring green consumer behavior through other theoretical frameworks or an extended version of the TPB (Nekmahmud & Fekete-Farkas, 2020; Wu et al., 2022). These adaptations cater to the unique nuances of the behavior or context under study.

For instance, Wu et al. (2022) in China have taken an innovative approach by employing the Norm Activation Theory (NAT). This Theory, which focuses on the activation of social norms in specific situations, provides a unique lens to explore how social norms influence human behavior (De Groot & Steg, 2009; Gao et al., 2016; Zhang et al., 2013). NAT posits that social norms can influence people both consciously and unconsciously, and that these norms can be triggered in specific situations, leading to behaviors that align with those norms (Wu et al., 2022). By applying this Theory, Wu et al. (2022) shed light on how perceived social norms impact Chinese consumers' purchasing decisions regarding environmental facial care products, thereby enriching our understanding of this phenomenon in the distinct cultural context of China.

Authors such as Nekmahmud et al. (2022b) propose using the TPB and the Theory of consumption values (TCV) to explain green behavior in European cities. In this case, this complementary theoretical framework helps to extend the understanding of green purchasing and explain the psychological factor of the purchase. They find that in addition to the predictors of TPB, conditional and emotional values are significant predictors of green purchasing.

Authors like Nekmahmud and Fekete-Farkas (2020) have proposed an extended TPB framework to analyze green procurement in Bangladesh. They have augmented the theoretical framework with elements that are characteristic of green consumption, such as environmental concern, ecological benefits, and perceived green quality, among others. Their findings, which explain 87% of the purchase decision, underscore the adaptability of the TPB to their context and its efficacy when supplemented with other

variables. This study serves as a testament to the fact that in a developing nation, the TPB can be enriched with additional variables to provide a more comprehensive understanding of the behaviors of green consumers.

The TPB, along with other models such as NAT or TCV, helps us understand environmentally responsible behavior better. These models recognize the complex interaction between individual psychological factors, social norms, values, variables specific to green consumption, and volitional and non-volitional processes of the TPB activated in specific contexts such as developed and developing nations. By integrating these theoretical concepts, we can design better interventions to promote more sustainable practices in green consumption and related activities such as sustainable tourism. This has significant implications for future research in this field.

According to the results, from 2002 to 2011, ethical consumption was emphasized, as opposed to green consumption. Below are some similar characteristics between ethical consumption and green consumption. Firstly, ethical and green consumption are closely related because they share a common goal of promoting environmental sustainability, health, and society. (Barnett et al., 2005; Szmigin et al., 2009). Secondly, ethical consumption, like green consumption, empowers consumers by inducing the generation of responsibilities by companies, institutions, and social movements in favor of political causes through a shared identity. Ethical consumption generates collective mobilization and pressure on institutions to achieve beneficial societal changes (Barnett et al., 2005). Food consumption is vital in ethical consumption, as consumers are willing to pay higher prices for organic products with additional ethical attributes (Zander & Hamm, 2010). It is a fact that green consumers frequently display both ethical and unethical behaviors, as their level of commitment to the cause varies significantly (Mazar & Zhong, 2010). Hence, it is crucial to classify consumers into committed environmentalists, conventional environmentalists, occasional environmentalists, and non-environmentalists (Gilg et al., 2005).

An alternative viewpoint presented in the literature suggests that instead of only treating individuals as mere consumers, there should be a shift towards a citizen-consumer hybrid. This approach caters to being a responsible citizen and fulfilling consumerist desires, such as having a more comprehensive range of purchasing options, establishing social status, and promoting environmentalism (Johnston, 2008). By analyzing shared practices of sustainable consumption, we can enhance the cultural framework of sustainability (Spaargaren, 2020).

The concept of a balanced citizen-consumer hybrid finds expression in food provision that focuses on social justice, solidarity, and sustainability. Examples of this include the slow food movement, community-supported agriculture, and community food security projects (Johnston, 2008; Mehrabi et al., 2022). Recent research reveals that consumers' social concerns, particularly with regard to producers, have intensified, resulting in an increase in local consumption and products related to social responsibility (Lobachevska & Daub, 2021; Nemes et al., 2021).

Tourists play a crucial role in promoting responsible behavior, according to Wu et al. (2022). Their commitment is demonstrated by various factors, such as their awareness of the consequences, perceived responsibility, and personal norms, all of which contribute to environmentally responsible behavior. Therefore, it's important for tourists to be mindful of their actions and take responsibility for their impact on the environment.

It has been suggested that in order to bring about a more significant positive impact on the environment, society, and individual well-being, the concept of green consumption needs to evolve into sustainable consumption (Gilg et al., 2005). This transformation would allow for an expansion of its reach and result in the creation of more sustainable lifestyles. In this way, sustainability principles in consumption behavior are fundamental in lifestyles in industrialized economies (Balaji et al., 2022; Peattie, 2010). In the latter case, the premise is that users/consumers have a hectic lifestyle, and it is relevant to generate strategies to promote green consumption through incentives and products with labels that allow these types of products to be easily distinguished (Nguyen-Viet, 2022; Rex & Baumann, 2007; Young et al., 2010).

According to the results, sustainable development objectives are one of the most cited topics. Therefore, the articles have emphasized that the excessive consumption of developed countries exerts pressure not only on their resources but also on those of other countries (Yu et al., 2013). The ongoing deterioration of the environment worldwide is primarily attributed to unsustainable and unregulated consumption and production practices (Tseng et al., 2013). The lack of sustainability measures in

high-growth regions that depend on natural resources directly further hampers the chances of effective correction and prevention. Therefore, adopting environmentally responsible and sustainable practices in these areas is imperative to mitigate the adverse effects of continued environmental degradation.

As mentioned above, the increase in energy demand and the negative impact of fossil fuels make other energy production necessary, and conventional lifestyles can be more sustainable (Stigka et al., 2014). To this end, formulating environmental policies can consider sustainable consumption to promote sustainable lifestyles (Spaargaren, 2020). Likewise, analyzing behaviors between consumers and producers makes it possible to identify and reduce environmental impacts and design better consumption-production systems (Peattie, 2010).

On the other hand, the barriers detected in SMEs to becoming ecological are the lack of support in their supply and demand network, the lack of capital, and the weak presence of public policies with ecological approaches in consumers, value chains, and business cultures (Rizos et al., 2016).

Country governments can also promote certifications for sustainability assessment, such as forestry certification, to raise awareness and disseminate sustainable practices (Rametsteiner & Simula, 2003). It is imperative to extend support to initiatives aimed at advancing sustainable development goals, such as clean water and sanitation, affordable and clean energy, decent work and economic growth, responsible production and consumption, and the preservation of life on land ecosystems. It is noteworthy that these goals are intrinsically linked to the circular economy (Schroeder et al., 2019).

It is worth noting that in recent years (2018–2021), families from all walks of life have been showing an increased interest in ecology, thanks to a process of empowerment (Al Mamun et al., 2018; Nemes et al., 2021). Additionally, due to the restrictions on people's mobility imposed by the COVID-19 pandemic, there has been a surge in the consumption of green products via electronic means (Nekmahmud et al., 2022a; Nemes et al., 2021). This situation is a far cry from 1988, when only the upper social classes showed such interest (Balderjahn, 1988).

5. Conclusion

The findings of this comprehensive research have provided significant insights into the growth of research, the primary investigations, researchers, trends, the role of governments, and the understanding of green consumption. These results have illuminated the role of the theory of planned behavior in the analysis of green behavior, the transition of the concept towards consumer empowerment and socially responsible consumption, and the ethical implications of the concept. Moreover, they have underscored the emergence of public participation, sustainable development goals, and technology in the last decade, marking a crucial shift in the field.

The findings indicate that research into green consumption commenced in 1975, but significant growth in studies within this field was not apparent until 2012. From 2012 to 2014, the period saw the highest number of publications and citations. Starting in 2010, the concept of green consumption advanced and became interconnected with emerging concepts.

Until 2010, ethical consumption was only linked to green consumption that focused on the conservation of the environment and other issues that aimed to promote solidarity commitments and combat poverty. However, since 2010, the concept of ethical consumption has evolved to include health and environmental issues and the promotion of goods and services that favor the environment. During this period, the concept of ethical consumption has become associated with various other concepts, such as consumer citizenship, consumer resistance, responsible consumption, circular economy, socially responsible consumption, consumer empowerment, and greenwashing, all of which have played a crucial role in shaping the current understanding of ethical consumption.

In the last decade, the analysis of purchasing behavior has evolved with the emergence of the theory of planned behavior. This framework has been instrumental in explaining green purchasing. However, recent studies have utilized extended TPB frameworks and other theories such as TCV and NAT. These approaches have enabled a more in-depth understanding of green purchasing.

The primary research on green consumption explains the profile of consumers and purchasing behavior. These integrate sociodemographic factors and deepen the gaps in the analysis of this consumption.

The primary research on this topic covers management and business, economics, climate change, the environment, biology, and sustainability. In this way, the administrative areas are combined with the sustainability area to explain the behavior of green consumers.

The concept of consumer citizenship encompasses both individual and collective consumption. Individual actions, such as lifestyle and daily activities, can result in collective behaviors that impact social and environmental changes. This concept encourages individuals to balance their altruistic and selfish tendencies while maintaining consumer behavior. Green behavior is closely associated with purchasing eco-friendly products and engaging in sustainable tourist activities and services.

Green consumers are typically well-informed and conscientious individuals who implement eco-friendly practices at home, advocate for them at their workplace, and encourage others to follow suit. They take charge of their environment and demand environmentally friendly behavior from governments, corporations, and others.

In recent years, environmentally conscious consumers have been growing concerned about the impact of business practices on the environment. As a result, these consumers demand transparency from companies that claim to be environmentally friendly. However, due to the lack of trust in such claims, 'greenwashing' has emerged. This refers to the practice of making false or exaggerated claims about the environmental benefits of a product or service.

The government must address these concerns and combat pollution and environmental degradation. Research has shown that companies need more support in transitioning to a more sustainable model. This includes the adoption of sustainable practices and the management and promotion of certifications for sustainable products. It is also vital for public policies to be formulated that encourage sustainable consumption and lifestyles. Only by taking these steps can we ensure a brighter, more sustainable future for future generations.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This study was supported by FAA 2023 from the Universidad Católica de la Santísima Concepción; Research Department of the Universidad Católica de la Santísima Concepción;

About the authors

Sandra Nelly Leyva-Hernández is professor-researcher at the Facultad de Ingeniería y Negocios San Quintín of the Universidad Autónoma de Baja California. She obtained her postdoctorate from the Facultad de Ciencias Económicas y Empresariales of the Universidad Panamericana. She has a doctorate in Sciences in Conservation and Use of Natural Resources from the Instituto Politécnico Nacional. She has been a reviewer for scientific journals such as Sage Open, Heliyon, British Food Journal, European Business Review, Innovar among others. She is a candidate-level member of the National System of Researchers of CONAHCYT. Her research interests are related to sustainability, social responsibility, university entrepreneurship, health, SMEs, consumer behavior and the use of advanced multivariate statistical techniques.

Paola Miriam Arango-Ramírez is professor-researcher at the Tecnológico Nacional de México/Instituto Tecnológico del Valle de Etla. She obtained her postdoctoral degree at the Facultad de Ciencias Administrativas y Sociales of the Universidad Autónoma de Baja California. She holds a PhD in Sciences in Regional and Technological Development from the Tecnológico Nacional de México/Institución Tecnológico de Oaxaca. She has been a reviewer for scientific journals such as Sage Open, Journal of Clean Production Innovar, Administrative Sciences Theory and Praxis, among others. She is a candidate member of the National System of Researchers of CONAHCYT. Her research interests are related to sustainability, social responsibility, green entrepreneurship, circular economy, SMEs, consumer behavior and regional development.

Magaly Gaviria-Marin is PhD in Business by University of Barcelona, Spain. Is currently Assistant Professor at the Faculty of Economics and Business Administration at the Universidad Católica de la Santísima Concepción, Chile. Her main research interests include knowledge management, innovation, entrepreneurship, information and communication technologies in SMEs, gender studies, alternative economies, and bibliometric methods.

ORCID

Sandra Nelly Leyva-Hernández  <http://orcid.org/0000-0002-5687-9945>

Paola Miriam Arango-Ramírez  <http://orcid.org/0000-0001-5983-4008>

Magaly Gaviria-Marin  <http://orcid.org/0000-0001-9565-2287>

References

- Adriaanse, L. S., & Rensleigh, C. (2013). *Web of Science, Scopus and Google Scholar: A content comprehensiveness comparison*. Electron. Libr.
- Afonso, C., Gavilan, D., García-Madariaga, J., & Gonçalves, H. M. (2018). Green consumer segmentation: Managerial and environmental implications from the perspective of business strategies and practices. In: Leal-Millan, A., Peris-Ortiz, M., Leal-Rodríguez, A.L. (Eds.), *Sustainability in innovation and entrepreneurship. Innovation, technology, and knowledge management* (pp. 137–151). Springer International Publishing. https://doi.org/10.1007/978-3-319-57318-2_9
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Akenji, L. (2014). Consumer scapegoatism and limits to green consumerism. *Journal of Cleaner Production*, 63, 13–23. <https://doi.org/10.1016/j.jclepro.2013.05.022>
- Al Mamun, A., Mohamad, M. R., Yaacob, M. R. B., & Mohiuddin, M. (2018). Intention and behavior towards green consumption among low-income households. *Journal of Environmental Management*, 227, 73–86. <https://doi.org/10.1016/j.jenvman.2018.08.061>
- Altieri, M. Á., & Nicholls, C. I. (2012). Agroecología: única esperanza para la soberanía alimentaria y la resiliencia socioecológica. *Agroecología*, 7, 65–83.
- Anantharaman, M. (2022). Is it sustainable consumption or performative environmentalism? *Consumption and Society*, 1(1), 120–143. <https://doi.org/10.1332/LTTT8626>
- Andorfer, V. A., & Liebe, U. (2012). Research on fair trade consumption-a review. *Journal of Business Ethics*, 106(4), 415–435. <https://doi.org/10.1007/s10551-011-1008-5>
- Arruda Filho, E. J. M. (2022). How perceived green benefits influence multifunctional technologies' usage. *International Journal of Consumer Studies*, 46(4), 1076–1098. <https://doi.org/10.1111/ijcs.12745>
- Auger, P., Burke, P., Devinney, T. M., & Louviere, J. J. (2003). What will consumers pay for social product features? *J. Bus. Ethics*, 42, 281–304. <https://doi.org/10.1023/A:1022212816261>
- Balaji, M. S., Jiang, Y., Bhattacharyya, J., Hewege, C. R., & Azer, J. (2022). An introduction to socially responsible sustainable consumption: Issues and challenges. *Soc. Responsible Consum. Mark. Pract.*, 3–14.
- Balderjahn, I. (1988). Personality variables and environmental attitudes as predictors of ecologically responsible consumption patterns. *Journal of Business Research*, 17(1), 51–56. [https://doi.org/10.1016/0148-2963\(88\)90022-7](https://doi.org/10.1016/0148-2963(88)90022-7)
- Barnett, C., Cloke, P., Clarke, N., & Malpass, A. (2005). Consuming ethics: Articulating the subjects and spaces of ethical consumption - Barnett - 2005 - Antipode - Wiley Online Library. *Antipode*, 37(1), 23–45. <https://doi.org/10.1111/j.0066-4812.2005.00472.x>
- Bratanova, B., Vauclair, C.-M., Kervyn, N., Schumann, S., Wood, R., & Klein, O. (2015). Savouring morality. Moral satisfaction renders food of ethical origin subjectively tastier. *Appetite*, 91, 137–149. <https://doi.org/10.1016/j.appet.2015.04.006>
- Bravo, A., Vieira, D., & Rebello, T. A. (2022). The origins, evolution, current state, and future of green products and consumer research: A bibliometric analysis. *Sustainability*, 14(17), 11022. <https://doi.org/10.3390/su141711022>
- Bray, J., Johns, N., & Kilburn, D. (2011). An exploratory study into the factors impeding ethical consumption. *Journal of Business Ethics*, 98(4), 597–608. <https://doi.org/10.1007/s10551-010-0640-9>
- Brusselaers, J., Verbeke, W., Mettepenningen, E., & Buysse, J. (2020). Unravelling the true drivers for eco-certified wood consumption by introducing scarcity. *Forest Policy and Economics*, 111, 102026. <https://doi.org/10.1016/j.forpol.2019.102026>
- Bürgin, D., & Wilken, R. (2022). Increasing consumers' purchase intentions toward fair-trade products through partitioned pricing. *Journal of Business Ethics*, 181(4), 1015–1040. <https://doi.org/10.1007/s10551-021-04938-6>
- Cáceres, D. (2003). Agricultura orgánica versus agricultura industrial: Su relación con la diversificación productiva y la seguridad alimentaria. *Agroalimentaria*, 8, 29–39.
- Cancino, C. A., Merigó, J. M., Urbano, D., & Amorós, J. E. (2023). Evolution of the entrepreneurship and innovation research in Ibero-America between 1986 and 2015. *Journal of Small Business Management*, 61(2), 322–352. <https://doi.org/10.1080/00472778.2020.1776578>
- Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2014). Lost in translation: Exploring the ethical consumer intention-behavior gap. *Journal of Business Research*, 67(1), 2759–2767. <https://doi.org/10.1016/j.jbusres.2012.09.022>
- Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2010). Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethical-minded consumers. *Journal of Business Ethics*, 97(1), 139–158. <https://doi.org/10.1007/s10551-010-0501-6>

- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39–48. [https://doi.org/10.1016/0007-6813\(91\)90005-G](https://doi.org/10.1016/0007-6813(91)90005-G)
- Catlin, J. R., & Wang, Y. (2013). Recycling gone bad: When the option to recycle increases resource consumption. *Journal of Consumer Psychology*, 23(1), 122–127. <https://doi.org/10.1016/j.jcps.2012.04.001>
- Chabowski, B. R., Samiee, S., & Hult, G. T. M. (2017). Cross-national research and international business: An interdisciplinary path. *International Business Review*, 26(1), 89–101. <https://doi.org/10.1016/j.ibusrev.2016.05.008>
- Chan, R. Y. K., & Lau, L. B. Y. (2002). Explaining green purchasing behavior: A cross-cultural study on American and Chinese consumers. *Journal of International Consumer Marketing*, 14(2–3), 9–40. https://doi.org/10.1300/J046v14n02_02
- Chatzidakis, A., Hibbert, S., & Smith, A. P. (2007). Why people don't take their concerns about fair trade to the supermarket: The role of neutralisation. *Journal of Business Ethics*, 74(1), 89–100. <https://doi.org/10.1007/s10551-006-9222-2>
- Chen, Y.-S., & Chang, C.-H. (2013). Greenwash and green trust: The mediation effects of green consumer confusion and green perceived risk. *Journal of Business Ethics*, 114(3), 489–500. <https://doi.org/10.1007/s10551-012-1360-0>
- Chu, S.-C., Chen, H.-T., & Gan, C. (2020). Consumers' engagement with corporate social responsibility (CSR) communication in social media: Evidence from China and the United States. *Journal of Business Research*, 110, 260–271. <https://doi.org/10.1016/j.jbusres.2020.01.036>
- Clarke, N., Barnett, C., Cloke, P., & Malpass, A. (2007). Globalising the consumer: Doing politics in an ethical register. *Political Geography*, 26(3), 231–249. <https://doi.org/10.1016/j.polgeo.2006.10.009>
- Cohen, S. A., Prayag, G., & Moital, M. (2014). Consumer behaviour in tourism: Concepts, influences and opportunities. *Current Issues in Tourism*, 17(10), 872–909. <https://doi.org/10.1080/13683500.2013.850064>
- Connolly, J., & Prothero, A. (2008). Green consumption: Life-politics, risk and contradictions. *Journal of Consumer Culture*, 8(1), 117–145. <https://doi.org/10.1177/1469540507086422>
- Crane, A., & Matten, D. (2004). *Business ethics: A European perspective: Managing corporate citizenship and sustainability in the age of globalization*. Oxford University Press.
- Daza, E., Artacker, T., & Lizano, R. (2020). *Cambio climático, biodiversidad y sistemas agroalimentarios: avances y retos a 10 años de la Ley Orgánica del Régimen de la Soberanía Alimentaria en Ecuador*. Editorial Abya-Yala.
- De Groot, J. I., & Steg, L. (2009). Moralidad y comportamiento prosocial: El papel de la conciencia, responsabilidad y normas en el modelo de activación de la norma. *El Diario de la Psicología*, 149(4), 425–449.
- De Pelsmacker, P., Driesen, L., & Rayp, G. (2005). Do consumers care about ethics? Willingness to pay for fair-trade coffee. *Journal of Consumer Affairs*, 39(2), 363–385. <https://doi.org/10.1111/j.1745-6606.2005.00019.x>
- Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research*, 56(6), 465–480. [https://doi.org/10.1016/S0148-2963\(01\)00241-7](https://doi.org/10.1016/S0148-2963(01)00241-7)
- Diddi, S., Yan, R.-N., Bloodhart, B., Bajtelsmit, V., & McShane, K. (2019). Exploring young adult consumers' sustainable clothing consumption intention-behavior gap: A behavioral reasoning theory perspective. *Sustainable Production and Consumption*, 18, 200–209. <https://doi.org/10.1016/j.spc.2019.02.009>
- Dong, X., Liu, S., Li, H., Yang, Z., Liang, S., & Deng, N. (2020). Love of nature as a mediator between connectedness to nature and sustainable consumption behavior. *Journal of Cleaner Production*, 242, 118451. <https://doi.org/10.1016/j.jclepro.2019.118451>
- ElHaffar, G., Durif, F., & Dubé, L. (2020). Towards closing the attitude-intention-behavior gap in green consumption: A narrative review of the literature and an overview of future research directions. *Journal of Cleaner Production*, 275, 122556. <https://doi.org/10.1016/j.jclepro.2020.122556>
- Ellegaard, O., & Wallin, J. A. (2015). The bibliometric analysis of scholarly production: How great is the impact? *Scientometrics*, 105(3), 1809–1831. <https://doi.org/10.1007/s11192-015-1645-z>
- Er-Peng, W., Ning, A. N., Geng, X., Zhifeng, G. A. O., & Kipro, E. (2021). Consumers' willingness to pay for ethical consumption initiatives on e-commerce platforms. *Journal of Integrative Agriculture*, 20(4), 1012–1020. [https://doi.org/10.1016/S2095-3119\(20\)63584-5](https://doi.org/10.1016/S2095-3119(20)63584-5)
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Gadenne, D., Sharma, B., Kerr, D., & Smith, T. (2011). The influence of consumers' environmental beliefs and attitudes on energy saving behaviours. *Energy Policy*, 39(12), 7684–7694. <https://doi.org/10.1016/j.enpol.2011.09.002>
- Gao, J., Huang, Z., & Zhang, C. (2017). Tourists' perceptions of responsibility: An application of norm-activation theory. *Journal of Sustainable Tourism*, 25(2), 276–291. <https://doi.org/10.1080/09669582.2016.1202954>
- Garfield, E. (1994). Scientography: Mapping the tracks of science. *Current Contents - Social and Behavioral Sciences*, 7, 5–10.
- Gasper, D., Shah, A., & Tankha, S. (2019). The framing of sustainable consumption and production in SDG 12. *Global Policy*, 10(S1), 83–95. <https://doi.org/10.1111/1758-5899.12592>
- Gaviria-Marin, M., Merigó, J. M., & Baier-Fuentes, H. (2019). Knowledge management: A global examination based on bibliometric analysis. *Technological Forecasting and Social Change*, 140, 194–220. <https://doi.org/10.1016/j.techfore.2018.07.006>
- Gaviria-Marin, M., Merigo, J. M., & Popa, S. (2018). Twenty years of the journal of knowledge management: A bibliometric analysis. *Journal of Knowledge Management*, 22(8), 1655–1687. <https://doi.org/10.1108/JKM-10-2017-0497>

- Gilg, A., Barr, S., & Ford, N. (2005). Green consumption or sustainable lifestyles? Identifying the sustainable consumer. *Futures*, 37(6), 481–504. <https://doi.org/10.1016/j.futures.2004.10.016>
- Gleim, M. R., Smith, J. S., Andrews, D., & Cronin, J. J. (2013). Against the green: A multi-method examination of the barriers to green consumption. *Journal of Retailing*, 89(1), 44–61. <https://doi.org/10.1016/j.jretai.2012.10.001>
- Han, H., & Yoon, H. J. (2015). Hotel customers' environmentally responsible behavioral intention: Impact of key constructs on decision in green consumerism. *International Journal of Hospitality Management*, 45, 22–33. <https://doi.org/10.1016/j.ijhm.2014.11.004>
- Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology*, 24(3), 336–354. <https://doi.org/10.1016/j.jcps.2013.11.002>
- Hengboriboon, L., Naruetharadol, P., Ketkeaw, C., & Gebsoombut, N. (2022). The impact of product image, CSR and green marketing in organic food purchase intention: Mediation roles of corporate reputation. *Cogent Business & Management*, 9(1), 2140744. <https://doi.org/10.1080/23311975.2022.2140744>
- Hunter, G. L., & Garnefeld, I. J. (2010). When does consumer empowerment lead to satisfied customers? Some mediating and moderating effects of the empowerment-satisfaction link. *Retail Ind. Glob. Rep*, 15, 1–14.
- Jafari, S. Q., Shokouhyar, S., & Shokoohyar, S. (2022). Producer-consumer sustainability continuum: Mutual understanding to implement extended producer responsibility. *Journal of Cleaner Production*, 374, 133880. <https://doi.org/10.1016/j.jclepro.2022.133880>
- Johnston, J. (2008). The citizen-consumer hybrid: Ideological tensions and the case of whole foods market. *Theory and Society*, 37(3), 229–270. <https://doi.org/10.1007/s1186-007-9058-5>
- Kessler, M. M. (1963). Bibliographic coupling between scientific papers. *American Documentation*, 14(1), 10–25. <https://doi.org/10.1002/asi.5090140103>
- Klein, F., Emberger-Klein, A., Menrad, K., Möhring, W., & Blesin, J.-M. (2019). Influencing factors for the purchase intention of consumers choosing bioplastic products in Germany. *Sustainable Production and Consumption*, 19, 33–43. <https://doi.org/10.1016/j.spc.2019.01.004>
- Kotler, P., & Armstrong, G. (1994). *Marketing management, analysis, planning, implementation, and control*, Philip Kotler. Prentice-Hall International.
- Kutaula, S., Gillani, A., Leonidou, L. C., & Christodoulides, P. (2022). Integrating fair trade with circular economy: Personality traits, consumer engagement, and ethically-minded behavior. *Journal of Business Research*, 144, 1087–1102. <https://doi.org/10.1016/j.jbusres.2022.02.044>
- Lahiri, S., Mukherjee, D., & Peng, M. W. (2020). Behind the internationalization of family SMEs: A strategy tripod synthesis. *Global Strategy Journal*, 10(4), 813–838. <https://doi.org/10.1002/gsj.1376>
- Lavuri, R. (2022). Organic green purchasing: Moderation of environmental protection emotion and price sensitivity. *Journal of Cleaner Production*, 368, 133113. <https://doi.org/10.1016/j.jclepro.2022.133113>
- Leyva-Hernández, S. N., Toledo-López, A., & Hernández-Lara, A. B. (2021). Purchase intention for organic food products in Mexico: The mediation of consumer desire. *Foods*, 10(2), 245.
- Leonidou, C. N., Katsikeas, C. S., & Morgan, N. A. (2013). 'Greening' the marketing mix: Do firms do it and does it pay off? *Journal of the Academy of Marketing Science*, 41(2), 151–170. <https://doi.org/10.1007/s11747-012-0317-2>
- Li, J., Zhang, J., Zhang, D., & Ji, Q. (2019). Does gender inequality affect household green consumption behaviour in China? *Energy Policy*, 135, 111071. <https://doi.org/10.1016/j.enpol.2019.111071>
- Li, X., Wu, P., Shen, G. Q., Wang, X., & Teng, Y. (2017). Mapping the knowledge domains of building information modeling (BIM): A bibliometric approach. *Automation in Construction*, 84, 195–206. <https://doi.org/10.1016/j.autcon.2017.09.011>
- Lim, W. M., Yap, S.-F., & Makkar, M. (2021). Home sharing in marketing and tourism at a tipping point: What do we know, how do we know, and where should we be heading? *Journal of Business Research*, 122, 534–566. <https://doi.org/10.1016/j.jbusres.2020.08.051>
- Liobikienė, G., Mandravickaitė, J., & Bernatoniene, J. (2016). Theory of planned behavior approach to understand the green purchasing behavior in the EU: A cross-cultural study. *Ecological Economics*, 125, 38–46. <https://doi.org/10.1016/j.ecolecon.2016.02.008>
- Lobachevska, G., & Daub, C.-H. (2021). The role of corporate social responsibility in the decision-making process of consumers in Ukraine. *Innovative Marketing*, 17(1), 78–93. [https://doi.org/10.21511/im.17\(1\).2021.07](https://doi.org/10.21511/im.17(1).2021.07)
- Luján-Álvarez, C., Olivas-García, J. M., Vázquez-Álvarez, S., Hernández-Salas, J., & Castruita-Esparza, L. U. (2021). Sistema de gestión estratégica forestal participativa para el desarrollo forestal sustentable. *Madera y Bosques*, 27(1). <https://doi.org/10.21829/myb.2021.2712260>
- Maier, D., Maier, A., Aşchilean, I., Anastasiu, L., & Gavriş, O. (2020). The relationship between innovation and sustainability: A bibliometric review of the literature. *Sustainability*, 12(10), 4083. <https://doi.org/10.3390/su12104083>
- Maignan, I. (2001). Consumers' perceptions of corporate social responsibilities: A cross-cultural comparison. *J. Bus. Ethics*, 30, 57–72. <https://doi.org/10.1023/A:1006433928640>
- Martínez, S. B. (2010). Desafío del desarrollo: la agricultura orgánica como parte de una estrategia de mitigación de la pobreza rural en México. *NÓESIS. Rev. CIENCIAS Soc*, 19, 92–111.
- Mazar, N., & Zhong, C. B. (2010). Do green products make us better people? *Psychological Science*, 21(4), 494–498. <https://doi.org/10.1177/0956797610363538>

- Mehrabi, S., Perez-Mesa, J. C., & Giagnocavo, C. (2022). The role of consumer-citizens and connectedness to nature in the sustainable transition to agroecological food systems: the mediation of innovative business models and a multi-level perspective. *Agriculture*, 12(2), 203. <https://doi.org/10.3390/agriculture12020203>
- Merigó, J. M., Mas-Tur, A., Roig-Tierno, N., & Ribeiro-Soriano, D. (2015). A bibliometric overview of the journal of business research between 1973 and 2014. *Journal of Business Research*, 68(12), 2645–2653. <https://doi.org/10.1016/j.jbusres.2015.04.006>
- Merigó, J. M., & Yang, J.-B. (2017). A bibliometric analysis of operations research and management science. *Omega*, 73, 37–48. <https://doi.org/10.1016/j.omega.2016.12.004>
- Mohr, L. A., Webb, D. J., & Harris, K. E. (2001). Do consumers expect companies to be socially responsible? The impact of corporate social responsibility on buying behavior. *Journal of Consumer Affairs*, 35(1), 45–72. <https://doi.org/10.1111/j.1745-6606.2001.tb00102.x>
- Muritala, B. A., Sánchez-Rebull, M.-V., & Hernández-Lara, A.-B. (2020). A bibliometric analysis of online reviews research in tourism and hospitality. *Sustainability*, 12(23), 9977. <https://doi.org/10.3390/su12239977>
- Nekmahmud, D., Naz, F., Ramkissoon, H., & Fekete-Farkas, M. (2022a). Transforming consumers' intention to purchase green products: Role of social media. *Technological Forecasting and Social Change*, 185, 122067. <https://doi.org/10.1016/j.techfore.2022.122067>
- Nekmahmud, M., & Fekete-Farkas, M. (2020). Why not green marketing? Determinates of consumers' intention to green purchase decision in a new developing nation. *Sustainability*, 12(19), 7880. <https://doi.org/10.3390/su12197880>
- Nekmahmud, M., Ramkissoon, H., & Fekete-Farkas, M. (2022b). Green purchase and sustainable consumption: A comparative study between European and non-European tourists. *Tourism Management Perspectives*, 43, 100980. <https://doi.org/10.1016/j.tmp.2022.100980>
- Nemes, G., Chiffolleau, Y., Zollet, S., Collison, M., Benedek, Z., Colantuono, F., Dulsrud, A., Fiore, M., Holtkamp, C., Kim, T.-Y., Korzun, M., Mesa-Manzano, R., Reckinger, R., Ruiz-Martínez, I., Smith, K., Tamura, N., Viteri, M. L., & Orbán, É. (2021). The impact of COVID-19 on alternative and local food systems and the potential for the sustainability transition: Insights from 13 countries. *Sustainable Production and Consumption*, 28, 591–599. <https://doi.org/10.1016/j.spc.2021.06.022>
- Nguyen-Viet, B. (2022). Understanding the influence of eco-label, and green advertising on green purchase intention: the mediating role of green brand equity. *Journal of Food Products Marketing*, 28(2), 87–103. <https://doi.org/10.1080/10454446.2022.2043212>
- Nguyen, H. V., Nguyen, C. H., & Hoang, T. T. B. (2019). Green consumption: Closing the intention-behavior gap. *Sustainable Development*, 27(1), 118–129. <https://doi.org/10.1002/sd.1875>
- Nguyen, H. V., Nguyen, N., Nguyen, B. K., Lobo, A., & Vu, P. A. (2019). Organic food purchases in an emerging market: The influence of consumers' personal factors and green marketing practices of food stores. *International Journal of Environmental Research and Public Health*, 16(6), 1037. <https://doi.org/10.3390/ijerph16061037>
- Nova-Reyes, A., Muñoz-Leiva, F., & Luque-Martínez, T. (2020). The tipping point in the status of socially responsible consumer behavior research? a bibliometric analysis. *Sustainability*, 12(8), 3141. <https://doi.org/10.3390/su12083141>
- Oladokun, M. G., & Aigbavboa, C. O. (2018). Energy and carbon emissions in housing. In Oladokun, M.G., Aigbavboa, C.O. (Eds.), *Simulation-based analysis of energy and carbon emissions in the housing sector: A system dynamics approach* (pp. 13–49). Springer International Publishing. https://doi.org/10.1007/978-3-319-75346-1_2
- Pacheco-Aquino, G., Durán Medina, E., & Ordóñez-Díaz, J. A. B. (2018). Estimación del carbono arbóreo en el área de manejo forestal de Ixtlán de Juárez, Oaxaca. *Revista Mexicana de Ciencias Forestales*, 6(29), 126–145. <https://doi.org/10.29298/rmcf.v6i29.221>
- Peattie, K. (2010). Green consumption: Behavior and norms. *Annual Review of Environment and Resources*, 35(1), 195–228. <https://doi.org/10.1146/annurev-environ-032609-094328>
- Pimonenko, T., Bilan, Y., Horák, J., Starchenko, L., & Gajda, W. (2020). Green brand of companies and greenwashing under sustainable development goals. *Sustainability*, 12(4), 1679. <https://doi.org/10.3390/su12041679>
- Qasim, H., Yan, L., Guo, R., Saeed, A., & Ashraf, B. N. (2019). The defining role of environmental self-identity among consumption values and behavioral intention to consume organic food. *International Journal of Environmental Research and Public Health*, 16(7), 1106. <https://doi.org/10.3390/ijerph16071106>
- Rametsteiner, E., & Simula, M. (2003). Forest certification - An instrument to promote sustainable forest management? *Journal of Environmental Management*, 67(1), 87–98. [https://doi.org/10.1016/S0301-4797\(02\)00191-3](https://doi.org/10.1016/S0301-4797(02)00191-3)
- Ramkissoon, A., Smith, L. D. G., & Weiler, B. (2013a). Testing the dimensionality of place attachment and its relationships with place satisfaction and pro-environmental behaviours: A structural equation modelling approach. *Tourism Management*, 36, 552–566. <https://doi.org/10.1016/j.tourman.2012.09.003>
- Ramkissoon, H., Smith, L. D. G., & Weiler, B. (2013b). Relationships between place attachment, place satisfaction and pro-environmental behaviour in an Australian national park. *Journal of Sustainable Tourism*, 21(3), 434–457. <https://doi.org/10.1080/09669582.2012.708042>
- Ramos-Rodríguez, A.-R., & Ruiz-Navarro, J. (2004). Changes in the intellectual structure of strategic management research: A bibliometric study of the Strategic Management Journal, 1980–2000. *Strategic Management Journal*, 25(10), 981–1004. <https://doi.org/10.1002/smj.397>

- Ramzan, M., Razi, U., Quddoos, M. U., & Adebayo, T. S. (2022). Do green innovation and financial globalization contribute to the ecological sustainability and energy transition in the United Kingdom? Policy insights from a bootstrap rolling window approach. *Sustainable Development*, 31(1), 393–414. <https://doi.org/10.1002/sd.2399>
- Rex, E., & Baumann, H. (2007). Beyond ecolabels: what green marketing can learn from conventional marketing. *Journal of Cleaner Production*, 15(6), 567–576. <https://doi.org/10.1016/j.jclepro.2006.05.013>
- Rezapouraghdam, H., Akhshik, A., & Ramkissoon, H. (2023). Application of machine learning to predict visitors' green behavior in marine protected areas: Evidence from Cyprus. *Journal of Sustainable Tourism*, 31(11), 2479–2505. <https://doi.org/10.1080/09669582.2021.1887878>
- Rizos, V., Behrens, A., van der Gaast, W., Hofman, E., Ioannou, A., Kafyeke, T., Flamos, A., Rinaldi, R., Papadelis, S., Hirschnitz-Garbers, M., & Topi, C. (2016). Implementation of circular economy business models by small and medium-sized enterprises (SMEs): Barriers and enablers. *Sustainability*, 8(11), 1212. <https://doi.org/10.3390/su8111212>
- Roberts, J. A. (1996). Green consumers in the 1990s: Profile and implications for advertising. *Journal of Business Research*, 36(3), 217–231. [https://doi.org/10.1016/0148-2963\(95\)00150-6](https://doi.org/10.1016/0148-2963(95)00150-6)
- Roberts, J. A. (1993). Sex differences in socially responsible consumers' behavior. *Psychological Reports*, 73(1), 139–148. <https://doi.org/10.2466/pr0.1993.73.1.139>
- Robichaud, Z., & Yu, H. (2022). Do young consumers care about ethical consumption? Modelling Gen Z's purchase intention towards fair trade coffee. *British Food Journal*, 124(9), 2740–2760. <https://doi.org/10.1108/BFJ-05-2021-0536>
- Schleifer, P., & Sun, Y. (2020). Reviewing the impact of sustainability certification on food security in developing countries. *Global Food Security*, 24, 100337. <https://doi.org/10.1016/j.gfs.2019.100337>
- Schroeder, P., Anggraeni, K., & Weber, U. (2019). The relevance of circular economy practices to the sustainable development goals. *Journal of Industrial Ecology*, 23(1), 77–95. <https://doi.org/10.1111/jiec.12732>
- Shao, J., & Ünal, E. (2019). What do consumers value more in green purchasing? Assessing the sustainability practices from demand side of business. *Journal of Cleaner Production*, 209, 1473–1483. <https://doi.org/10.1016/j.jclepro.2018.11.022>
- Schor, J. B. (1998). *The overspent American: Why we want what we don't need/upscaling, downshifting, and the new consumer*. New York HarperPerennial, Basic Books.
- Sharma, A., & Foropon, C. (2019). Green product attributes and green purchase behavior. *Management Decision*, 57(4), 1018–1042. <https://doi.org/10.1108/MD-10-2018-1092>
- Sharma, H. B., Vanapalli, K. R., Samal, B., Cheela, V. R. S., Dubey, B. K., & Bhattacharya, J. (2021). Circular economy approach in solid waste management system to achieve UN-SDGs: Solutions for post-COVID recovery. *The Science of the Total Environment*, 800, 149605. <https://doi.org/10.1016/j.scitotenv.2021.149605>
- Shaw, D., & Newholm, T. (2002). Voluntary simplicity and the ethics of consumption. *Psychology & Marketing*, 19(2), 167–185. <https://doi.org/10.1002/mar.10008>
- Shrum, L. J., McCarty, J. A., & Lowrey, T. M. (1995). Buyer characteristics of the green consumer and their implications for advertising strategy. *Journal of Advertising*, 24(2), 71–82. <https://doi.org/10.1080/00913367.1995.10673477>
- Silva, B. C., & Moreira, A. C. (2022). Entrepreneurship and the gig economy: A bibliometric analysis. *Cuadernos de Gestión*, 22(2), 23–44. <https://doi.org/10.5295/cdg.211580am>
- Small, H. (1973). Co-citation in the scientific literature: A new measure of the relationship between two documents. *Journal of the American Society for Information Science*, 24(4), 265–269. <https://doi.org/10.1002/asi.4630240406>
- So, H. W., & Laforzezza, R. (2022). Reviewing the impacts of eco-labelling of forest products on different dimensions of sustainability in Europe. *Forest Policy and Economics*, 145, 102851. <https://doi.org/10.1016/j.forpol.2022.102851>
- Song, S. Y., & Kim, Y.-K. (2019). Doing good better: Impure altruism in green apparel advertising. *Sustainability*, 11(20), 5762. <https://doi.org/10.3390/su11205762>
- Spaargaren, G. (2020). Sustainable consumption: a theoretical and environmental policy perspective. In: Mol, A. P., Sonnenfeld, D. A., & Spaargaren, G. (Eds.), *The Ecological Modernisation Reader*. pp. 318–333. Routledge.
- Sparks, P., & Shepherd, R. (1992). Self-identity and the theory of planned behavior: Assessing the role of identification with 'green consumerism'. *Social Psychology Quarterly*, 55(4), 388. <https://doi.org/10.2307/2786955>
- Stigka, E. K., Paravantis, J. A., & Mihalakakou, G. K. (2014). Social acceptance of renewable energy sources: A review of contingent valuation applications. *Renewable and Sustainable Energy Reviews*, 32, 100–106. <https://doi.org/10.1016/j.rser.2013.12.026>
- Sustacha, I., Baños-Pino, J. F., & del Valle, E. (2022). Research trends in technology in the context of smart destinations: A bibliometric analysis and network visualization. *Cuadernos de Gestión*, 22(1), 161–173. <https://doi.org/10.5295/cdg.211501is>
- Szmigin, I., Carrigan, M., & McEachern, M. G. (2009). The conscious consumer: Taking a flexible approach to ethical behaviour. *International Journal of Consumer Studies*, 33(2), 224–231. <https://doi.org/10.1111/j.1470-6431.2009.00750.x>
- Taufique, K. M. R. (2022). Integrating environmental values and emotion in green marketing communications inducing sustainable consumer behaviour. *Journal of Marketing Communications*, 28(3), 272–290. <https://doi.org/10.1080/13527266.2020.1866645>
- Teixeira, S. F., Barbosa, B., Cunha, H., & Oliveira, Z. (2021). Exploring the antecedents of organic food purchase intention: An extension of the theory of planned behavior. *Sustainability*, 14(1), 242. <https://doi.org/10.3390/su14010242>

- Testa, F., Sarti, S., & Frey, M. (2019). Are green consumers really green? Exploring the factors behind the actual consumption of organic food products. *Business Strategy and the Environment*, 28(2), 327–338. <https://doi.org/10.1002/bse.2234>
- Thelwall, M. (2008). Bibliometrics to webometrics. *Journal of Information Science*, 34(4), 605–621. <https://doi.org/10.1177/0165551507087238>
- Thompson, C. J., & Coskuner-Balli, G. (2007). Countervailing market responses to corporate co-optation and the ideological recruitment of consumption communities. *Journal of Consumer Research*, 34(2), 135–152. <https://doi.org/10.1086/519143>
- Tripathi, A., & Singh, M. P. (2016). Determinants of sustainable/green consumption: a review. *International Journal of Environmental Technology and Management*, 19(3/4), 316–358. <https://doi.org/10.1504/IJETM.2016.082258>
- Tseng, M. L., Chiu, A. S. F., Tan, R. R., & Siriban-Manalang, A. B. (2013). Sustainable consumption and production for Asia: Sustainability through green design and practice. *Journal of Cleaner Production*, 40, 1–5. <https://doi.org/10.1016/j.jclepro.2012.07.015>
- United Nations (UN). (2015). Sustainable development goals [WWW Document]. URL <https://sdgs.un.org/goals>
- Valenzuela-Fernández, L. M., Merigó, J. M., Nicolas, C., & Kleinaltenkamp, M. (2019). Leaders in industrial marketing research: 25 years of analysis. *Journal of Business & Industrial Marketing*, 35(3), 586–601. <https://doi.org/10.1108/JBIM-12-2018-0367>
- Webster, F. E. Jr. (1975). Determining the characteristics of the socially conscious consumer. *J. Consum. Res.*, 2, 188–196.
- Wu, J., Wu, H. C., Hsieh, C. M., & Ramkissoon, H. (2022). Face consciousness, personal norms, and environmentally responsible behavior of Chinese tourists: Evidence from a lake tourism site. *Journal of Hospitality and Tourism Management*, 50, 148–158. <https://doi.org/10.1016/j.jhtm.2022.01.010>
- Yadav, R., & Pathak, G. (2017). Determinants of consumers' green purchase behavior in a developing nation: Applying and extending the theory of planned behavior. *Ecological Economics*, 134, 114–122. <https://doi.org/10.1016/j.ecolecon.2016.12.019>
- Yang, D., Lu, Y., Zhu, W., & Su, C. (2015). Going green: How different advertising appeals impact green consumption behavior. *Journal of Business Research*, 68(12), 2663–2675. <https://doi.org/10.1016/j.jbusres.2015.04.004>
- Yao, J., Guo, X., Wang, L., & Jiang, H. (2022). Understanding green consumption: A literature review based on factor analysis and bibliometric method. *Sustainability*, 14(14), 8324. <https://doi.org/10.3390/su14148324>
- Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: Green consumer behaviour when purchasing products. *Sustainable Development*, 18(1), 20–31. <https://doi.org/10.1002/sd.394>
- Yu, E. P., Luu, B. V., & Chen, C. H. (2020). Greenwashing in environmental, social and governance disclosures. *Research in International Business and Finance*, 52, 101192. <https://doi.org/10.1016/j.ribaf.2020.101192>
- Yu, Y., Feng, K., & Hubacek, K. (2013). Tele-connecting local consumption to global land use. *Global Environmental Change*, 23(5), 1178–1186. <https://doi.org/10.1016/j.gloenvcha.2013.04.006>
- Zander, K., & Hamm, U. (2010). Consumer preferences for additional ethical attributes of organic food. *Food Quality and Preference*, 21(5), 495–503. <https://doi.org/10.1016/j.foodqual.2010.01.006>
- Zhang, Y., Wang, Z., & Zhou, G. (2013). (1120). Antecedents of employee electricity saving behavior in organizations: An empirical study based on norm activation model. *Energy Policy*, 62, 1120–1127. <https://doi.org/10.1016/j.enpol.2013.07.036>
- Zhao, H., Gao, Q., Wu, Y., Wang, Y., & Zhu, X. (2014). What affects green consumer behavior in China? A case study from Qingdao. *Journal of Cleaner Production*, 63, 143–151. <https://doi.org/10.1016/j.jclepro.2013.05.021>
- Zheng, Q., Zeng, H., Xiu, X., & Chen, Q. (2022). Pull the emotional trigger or the rational string? A multi-group analysis of organic food consumption. *Foods*, 11(10), 1375. <https://doi.org/10.3390/foods11101375>