Mapping the Intellectual Structure and Research Trends on Environmental Concern, Attitude toward Green Products, and Subjective Norms in Predicting Consumers' Green Purchase Intention: A Bibliometric Analysis

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Abstract

Purpose: *This study aims to map the intellectual structure and research trends related to environmental concern, attitudes toward green products, and subjective norms in predicting green purchase intention through bibliometric analysis.*

Design/Methodology/Approach: *The research uses bibliometric tools like RStudio and VOSviewer to analyse data from the Scopus database, focusing on publication trends, citation patterns, and key research themes in sustainability and consumer behaviour.*

Findings: *The bibliometric analysis reveals significant research trends in sustainability, particularly regarding the Theory of Planned Behaviour (TPB) and its application in understanding green consumption and sustainable consumer behaviour. Leading countries in sustainability research include China, India, the United States, and Malaysia, with top journals such as Sustainability and the Journal of Cleaner Production publishing the most influential works. The study highlights the interdisciplinary nature of sustainability research, with significant contributions from business management, environmental science, and social sciences. Key themes identified include green purchase intention, corporate social responsibility (CSR), eco-labelling, and the role of artificial intelligence in influencing consumer behaviour.*

Originality/Value: *This study provides an overview of sustainability research, identifying influential authors, institutions, and funding sources. It offers insights for policymakers, researchers, and businesses aiming to foster sustainable consumer behaviour.*

Keywords: *Green Purchase Intention, Environmental Concern, TPB, Bibliometric Analysis, Sustainability Research, Consumer Behaviour.*

1. Introduction

This increased attention to consumer behaviour and sustainability has led to renewed interest in seeing how people make decisions in an environmentally conscious way, especially when said purchase occurs of the green products. Researchers have discussed many factors to be considered in the impacts on green purchase intentions and attitudes, as well as subjective norms involved in directing behaviour on sustainable consumer practices. One of the factors that has been extensively used in the research on the role of environmental concern, green products, and consumer attitudes as factors contributing to said behaviours is the Theory of Planned Behaviour (TPB) (Ajzen, 1991; Liu, 2020).

The most significant part of the advancement of knowledge about how sustainability aspects influence the purchasing decisions, in particular the impact of consumer preferences of environmental impact, is the research conducted by authors such as Han, H., Long, R., and Dhir, A. (Han, 2023; Long, 2021).

The related academic contribution in this field cuts across various disciplines, indicating the interdisciplinary character of the sustainability research. Such disciplines as business, social sciences, environmental science, and economics overlap because they help to elucidate the engagement of the consumer with the practice of green activity (Testa, 2024; Yazdanpanah, 2015). The organisations across the globe, be it in China or

the United States, are starting to discover how attitudes of consumers to environmental issues can be utilised to meet the needs of global sustainability (Kravchuk, 2022; Yazdanpanah, 2015). As an example, the European Commission and the National Natural Science Foundation of China funded many studies that examine the role of cognitive and emotional elements shaping the intention to purchase green, and studies on the topic of green use behaviour and eco-friendly technologies have taken place (Irfan, 2021; Ameen, 2021). Also, other scientists, such as Koch, J. and Esmaeilian, B., have written much on the role of circular consumption in enhancing sustainable behaviours (Koch, 2024; Esmaeilian, 2021).

The given bibliometric analysis penetrates the world of the global picture of consumer behaviour and sustainability research, which shows a lot of trends and impactful contributions. Based on studying the scholarly work of the most popular journals like Sustainability Switzerland and Journal of Cleaner Production (Testa, 2024), this paper gives an overall review of the evolution of the field. With the necessity of sustainable practices ever-growing, this study provides essential data on the intellectual framework of sustainability studies, indicating how artificial intelligence, green marketing, and consumer behaviour integrate more into the development of a greener future (Kravchuk, 2022). Such contributions of researchers as Akerlof, G. A. and Avelar, A. B. A. also add value to the discussion by presenting theories and models that help to resolve the issues of the overlap of consumer psychology, sustainability, and environmental governance (Akerlof, 1970; Avelar, 2022).

2. Background

Consumer behaviour and its impact on sustainability is a study that has received unprecedented significance because advertising and purchase patterns of consumers have been influenced by environmental concerns. Research based on sustainability has reported that the perception of green products, attitudes concerning eco-friendly behaviour and environmental concerns have a strong impact on consumer green purchase intention. Theory of Planned Behaviour (TPB) is a theory developed by Ajzen (1991) and has turned out to be one of the core tools in understanding the influences of attitudes, subjective norms, and the perception of

behavioural control on consumer intentions. Other researchers, such as Liu (2020) and Botetzagias (2015), have expanded on the TPB concept to comprehend the specifics of green consumption to reveal that ethical conventions and personal values are very strong predictors of green purchasing. TPP in recent years has been adapted to certain areas of behaviour, including renewable energy adoption behavioural change (Irfan, 2021), buying organic food (Bharti, 2024), and green product consumption (Long, 2021).

Consumer sustainability practice is also inherently interdisciplinary, cutting across any number of areas, including businesses, social sciences, environmental science, and economics. The topmost subject area is Business, Management, and Accounting, which has more than 5,000 publications, as it shows the substantial level of integration of sustainability in the corporate strategy (Testa, 2024). In addition, Social Sciences and Environmental Science can contribute significantly, as they offers understanding of the hustle and bustle of the human and ecological aspects of sustainable consumption. The importance of corporate social responsibility (CSR) and ethical consumption is studied in research such as the one conducted by Koch (2024), Bortoleto (2012), and Irfan (2021), in which the authors examine the influence of CSR activities and sustainable marketing of products on consumer behaviour. The works of energy researchers (Yazdanpanah, 2015) and authors who concentrate on eco-labelling and environmental product certifications make fundamental contributions to consumer choices as being affected by policies (Koch, 2024).

With China, India, the United States, Malaysia and the United Kingdom making some of the major contributions to the research on sustainability, the field has gained an international outlook. China has the most significant amount of publications (Han, 2023; Wang, 2023), which is probably explained by the interest of the nation in environmental challenges and its place in the chain of world supply. Cross-border discussion on the topic of green consumption and the issue of environmental governance became achievable thanks to the international research collaborations that started enhancing the interdisciplinary nature of the field (Yazdanpanah, 2015; Avelar, 2022). The increased

consumption of green technology and business sustainability in consumer markets has catalysed the increase in sustainability research. It has also been studied how the attitude toward green products depends on cultural, psychological and social factors, and the works by Ajzen (1991), Schultz (2014), and Al Mamun (2020) have added to the overall comprehension of consumer behaviour (Al Mamun, 2020; Testa, 2024).

The Theory of Planned Behaviour (TPB) has been widely put into action aimed at predicting green buy thought as well as green consumption patterns using many studies on how attitudes and norms are linked to perceived control. The contributions of major authors to developing TPB have become rather prominent (Ajzen, 1991 and Han, 2023); more specifically, it has been suggested that behavioural intentions may be the means of the longevity of sustainable practices (Ajzen, 1991; Han, 2023). Secondly, the article by Ameen (2021) has also revealed the impact that artificial intelligence (AI) has on consumer behaviour because the data has revealed that marketing mechanisms based on artificial intelligence (AI) can transform consumer preferences to sustainable products (Ameen, 2021). Social Exchange Theory or the Value-Belief-Norm(VBN) Theory also have a wide usage to investigate how environmental values and beliefs are incorporated into sustainable consumption decisions (Schultz, 2014).

Studies that have investigated the relevance of sustainability research on a global level have given the research perspectives on how the national governments and international associations influence green consumption. The research studies that relate environmental protection and consumer behaviour by government-funded research initiatives (Irfan, 2021), like the National Natural Science Foundation of China and the European Commission, have played a central role. The green marketing and sustainability communication interface (Kravchuk, 2022) also emerges and plays a significant role in research because now businesses and governments target consumer education and promotion of sustainability. As more and more research works by international organizations, including Sustainability Switzerland and the Journal of Cleaner Production, prove that sustainability is becoming a collaborative effort across borders, it

becomes clear that sustainability studies become an international collaborative matter in which scholars like Koch (2024), Bigné (2020), and Bhagat (2023) are on the frontline to comprehend the decision-making process of consumers as it applies to green consumption and sustainable products (Koch, 2024; Bigné, 2020; Bhagat,

2.1 Rationale of the Study

The justification of the study is that the intellectual framework and dominant trends in consumer behaviour and sustainability should be mapped by formulating the bibliometric analysis. With green purchase intention and environmental concern rising to more weight regarding consumer decision making, it is imperative to review how the area has changed over a period of time. This work offers a rational order to comprehend the research trends, themes, clusters, and partnership networks that have formed a discursive scene on sustainability. The analysis of bibliometrics, including the application of bibliometric software, VOSviewer, and the Bibliometrics package, will assist the study in revealing tendencies in the number of publications, citation rates, topics, regions, etc. Its results will outline the top-most influential authors, institutions, and funding agencies in the sector, which will provide an insight into how the study of consumer behaviour can help enhance the notion of global sustainability.

Research Questions

In this study, the research questions will be answered to answer several research questions which will be used to analyse the literature, as using a bibliometrics approach will help to uncover the most critical information regarding the field of sustainable consumer behaviour:

1. What are the key research trends and research deliberations in environmental concern, green products and green purchase intention study?
2. What are the top authors and institutions that are involved in the sustainability research, and how do they interact around sustainability-related issues?
3. Which are the main subject areas and interdisciplinary relationships of the study of sustainability, and how are they becoming more intricate through time?

4. What impact does international partnership in research have on the significance of sustainability research, and specifically on green consumerism?

5. Who is pushing sustainability research by their funding agencies, and what is their effect on the future of consumer behaviour studies?

These research questions will allow acquiring the all-encompassing picture of the contemporary sustainability research and allow investigating the new patterns and links surrounding the scholarly study of green purchase intentions and consumer behaviour.

3. Methodology

The research methodology was an analysis of literature in terms of identifying the intellectual topography and the research trends on environmental concern, green products, green purchase intention, and attitude towards green products. The information was collected by using the Scopus database. The data was extracted, after which unwanted duplicates were eliminated as a result of RStudio in order to make the dataset accurate. The bibliometric indicators included in the publication count, most prolific authors, countries, funding sources, the types of documents, and the themes were obtained in accordance with the analysis of the biblioshiny (in the bibliometrix package of RamStudio). VOS viewer was used in visualising and analysing co-authorship networks and thematic clusters. The results were presented in the forms of tables and figures and offered an idea of publication trends, the number of citations and the most influential journals and the contributors in the area. This method enabled a wholesome comprehension of the mind-landscape, showing the worldwide study trends and prime turns in the study of sustainable consumer behaviour.

4. Results

4.1 Bibliometric Data

The bibliometric data part presents the summary of the research findings in terms of the quantity of publications, authors, nations, type of documents, funders and subgroups of related topics concerning consumer behaviour and sustainability. The data also draw attention to the most important contributors, the geographical location of studies, as well as the kind of documents that have been published most commonly in the field. This section plays a very imperative role in comprehending the magnitude and extent of academic work in the field.

Table 1: Bibliometric Data

Category	Details
Total Results	11,418
Top 5 Authors	1. Han, H. (66) 2. Long, R. (35) 3. Dhir, A. (34) 4. Wang, S. (32) 5. Al Mamun, A. (30)
Top 5 Countries	1. China (1,917) 2. India (1,543) 3. United States (1,114) 4. Malaysia (1,015) 5. United Kingdom (857)
Document Types	- Article: 9,673 - Review: 604 - Book Chapter: 467 - Book: 349 - Conference Paper: 279 - Retracted: 22 - Editorial: 7 - Note: 9 - Short Survey: 4
Funding Agencies	1. National Natural Science Foundation of China (522) 2. National Office for Philosophy and Social Sciences (225) 3. European Commission (156) 4. Fundação para a Ciência e a Tecnologia (118)
Top Journals	1. Sustainability Switzerland (983) 2. Journal of Cleaner Production (369) 3. British Food Journal (207) 4. Journal of Retailing and Consumer Services (207) 5. Foods (131)
Top 5 Subject Areas	1. Business, Management and Accounting (5,098) 2. Social Sciences (4,026) 3. Environmental Science (3,445) 4. Energy (2,155) 5. Economics (1,983)
Year-wise Distribution	2025: 2,190 2024: 2,540 2023: 1,772 2022: 1,505 2021: 1,099

The table of Bibliometric Data gives a summary of the broad research indicators and features of consumer behaviour and sustainability. It starts with stating the total number of results that had been retrieved in the Scopus database- 11,418 publications. The highest ranking authors are given in the number of publications made, and therefore Han, H. is ranked top with 66 publications, followed by Long, R. with 35 publications and lastly Dhir, A. with 34 publications. This provides one with the idea of the most prolific researchers in the field. The most active nations in this study are also determined, whereby China (1,917 publications), India (1,543 publications), and the United States (1,114 publications) are the top countries that have made contributions in this study. Other important countries are Malaysia and the United Kingdom. The types of documents are divided to depict the percentage illustration of the type of research formats, the most accessed being articles (9,673), then reviews (604), and lastly, show the book chapters (467). The funding agencies involve investment into research, the most prominent source of which is the National Natural Science Foundation of China (522 grants). The most common journal is Sustainability Switzerland (983 publications), through which the scholarly journals are marking their part in the discipline. The table also subdivides research into areas of study, with Business, Management, and Accounting taking the first place, with other locations such as Social Sciences, Environmental Science, Energy, and Economics successively following the first three. Lastly, it also offers a breakdown of publications per year, which only demonstrates a constant rise in publications since 2021; 2025, meaning that the research in this sphere is rapidly increasing.

4.2 General Information

The general information section summarises the search query applied to collect the data and gives some fundamental information about the database (Scopus) and the results of the search. The section is keen on the leading contributors in the form of authors, countries, journals, and funding agencies, which provide a glimpse of the extent to which sustainability-based research on consumer behaviour is done around the world.

Table 2: General Information

Category	Details
Search Query	((ALL(environmental concern) AND ALL(green products) AND ALL(Green Purchase Intention) AND ALL(attitude towards green products)))
Total Records Found	11,418
Database	Scopus
Top 5 Authors	1. Han, H. (66) 2. Long, R. (35) 3. Dhir, A. (34) 4. Wang, S. (32) 5. Al Mamun, A. (30)
Top 5 Countries	1. China (1,917) 2. India (1,543) 3. United States (1,114) 4. Malaysia (1,015) 5. United Kingdom (857)
Top 5 Journals	1. Sustainability Switzerland (983) 2. Journal of Cleaner Production (369) 3. British Food Journal (207) 4. Journal of Retailing and Consumer Services (207) 5. Foods (131)
Top 5 Document Types	1. Article: 9,673 2. Review: 604 3. Book Chapter: 467 4. Book: 349 5. Conference Paper: 279
Top 5 Funding Agencies	1. National Natural Science Foundation of China (522) 2. National Office for Philosophy and Social Sciences (225) 3. European Commission (156) 4. Fundação para a Ciência e a Tecnologia (118)
Top 5 Subject Areas	1. Business, Management and Accounting (5,098) 2. Social Sciences (4,026) 3. Environmental Science (3,445) 4. Energy (2,155) 5. Economics (1,983)
Year-wise Publications	2025: 2,190 2024: 2,540 2023: 1,772 2022: 1,505 2021: 1,099

The General Information table presented the necessary information for the search process to gather the bibliometric data. The very search query was planned in a certain way that it would incorporate the key terms connected with the environmental concern, green products, green purchase intention and attitudes towards green products. The search query identified 11,418 entries of the Scopus database, which illustrates the

abundance of research conducted on the topic of consumer behaviour as regards sustainability. Also, like Table 1, this table confirms the work of the leading contributors, that is, Han, H. (66 publications), Long, R. (35 publications), and Dhir, A. (34 publications). The best countries that took part in the study are repeated, with the industry being taken by China, then India, the United States, Malaysia and the United Kingdom. The leading journals in which the study is featured are also provided once again, with a specific focus on Sustainability Switzerland and Journal of Cleaner Production. The most common types of documents can also be found in the list offered in the table, which once again confirms that articles get the majority of publications, followed by reviews and book chapters. The main players assisting in active research are funding agencies, and the biggest sponsor is the National Natural Science Foundation of China, the next one is the European Commission

and Fundação para a Ciencia e a Tecnologia. Again, subject areas prove that Business, Management, and Accounting are the most vocal areas of study, in that the Environmental Science and Social Sciences play a good role in the research field. This is then further explained in its yearly usage with a recurring pattern of more publications each year, with 2025 being the year where it is expected that the highest output will be reached.

4.3 Document Types

This category pays attention to the nature of documents provided in the search for bibliometrics. It organises the type of publications, such as articles, reviews, book chapters, and conference papers, which gives an idea of the range of the different types of research applied in sustainability studies. Our breakdown of the types of documents contributes to awareness of the distribution of research output and publication trends in the field.

Table 3 Document Types

DOCUMENT TYPE	
Article	9673
Review	604
Book Chapter	467
Book	349
Conference Paper	279
Retracted	22
Note	9
Editorial	7
Short Survey	4
Letter	2
Data Paper	1
Erratum	1

Document types table groups the publications in the bibliometric search according to the format. This matter is significant as it will give information about the type of research outputs comprising the sphere of consumer behaviour and sustainability. The table indicates that the commonest type of document is the article since 9,673 articles have been published. This is a classic way of conducting academic research, and that is what the mainstream of the subject consists of. The second most common ones are review articles (604), which point to the strong interest in the explanation/summarisation/synthesis of the current literature. Chapters of books (467) and books (349) are also of less relevance, giving an

implication that substantial outlines, inclusive of text books, are fundamental but have less significance compared to journal articles that are the main venues of research dissemination. There is also a role of the contribution of conference papers (279), showing that academic conferences represent a large area of research enablers at the initial steams and gathering of scholars. These other types of documents are retracted articles (22), editorial (7), note (9), short survey (4), letter (2), data paper (1), and errata (1). The existence of this disintegration indicates the diversification of the research outputs and the forms of presentation through which sustainability and consumer behaviour research is published.

Documents by type   Scopus
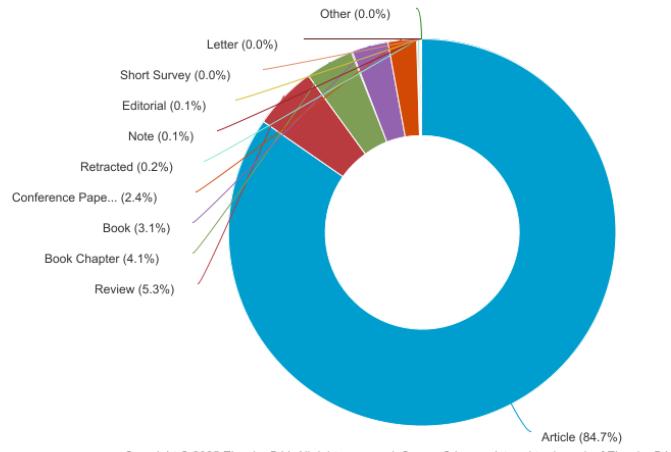
Fig. 1 Document Types

Fig. 1 gives a breakdown of the types of documents that were presented in the bibliometric search on consumer behaviour and sustainability. The chart is a visual representation that classifies the research in many formats, e.g., articles, reviews, book chapters, and conference papers. Articles comprise the biggest percentage, and it means that the most frequent kind of publication in the subject remains old-fashioned research papers. The review articles path issues in their turn, as it is the significance of summarising the literature available and the identification of the gaps in research. The analysis also reveals the existence of book chapters, books, and conference papers, indicating that sustainability study is also found in printed materials beyond academic journals in terms of the editors' volumes and study conferences. The relative diversity of research dissemination forms appears to explain why other types of documents, like retracted articles, notes, and editorials, have a smaller yet significant portion of all research publications.

4.4 Average Citations Per Year

Average citations per year make a trace of the frequencies of the publications being used in the academic work, and it allows measuring the influence and the topicality of the research over the years. This section will pinpoint trends of how the research is being increasingly cited and with an influence in the academic circles, as evidenced by the citation data provided per respective year.

Table 4 Average Citations Per Year

YEAR	
2025	2190
2024	2540
2023	1772
2022	1505
2021	1099
2020	789
2019	568
2018	397
2017	301
2016	257

The Average Citations Per Year table is used to investigate the effect of the publications in the course of the years, as the table shows the number of citations obtained per year. This aids in mitigating the impact of the research and its level of reference

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by the academic community. A trend presented in the table is that the number of citations is increasing, where 2025 and 2024 publication years cited the most, 2,190 citations and 2,540 citations, respectively. This means that new studies are increasingly becoming more concerned and more influential. The number of citations to previous years is quite low, though with 1,099 citations per 2021 being made and 789 citations per 2020, actually depicting the research gaining momentum. Such an upward trend argues in favour of the idea that sustainable consumer behaviour is receiving growing interest from the community of research, and more recent publications have a substantial impact on forming emerging discourses. The table is an indicator of the increased importance and power of the field in the associated academic fields.
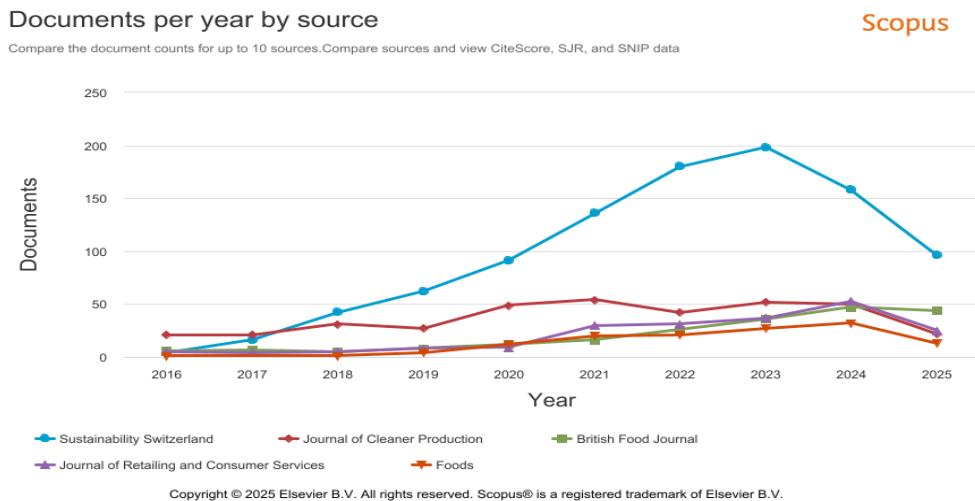
Fig. 2 Average Citations Per Year

Fig. 2 provides the average number of times the yearly publication has been cited in the research of consumer behaviour and sustainability, which is evident in the increase in importance of these publications over the years. The chart reveals a trend of growing citations, especially in the papers written in 2024 and 2025, which is the rise in the influence of the recent studies. The latest publication is shifting to 2025, and thus, the most recent studies are making a considerable scholarly impact. Older articles (from 2016 to 2019) included fewer references, indicating they had a weak impact at the time they were published. This number goes to show how sustainability research has been increasingly coming to the limelight as the issue has increasingly become a defining concern in both academic and policy discourse.

4.5 Most Relevant Authors

The current section is dedicated to the identification of the most meaningful authors in the issue of consumer behaviour and sustainability, with special attention being given to these authors whose works have had a great impact on the research sphere. Analysis of the publications and citations will enable this section to reveal the top figures who have been salient in propelling research in sustainability.
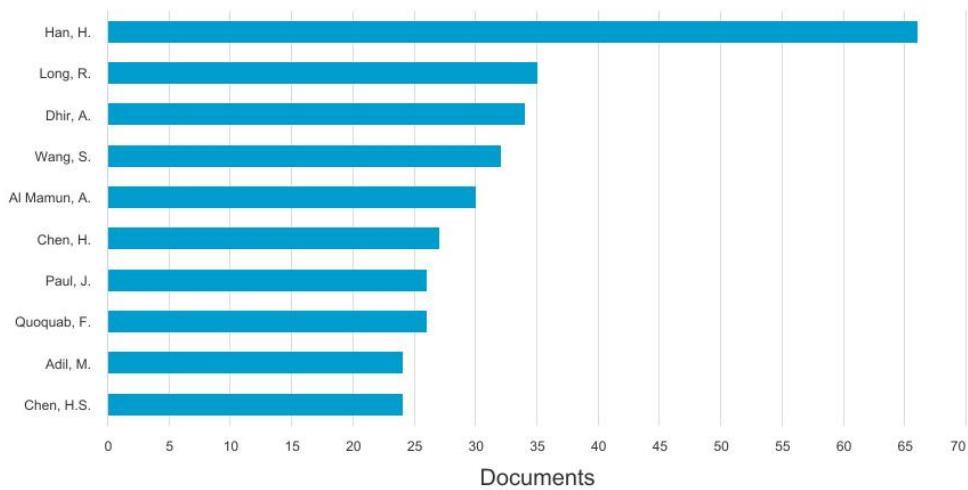
Fig. 3 Most Relevant Authors

Several authors within the sphere of consumer behaviour and sustainability are the most relevant in terms of the quantity of publications and references (Fig. 3). As can be seen in the diagram, the most prolific author is Han, H., and the other authors are Long, R. and Dhir, A. The works of these authors played a fundamental role in setting research trends in the field, as they are highly cited and used. The chart can be used to determine the top scholars whose work has supported the need to research on sustainable consumer behaviour, green purchase intentions and other associated issues. The mapping of these authors and their works provides the image of the academic leaders in assimilating innovation in sustaining research.

4.6 Subject-wise

The Subject-wise classification of the research publications into academic disciplines provides a visual illustration of the varied fields that are involved in transforming the manner in which consumer behaviour and sustainability can be studied. It brings out the connections between other fields like business, environmental science, and economics in the study of sustainability.

Table 5 Subject-wise

SUBJECT AREA	
Business, Management and Accounting	5098
Social Sciences	4026
Environmental Science	3445
Energy	2155
Economics, Econometrics and Finance	1983
Computer Science	1539
Agricultural and Biological Sciences	1420
Engineering	1414
Psychology	880
Decision Sciences	566
Arts and Humanities	459
Medicine	445
Nursing	299
Multidisciplinary	234
Mathematics	205
Biochemistry, Genetics and Molecular Biology	186

Earth and Planetary Sciences	159
Health Professions	156
Immunology and Microbiology	146
Materials Science	133
Chemical Engineering	89
Neuroscience	55
Physics and Astronomy	48
Chemistry	41
Veterinary	36
Pharmacology, Toxicology and Pharmaceutics	25

The Subject-wise table will classify the research results into the areas of academic discipline that are applicable in the study of consumer behaviour and sustainability. The field, as it is confirmed in the table, is the most closely linked with Business, Management, and Accounting, which has the best share of publications with the highest number of 5,098 papers. Next in order is Social Sciences (4,026 papers), which denotes the relevance of human behaviour and societal trends in influencing the decisions of the consumers. Existing literature is also a large subject of interest in Environmental Science (3,445 papers), which symbolises the necessity to comprehend how the type of consumer behaviour affects the environment. Other relevant categories consist of Energy (2,155 papers), Economics (1,983 papers) and Computer Science (1,539 papers), which underscores the interdisciplinary character of sustainability studies. There are also other fields like Agricultural and Biological Sciences, Engineering and Psychology involved, which also reflect that consumer behaviour and sustainability are being considered through the various perspectives of academics. This table illustrates the intersection of this field with areas that explain the omnipresent nature that researchers are pursuing toward comprehending the issues of sustainability.
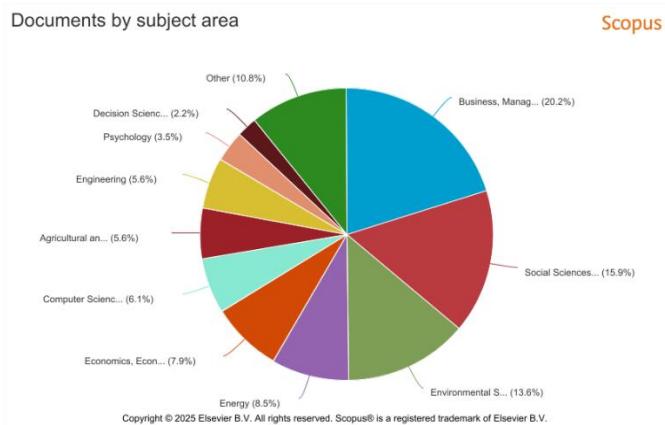
Fig. 4 Subject-wise

Fig. 4 renders the records of research on consumer behaviour and sustainability based on different subject areas. The figure indicates that Business, Management, and Accounting is the predominant major of study, which indicates the close connection between sustainability and management and business strategies. Other key research areas, including Social Sciences and, to mention, Environmental Science, will also play a significant role as a demonstration of interdisciplinary research on consumer behaviour towards sustainability. The contributions related to Energy, Economics, Computer Science, and Engineering are also represented in the chart significantly as well, and this evidence can demonstrate the wide realisation of sustainability matters in the academic world. As evidenced in the figure, sustainability research is a multi-disciplinary process, and all the subject areas play a crucial role in identifying complex environmental problems.

4.7 Documents by Country or Territory

The section Documents by Country or Territory presents the visualisation of the geographic scope of research on consumer behaviour and sustainability.

It presents the nations that have the largest contribution to the field, as it facilitates the ability to see the global trends and worldwide leaders in the field of research, in terms of sustainability.

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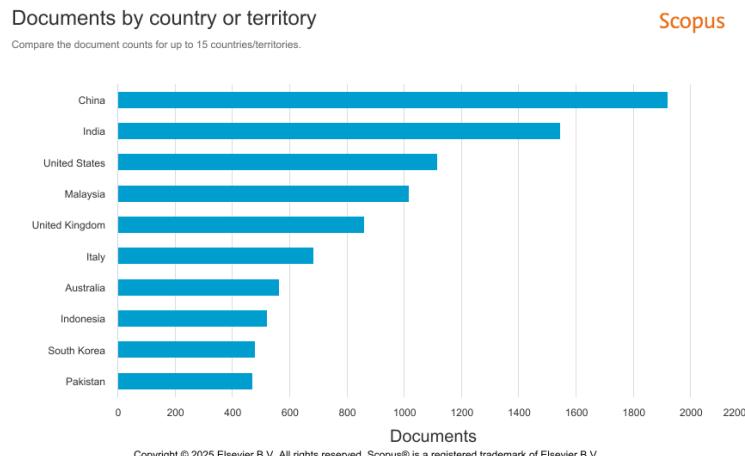
Fig. 5: Documents by Country or Territory

The Fig. 5 gives a visual understanding of the number of documents relating to the consumer behaviour and sustainability of various countries or territories. The graph will recognise the leading nations in this area, wherein China, India and the United States have the highest number of publications. The figure also unveils other important players, including Malaysia and the United Kingdom, showing that sustainability research is a worldwide venture. Through mapping the geographical location of research, this number allows establishing the areas where the research of sustainability and consumer behaviour thrives and also signifies the global partnership in addressing the issue of sustainability.

4.8 Documents by Fundings Sponsor

In this section, the funding sponsors that facilitate research in consumer behaviour and sustainability shall be considered. It also brings into focus some of the major financial actors which play an important role in assisting and guiding research endeavours in sustainability and environmental consumer behaviour, including government departments and other international bodies.

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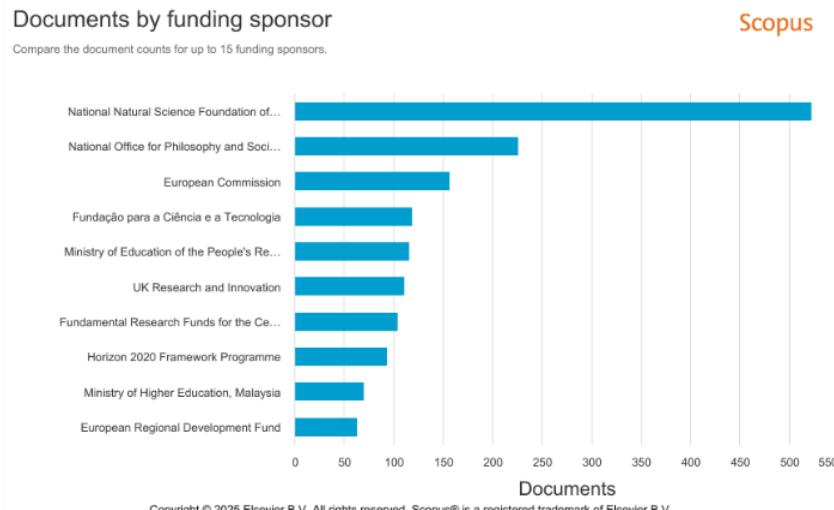
Fig. 6: Documents by Fundings Sponsor

Fig. 6 depicts the sponsors of research in consumer behaviour and sustainability (funding behind the research), has demonstrates the financial backing that is increased through the sponsor to carry out this research. The figure shows that the biggest sponsor is the National Natural Science Foundation of China, as it offers the greatest amount of money in research on the same. The European Commission and the National Office of Philosophy and Social Sciences appear to be other important sponsors, which demonstrates that government and international organisations play an important part in promoting sustainability research. This chart offers an insight into the factors of how sustainability research is funded and the significance of funding on the aims and personification of academic research into consumer behaviour and environmental sustainability.

4.9 Service Mapping

Cluster 1: Network Analysis of Consumer Behaviour and Sustainability: Key Concepts and Relationships

Cluster I addresses the main ideas and connections in the domain of consumer behaviour and sustainability studies. This cluster names the key themes that have brought the studies to the main focus of the academic research, including green products, green purchase intention, environmental concern and the dependence of these aspects on each other to create the sustainable consumer behaviour.
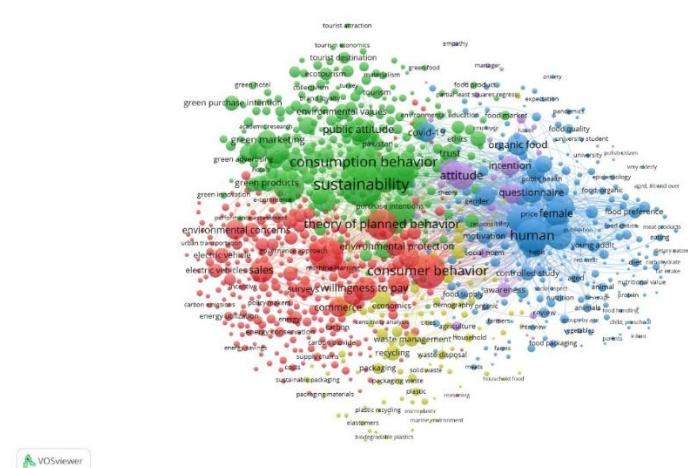
Fig. 7: Network Analysis of Consumer Behaviour and Sustainability: Key Concepts and Relationships

Fig. 7 has a network map which illustrates some key concepts of the consumer behaviour and sustainability field. In this figure, we can point out such terms as sustainability, green purchase intention, and consumer behaviour, which are at the centre of academic speciality. The map visually represents the relationship between the environmental issues, attitudes of consumers, and sustainability practices, leading to forth dominant trends in contemporary studies. The bonds among these concepts thus can be seen as strong, allowing us to see the way they interact and affect each other in shaping a sustainable behaviour among the consumers. The figure indicates that these central themes are interconnected very often, and the key contribution was that the sustainability of attitudes and sustainable actions is considered to be very central to comprehending consumer choices.

Cluster II: Network Analysis of Scholarly Contributions on the Theory of Planned Behavior and Cognitive Control in Consumer Behavior Research

Cluster II explores the academic works of the Theory of Planned Behaviour (TPB) and cognitive control within the frames of consumer behaviour. TPB has served as a formidable paradigm in dissecting the role of attitude, perceptions of control of behaviour and the existence of the subjective norms on consumer intentions, at least in respect to sustainability.
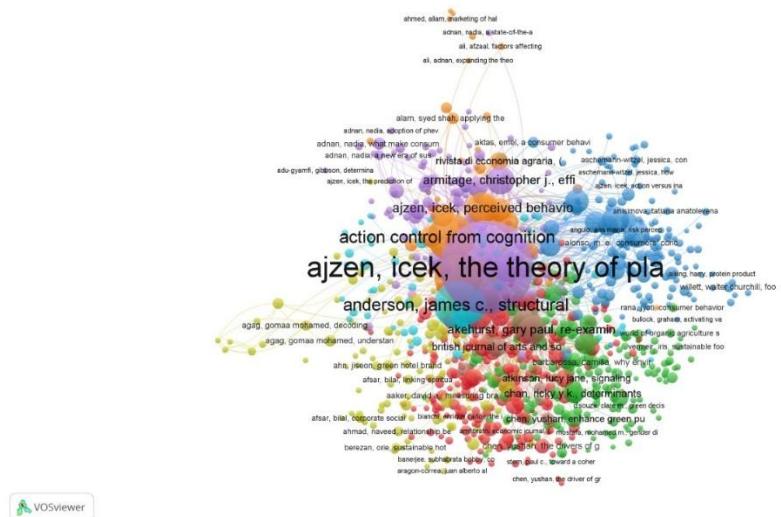
Fig. 8: Network Analysis of Scholarly Contributions on the Theory of Planned Behavior and Cognitive Control in Consumer Behavior Research

Fig. 8 identifies the academic research regarding TPB and cognitive control in consumer behaviour. The network links up authors and their works that have extended TPB in grasping sustainable consumer practices. The figure highlights the main practitioners, such as Ajzen and Han, who play a major role in developing and utilising the TPB framework for sustainability matters. The map indicates collaboration and citation patterns that indicate the patterns of TPB that have been applied to explain the desires of green purchases and other sustainability-based practices. According to the figure, pivotal authors and canonical literature in TPB have become a significant indication in developing the sustainability research with the growing use and changing TPB theory according to the studies of consumer behaviour.

Cluster III: Network of Academic Institutions Involved in Research on Consumer Behaviour and Sustainability

Cluster III looks at institutions of learning that take part in conducting research studies on customer behaviour and sustainability. This cluster plots research clusters worldwide, and one can see that particular institutions are on the cutting edge of sustainability research and are influencing the field overall.
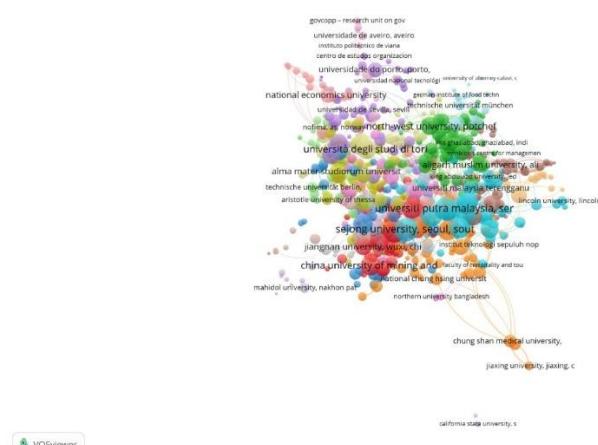

Fig. 9: Network of Academic Institutions Involved in Research on Consumer Behaviour and Sustainability

In Fig. 9, a network of academic institutions that deal with consumption behaviour and sustainability research has been provided. The figure illustrates the relations of co-authorship among institutions, indicating the universities and research centres that seem to be the most active in this direction. The institutions are considered according to their output collaboratively, and the map indicates the world distribution of research work with heavy output areas (research clusters) being developed by North America, Europe and Asia. The figure assists in determining the key research centres, including those in China, the United States and the United Kingdom, that are contributing towards sustainability research. The map also represents the rising collaboration in the world in the research of consumer behaviour and sustainability.

Cluster IV: Global Network of Research Collaborations on Consumer Behaviour and Sustainability

Cluster IV covers the international studies in the field of consumer behaviour and sustainability. The given cluster studies the nature of attention of research groups representing different regions of the world to the sustainability-related projects and studies.
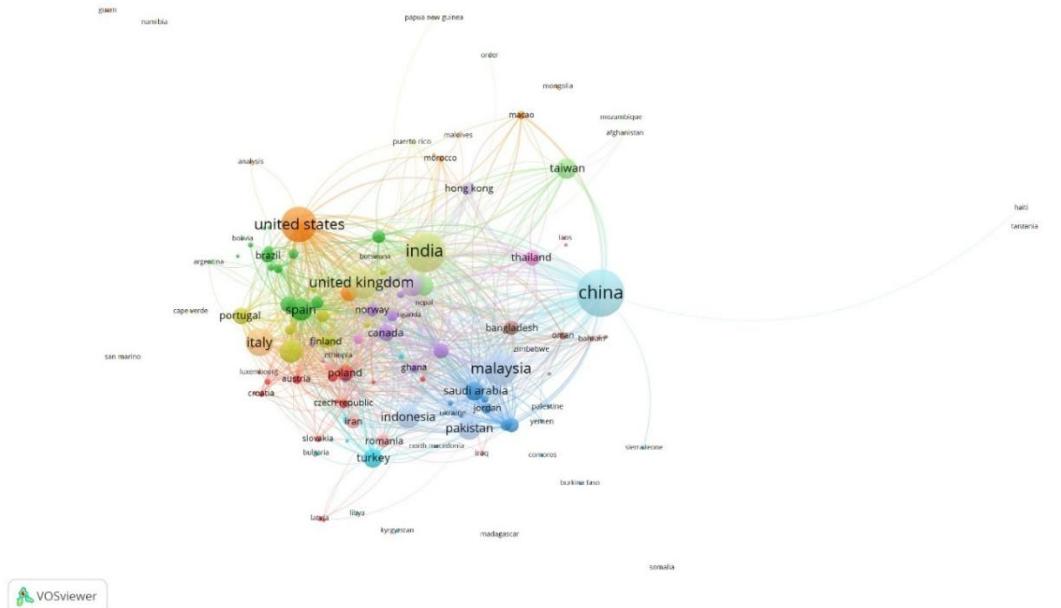

Fig. 10: Global Network of Research Collaborations on Consumer Behaviour and Sustainability

Fig. 10 is a visualisation of the cooperation pattern between various research teams and institutions. It is a network around the world showing how the international research associations have been established, with particular contributions made by Asia, Europe, and the Americas. The figure indicates the power and degree of cooperation, noting how the experience of researchers in various geographies shares knowledge and deals with sustainability issues. The map indicates alternative trends in global consumer behaviour and sustainability, which depicts how different teams in the Globe are collaborating to address complicated problems like green consumption, ethical marketing and sustainable product designs.

Cluster V: Co-authorship Network Analysis on Research in Consumer Behaviour and Sustainability

Cluster V is devoted to the co-authorship networks, and its essence is the analysis of the collaboration of academic researchers in the field of consumer behaviour and sustainability. This group determines the major research groups and effective collaborations in this field of research.
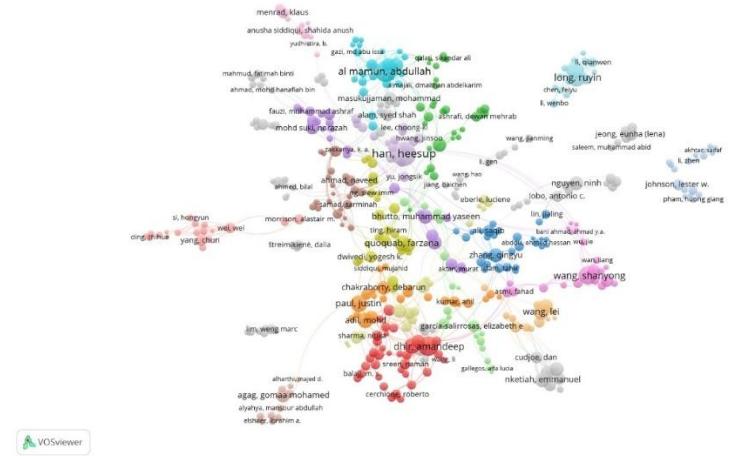
Fig. 11: Co-authorship Network Analysis on Research in Consumer Behaviour and Sustainability

Fig. 11 shows the co-authorial relationships of scientists in the research of sustainability. Visualising these connections allows demonstrating the collaborative character of the research, taking into account which authors cooperate most often on the corresponding issues related to the problem of sustainability. With the help of this network, one can gain valuable ideas on the most powerful authors and research groups that advance the direction of consumer behaviour and sustainability. The figure demonstrates important research groups and alliances and is useful in determining who has been dominating paired research collaborations and how they affect the knowledge development in the field of sustainable consumer practices and environmental psychology.

Cluster V1: Co-citation Network Analysis of Key Authors in Consumer Behaviour and Sustainability Research

Cluster VI deals with the most popular authors co-cited in research in consumer behaviour and sustainability. This cluster compares the frequency of citation of some authors alongside one another, and this moves one into understanding the intellectual basis of the business.
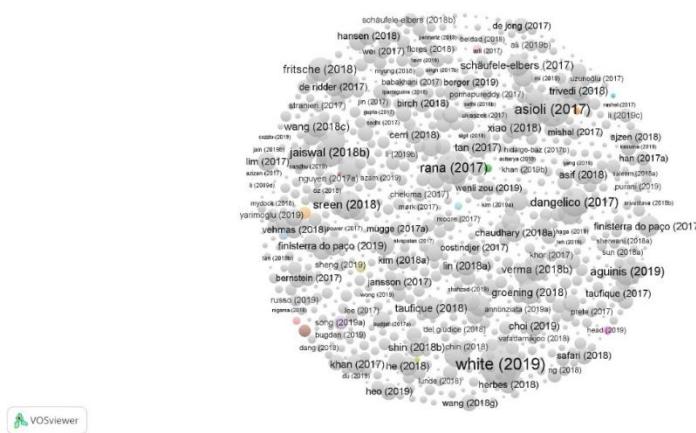
Fig. 12: Co-citation Network Analysis of Key Authors in Consumer Behaviour and Sustainability Research

The co-citation network (Fig. 12) depicts the authors who are often cited referring to sustainability and consumer behaviour. The figure is used to state the key scholars who are frequently cited in the academic debate of sustainability. Studying the co-citation patterns, we can trace the theoretical impacts and works which have become the foundations of the development of the field. The

network enables mapping the intellectual field of research of the sustainability and consumer behaviour domains and provides the most mentioned articles and authors in this sphere. The name of the authors, such as Ajzen, Han and Schultz, becomes the centre of attraction.

Cluster VII: Co-authorship Network in Consumer Behaviour and Sustainability

Research: Collaborative Clusters and Key Authors

Cluster VII provides mapping of the collaborative groups in the consumer behaviour and sustainability research, pointing to the most active researchers and collaborations of active researchers within the field.
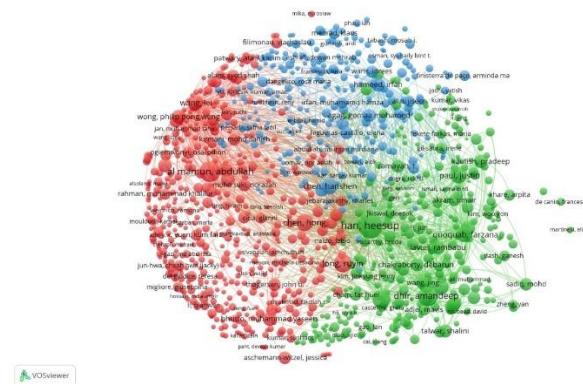
Fig. 13: Co-authorship Network in Consumer Behaviour and Sustainability Research: Collaborative Clusters and Key Authors

Fig. 13 presents the visualisation of the co-authorship network that comprises the most important investigations in the areas of sustainability and consumer behaviour studies. The number brings together researchers who have collaborated on related issues or subjects, and these include the key players in the field and the research areas that prevail in the field of interest. This map provides a transparent look at the research teams that promote the study of green consumption, ethical marketing and stereotyped sustainability behaviours. The map exemplifies how collective clusters are created, and through this, we can see the interlocking nature of high-profile scholars and the questions they are addressing. It also stresses the need for interdisciplinary cooperation and teamwork within the further development of sustainable consumer behaviour studies.

5. Conclusion and Future Directions

This research paper offers a practice bibliometric analysis of the downward trends, intellectual framework and contributors performing in the consumer behaviour and sustainability discipline. The study provides perspectives on the emerging body of research in different disciplines by concentrating on the Theory of Planned Behaviour (TPB) and its application in explaining the green purchase intention, the environmental concern, and the subjective norms. The findings reflect on the growing concern over sustainability in consumer practices at the global level, which has been founded on an ample scholarly synergy between different institutions and geographical regions. With the continuously growing role of sustainability in the decision-making process of consumers, the offered study could be regarded as a valuable resource that can be used to comprehend the changing academic landscape and can be used to orient future research.

5.1 Research Implications

This bibliometric analysis has important suggestions in regard to theory and practice of sustainability research.

5.1.1 Theoretical Implications:

The research creates a point of focus on the central role of TPB as the factor to explain sustainable consumer behaviours and the interplay among environmental attitudes, subjective norms, and behavioural control. TPP can be additionally improved and expanded by other constructs like moral norms (Botetzagias, 2015), social influence,

and behavioural intentions based on how researchers can enhance the prediction of green purchase behaviours. The theoretical frameworks made during this paper may contribute to further examination of psychological and cultural effects on green consumption and usher in new research on the usage of green technologies and green marketing techniques (Irfan, 2021; Ameen, 2021).

5.1.2 Methodological Implications:

This bibliometric analysis shows that bibliometric tools, including RStudio, VOSviewer, and Bibliometrix, are useful to organise intellectual structures and find research gaps. These methodologies can be followed in future research to trace the idea of research trends over a period, offering a better idea of how the various themes in sustainability have changed over time. Further, the practice can practically be extended to other spheres of environmental behaviour under the broader domain to understand the changes in research perspectives and the influence of the change in global policies.

5.1.3 Practical Implications for Investors and Analysts:

The findings of this research can help investors and business analysts to deduce the new trends in sustainable consumer behaviour and green marketing policies. Since sustainability is becoming reasonable in the process of making consumer choices, firms can capitalise on this information to create products that suit the evolving environmental issues among consumers. The results of the study also convey quite an informative piece concerning collaboration networks and research hubs, potentially handy in cases when an investor wants to make an application to a prominent institution and a source of funds in the sustainability area. As an example, identifying the sources of funds and the most influential players on the market will be beneficial to direct the investment resources of investors (Koch, 2024; Avelar, 2022).

5.1.4 Practical Implications for Policymakers:

To the policymakers, the research results offer a critical analysis of the global research trends and patterns in relation to consumer behaviour as regards sustainability. Based on these findings, policymakers are able to formulate policies that will influence them to purchase green products and adopt sustainable business practices. In learning how subjective norms and environmental issues affect consumer decisions, policy-makers can formulate specific campaigns of public awareness combined with new incentive programs to promote behaviours that can be considered more sustainable. Also, activities like increased emphasis on circular consumption (Koch, 2024) or eco-labelling (Yazdanpanah, 2015) are also research trends that can inform the choice of policies to impose on how to certify to be a green product or regarding the use of renewable energy.

5.2 Limitations

Although this bibliometric analysis serves as an invaluable source of information on the intellectual set-up of sustainability research, several limitations ought to be mentioned:

1. Limitations in data source: The literature only uses Scopus as a bibliometric data source, which does not have all the applications in the field and especially non-indexed journals or niche areas of interest.
2. Language Bias: Non-English publications might not be adequately represented in the analysis, which might bias the description of world research trends.
3. Limitations of Citation Data: Citation data are an indicator of influence, and this information might not represent the quality of research or impact of the study on the research since recent studies might not yet have received many citations.
4. Geographical Bias: Although the global was examined by analysing research outputs by region, the one with fewer research outputs might not be well represented, like Africa and South America, which may offer an incomplete view of sustainability research in the entire world.

The limitations may be solved in the future by making studies cover a bigger scope of databases, languages and areas of research to get a more accurate picture of the overall sustainability research in the world.

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