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GREEN PURCHASE BEHAVIOUR AMONG CHINESE CONSUMERS: A DECADE-LONG BIBLIOMETRIC ANALYSIS AND KNOWLEDGE MAPPING USING CITESPACE

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ABSTRACT

The intersection between green purchase behaviour and consumer behaviour has emerged as a central topic in sustainable development, drawing significant attention from both academic researchers and industry practitioners. It is essential to remain informed about the latest progress and notable achievements in this rapidly evolving field. Accordingly, this study aims to review the literature on Chinese consumers' green purchasing behaviour and using CiteSpace, to map the research landscape and identify future development trends, providing knowledge for future studies. A total of 109 articles related to green purchase behaviour among Chinese consumers (who are domestic consumers within China), published between 2014 and 2024 in the Web of Science (WoS) core collection were selected for this study. Furthermore, CiteSpace was employed to visualise various aspects, such as researcher networks, research institution networks, keyword co-citation clustering, keyword timelines, and bursts of keywords in the database literature. Notably, the findings indicate that research on green purchasing behaviour in China has grown markedly over the past decade but has fluctuated due to policy shifts and COVID-19. While early studies focus on consumer attitudes and intentions, recent work adopts more diverse perspectives. However, limited collaboration among researchers and insufficient interdisciplinary integration, especially with environmental science and business, remain key challenges. Correspondingly, a bibliometric analysis of the literature on green purchase behaviour among Chinese consumers provides a unique and insightful perspective into this knowledge domain. Ultimately, the insights derived from CiteSpace will enhance our understanding of platform research and pave the way for future advancements in both theoretical frameworks and practical applications.

Introduction

The rapid economic expansion in China, along with intensifying environmental challenges and resource shortages, has underscored the complex tension between economic growth and environmental sustainability (Adebayo & Ullah, 2023). As a major global economic power and a central actor in addressing environmental issues, China has established ambitious standards for sustainable development. Furthermore, the government seeks to influence consumer behaviour by promoting the adoption of low-carbon and environmentally friendly products. However, a considerable disparity persists between the pro-environmental attitudes of Chinese consumers (who are domestic consumers within China) and their actual green consumption behaviours.

In recent years, there has been a growing number of studies on green purchasing behaviour among Chinese consumers. Still, a

lack of comprehensive and systematic literature reviews remains in this field. Moreover, to better support policymakers building pro-green consumption policies, there is a need for longitudinal research that tracks changes and trends in green consumption behaviours over time (H. Wei *et al.*, 2024). In essence, CiteSpace is a tool used to study academic articles over time. It demonstrates the overall development of a research field and highlights notable studies that push the field forward (Chen, 2006; Wei *et al.*, 2015). Consequently, this study attempts to answer the following Research Questions (RQ).

- RQ1: How can CiteSpace be used to better show and explain the structure and main themes of Chinese consumers' green purchasing behaviour?
- RQ2: What trends in green consumption behaviour can be seen among Chinese consumers, and how can these trends help improve theories and guide practical actions to promote green consumption?

This study undertakes a comprehensive review of the literature on Chinese consumers' green purchasing behaviour from 2014 to 2024, with the aim of systematically analysing the evolution of research themes, key contributors, and methodological approaches in the field. In particular, this study employs CiteSpace to analyse literature collected from Web of Science (WoS) to fully understand the research topic. Using quantitative analysis and reviewing the existing literature, we could observe the overall features and research direction of green purchasing behaviour among Chinese consumers. This study also provides new insights into green buying behaviour and makes suggestions for future research.

Methods and Data

To comprehensively understand and present the research landscape of green consumption behaviour among Chinese consumers, this research includes bibliometric analysis, social network analysis, and scientific knowledge mapping. Accordingly, bibliometric analysis systematically examines publication patterns, citation structures, and influential contributions, allowing the assessment of the field's intellectual impact and developmental trajectory (Donthu *et al.*, 2021). In the context of green consumption, bibliometric studies have been effective in identifying thematic concentrations and emerging research hotspots. In addition, social network analysis reveals collaboration patterns among authors, institutions, and countries, highlighting the core contributors and structural gaps within the research network (Munoz *et al.*, 2016). This is particularly useful for understanding the cooperative dynamics shaping sustainability research. At the same time, scientific knowledge mapping uses visualisation tools such as CiteSpace to depict the intellectual structure and thematic evolution of a research domain over time (Guo *et al.*, 2022). Such mapping provides an intuitive representation of research frontiers and facilitates the identification of future directions.

Bibliometric Analysis

Bibliometric analysis utilises mathematical and statistical methods for analysis (Keuzenkamp & McAleer, 1995; Geng *et al.*, 2017). In bibliometric analysis, quantitative search techniques (e.g., computational techniques and mathematical statistics) are used to analyse keywords, authors, journals, publication years, institutions, literature content, and citation information of relevant research articles. These aim to identify research focuses and to predict future research directions.

For scientific evaluation, bibliometric analysis offers theoretical backing and information management assurance. Notably,

finding key documents, assessing publications, and analysing citations on linked articles are all examples of micro-level bibliometric analysis research. Meanwhile, the creation of economic information networks and systems, the forecasting of future research paths, and the advancement of fundamental information theory are examples of macro-level bibliometric analysis investigations. Following this, applications of bibliometric analysis include the description of the state and advancement of interdisciplinary research, the ranking of scholarly journals (Talukdar, 2011; Rosenzweig *et al.*, 2016), the statistical analysis of the primary research management techniques (Ferreira *et al.*, 2016; Merigó & Yang, 2017), and the evolutionary pathways of economics research (Schatz & Bashroush, 2017; Hodgson & Lamberg, 2018).

Social Network Analysis

According to sociological theory, society is composed of networks, which include the interactions between nodes, rather than people. Thus, by examining the relationships inside the network, the social network analysis approach investigates the network's properties (Zheng *et al.*, 2016). The literature on a single subject is viewed as a full network in social network analysis, and co-words analysis presents the keyword co-occurrence network directly. In order to identify research hotspots and development patterns, keywords were analysed and studied in depth using the principles of social network centrality and frequency.

The main purpose of co-words analysis is to determine the number of times a lot of words appear in the same document. Specifically, it examines the co-occurrence relationships and strengths of word sets, describes the relationships between word sets, and reveals structural changes in the study object represented by a word setting. Moreover, this method uses keywords to represent the main concepts of a particular literary work and analyses co-occurrence relationships and intensities to discover hotspots, frontiers, and trends in the study. Building on this, cluster analysis is the process of clustering words with high co-occurrence intensity. Co-words analysis includes Artificial Intelligence (AI) (Bullinaria & Levy, 2007), scientific metrology (Lamnabhi-Lagarrigue *et al.*, 2017; Olmeda-Gómez *et al.*, 2017), and economics (Topalli & Ivanaj, 2016; Bracco *et al.*, 2018).

Scientific Knowledge Mapping

One technique for quantitative analysis of science is scientific knowledge mapping (Gazni *et al*., 2012; Jeong *et al*., 2014). This approach uses data mining, information processing, knowledge measurement, and graphic design to visualise the evolution, development processes, and structural links of scientific knowledge as a research object. In line with this, Price (1976) developed scientometrics by mapping the first scientific knowledge and used data equations to reveal patterns in the evolution of science. To map bibliometrics, Eck and Waltman (2009) created a computer software. The works of Shiffrin and Cook (1978), Börner *et al*. (2003), and Chen (2006) provided relevant findings that contributed to the development of cartographic science. Furthermore, related fields such as ecological security analysis (Chen *et al*., 2017) and economic geography (Cobo *et al*., 2011; Wei *et al*., 2015) have made extensive use of the Scientific Knowledge Graph due to its co-citation analysis capabilities.

According to Wolfe (1994), visual analytics can be applied to study relationships between different research areas, especially keyword phrases, core author groups, and diverse collaborative symbiotic networks. Correspondingly, we can reveal the structure and characteristics of scientific knowledge by

creating a series of knowledge maps (including literature co-occurrence maps and keyword maps). Conversely, literature citation analysis, keyword co-occurrence analysis, and citation surge analysis can reveal the evolution process and research hotspots in the field. Similarly, the co-citation analysis of multiple journals can further identify the main concepts, patterns, and sources of the research topic. Overall, by creating visual knowledge maps, we can accurately predict the trends and evolutions of a specific topic.

Data Sources

This systematic review follows the guideline methodology of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The PRISMA technique includes four phases-identification, screening, qualification, and inclusion-used for literature screening and syntheses.

The literature data for this study were obtained from the WoS database, the major database platform for accessing global academic information, which includes more than 12,400 important academic articles recognised worldwide. Moreover, this study used Boolean search strings ("green purchase intention" or 'green purchase behaviour') and ("China" or "Chinese") to identify literature related to Chinese consumers' green purchasing behaviour with high relevance. Note that the search time frame was set from 2014 to 2024.

Following this, the title, keywords, and abstract were used to screen and assess the qualifications of the literature discovered in the primary search. Literature that met the inclusion and exclusion criteria listed in Table 1 was considered for inclusion in this study. Qualification was further refined by reading the full text and excluding literature that did not meet the screening requirements. Ultimately, a total of 109 empirical research articles were identified with the data as of May 21, 2024. The data was saved in "plain text file" format as a "full record and cited references."

Table 1: Eligibility criteria

Articles Inclusion Criteria
Studies of English writing
Publish time: 2014–2024
Scholarly articles
Studies focused on China or Chinese consumers
Studies focused on green purchase intention or green purchase behaviour
Articles Exclusion Criteria
Articles that are not accessible to get the full-text
Studies not focused on specific green products

Figure 1 illustrates the procedure by which 109 studies of empirical research literature were ultimately yielded (Data obtained on May 21, 2024). The publishing data are then saved in a "plain text file" format as a "full record and cited references."

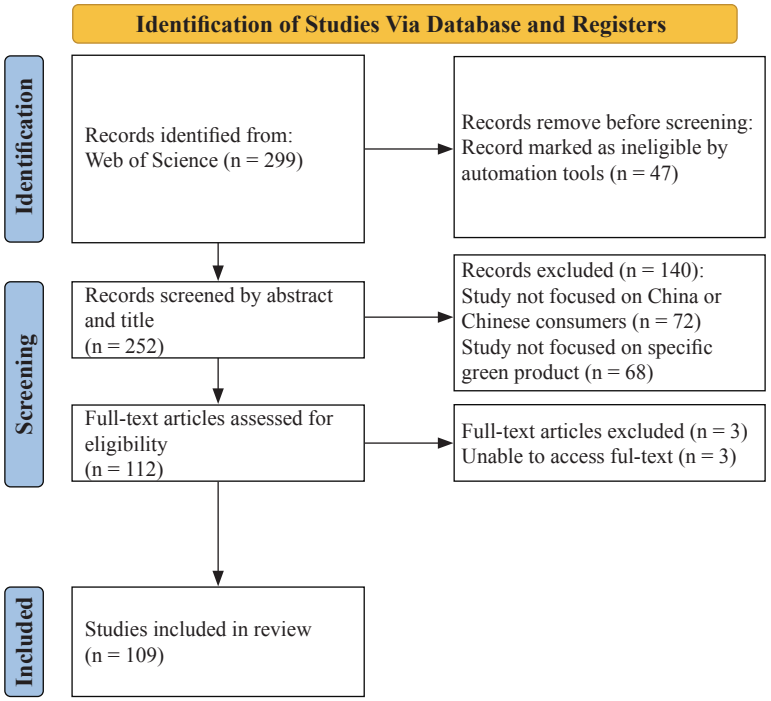

Figure 1: PRISMA flowchart for choosing articles

Results and Discussions

Descriptive Analysis of Related Publications

We counted the top five journals (Table 2) in terms of publication counts. Among them, Sustainability ranked first with 20 publications. This is followed by the International Journal of Environmental Research and Public Health with seven publications, and the Journal of Cleaner Production with six publications. While Frontiers in Psychology and Journal of Retailing and Consumer Services ranked fourth and fifth, they have the same number of publications (5). Although Sustainability has the highest number of publications, Journal of Retailing and Consumer Services has the highest impact factor (13.1) in 2024.

Table 2: Top five journals with publication counts in the field of this study (2014–2024)

Number	Journals	Counts	IF
1	Sustainability	20	3.3
2	International Journal of Environmental Research and Public Health	7	4.6
3	Journal of Cleaner Production	6	10.0
4	Frontiers in Psychology	5	2.9
5	Journal of Retailing and Consumer Services	5	13.1

According to Canti and Huisman (2015) and Lu *et al.* (2015), the quantity of articles is a crucial metric for assessing the advancement of a certain field of study. The time distribution of the research literature on Chinese consumers' green purchase behaviour can be intuitively understood by multivariate statistical analysis, which is illustrated in Figure 2. It is apparent that the total publications on Chinese consumers' green purchase behaviour increased from 2014 to 2024. As such, these publications' evolutionary tendency can be broken down into three stages. In line with this, the overall publication trend suggests that research in this area has not yet developed a steady growth pattern and remains influenced by various policy levels.

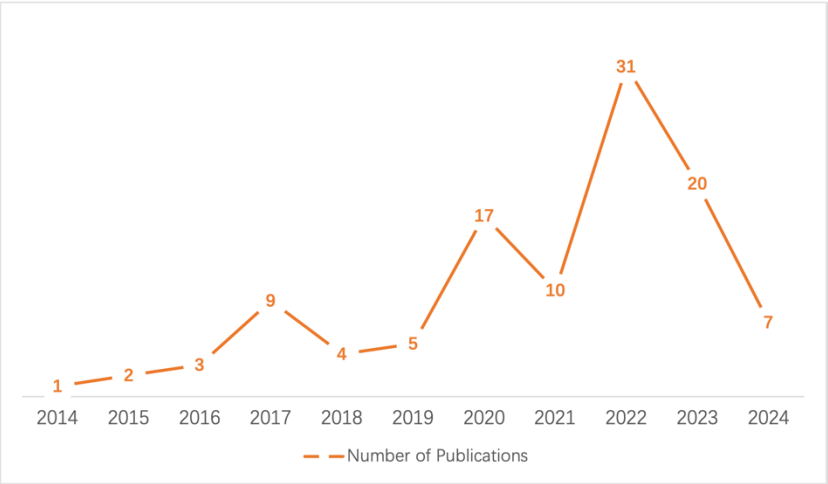

Figure 2: Distribution of publications

Slow Growth Stage (2014-2017): The first article was published in 2014 in the Journal of Marketing Intelligence & Planning, titled "Effects of Green Brand on Green Purchase Intention" by Huang *et al.* (2014). This study noted that green brand attitudes influence green purchase intentions using Structural Equation Modelling (SEM). In 2016, China's National Development and Reform Commission and 10 other departments published the "Guiding Opinions on Promoting Green Consumption". With this policy in place, the field began to attract more researchers and reached its first peak in 2017.

Continuous Growth Stage (2018-2020): During these years, scholars have focused on different aspects of green consumer behaviour, such as green hotels (Chen *et al.*, 2017), green advertisements (Luo *et al.*, 2020), electric vehicles (Sajjad *et al.*, 2020), and agricultural food (Li *et al.*, 2020). Specifically, "An Extended Model of Value-Attitude-Behaviour to Explain Chinese Consumers' Green Purchase Behaviour" in the Journal of Retailing and Consumer Services is the highest cited publication. Moreover, Cheung and To (2019) established that consumers' environmental consciousness significantly affects their green consumption behaviour. The second peak of publications occurred in 2020.

Declining Growth Stage (2021-2024): This period saw a total of 68 articles published, accounting for three-fifths of the total publications. A notable surge occurred in 2022, with 31 articles published, possibly linked to the "Implementation Plan for Science and Technology to Support Carbon Peak and Carbon Neutrality (2022-2030)". These were

issued by various Chinese ministries, among them the Ministry of Science and Technology, the National Development and Reform Commission, and the Ministry of Industry and Information Technology. However, publication numbers declined in 2023, likely due to the impact of COVID-19. By April 2024, only seven articles had been published in this field.

Performance of Authors and Institutions

Cooperative Network of Authors

Researcher networks are useful for examining how researchers collaborate within a certain field of study. Researchers working collaboratively are essential to the growth and advancement of any academic research field (Kone *et al.*, 2000). The author mapping in CiteSpace has 185 collaboration links and 187 nodes. Figure 3 displays the core researchers and their research teams in the research area, with just two publishing more than five articles.

Overall, there is a large dispersion of researchers working together with concentrated areas in some places, and certain researchers have formed academic communities. For example, there have been cooperative connections between the researchers Wang, L., Wong, Philip P. W., Wang, J. M., and Wang, J. G. Nevertheless, the level of cooperation is low and has not yet developed into a well-accepted collaborative dynamic.

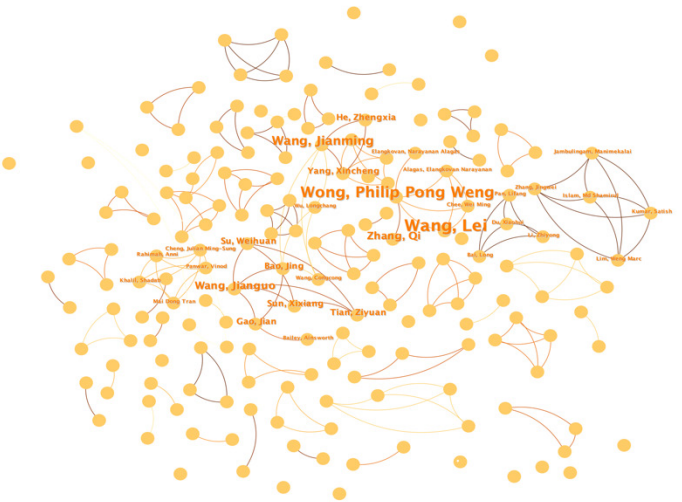

Figure 3: Cooperation network of researchers

The top five authors in terms of the number of articles are presented in Table 3. Wang Lei of Xuzhou University of Technology and Taylor's University is the most published researcher on the green purchase behaviour of Chinese consumers. Wang, L., focuses on psychology, science and technology, business and economics, and social sciences, and he has eight articles in the WoS database connected to this topic. "The Demographic Impact of Consumer Green Purchase Intention toward Green Hotel Selection in China" is the article that receives the most citations. Wang *et al.* (2024) also discovered in their recent study that subjective norms positively affected personal norms and intentions, whereas personal norms, in turn, positively influenced anthropocentric attitudes and intentions.

Wong Philip Pong Weng, from Sunway University and the National University of Singapore, is the second-most published researcher with six articles. He is also the only researcher among the top five in publication counts who is not from China. Accordingly, Wong Philip Pong Weng pays more attention to social sciences, geography, psychology, business and economics, and oceanography. It is worth mentioning that he co-authored four articles related to green purchase behaviour with Wang, L., from 2019 to 2020. They developed a comprehensive psychological framework of Social Identity Theory, Value-Belief-Norm Theory (VBN), and Theory of Planned Behaviour (TPB) (Wang *et al.*, 2024).

They discovered that the association between subjective norms and intention to stay at green hotels is partially mediated by personal norms, implicit attitudes, and explicit attitudes (Wang *et al.*, 2023). At the same time, the association between value components (biospheric, altruistic, and collectivistic), beliefs (explicit and implicit attitudes), norms (social and personal norms), and green purchase intention to visit green hotels was also examined by questionnaire (Wang *et al.*, 2023).

Table 3: Top five authors in the field of this study (2014–2024)

No.	Authors	Counts	Affiliations	Countries/ Regions
1	Wang Lei	8	Xuzhou University of Technology	China
2	Wong Philip Pong Weng	6	Sunway University	Malaysia
3	Zhang Qi	4	Xuzhou University of Technology	China
4	Wang Hong	3	Beijing Institute of Technology	China
5	Sun Ying	3	Beijing Technology and Business University	China

Cooperative Network of Institutions

Figure 4 illustrates the distribution of institutions by year between 2014 and 2024 using CiteSpace, which displays 143 nodes and 154 collaborative linkages for research-related institutions. With six articles, Zhejiang University of Finance and Economics contributed the most to the study of green purchase behaviour among Chinese consumers. The most frequently cited article is "The Impact of Different Emotional Appeals on the Purchase Intention for Green Products: The Moderating Effects of Green Involvement and Confucian Cultures". Interestingly, this study was the first to include both the disdainful and the admiring green appeals, as well as the first to verify the moderating effect of Confucian cultures.

Furthermore, Xuzhou University of Technology, Taylor's University, Sunway University, Chinese Academy of Sciences, and Beijing Institution of Technology contributed to the study on Chinese consumers' green purchase behaviour with five articles. In addition, from Figure 4, various other institutions have already begun to cooperate in this field. This includes Hangzhou Normal University and Zhejiang University of Finance and Economics, Taylor's University, Xuzhou University of Technology, National Kaohsiung University of Science and Technology, Lanzhou University, University of Science and Technology of China, Chinese Academy of Sciences, Symbiosis International University, and Southern University of Science and Technology.

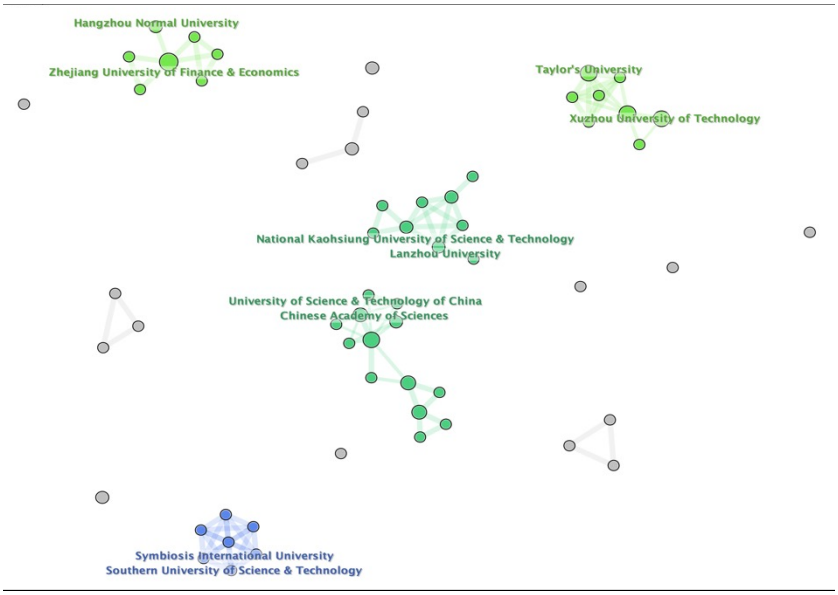

Figure 4: The cooperation network of academic institutions

From the statistical results of the number of documents issued by various institutions and the CiteSpace analysis, it can be observed that Chinese institutions are four, accounting for 80% of all the top five publishing institutions, which further illustrates China's dominant position in this field (Table 4). The first place is Xuzhou University of Technology and Zhejiang University of Finance and Economics, each with six publications. This is followed by four institutions with five publications, namely the Chinese Academy of Sciences, Taylor's University, and the University of Science and Technology of China.

Table 4: Top five institutions with publication counts in the field of this study (2014–2024)

No.	Affiliations	Counts	Countries/ Regions
1	Xuzhou University of Technology	6	China
2	Zhejiang University of Finance and Economics	6	China
3	Chinese Academy of Sciences	5	China
4	Taylor's University	5	Malaysia
5	University of Science and Technology of China	5	China

Performance of Journals, Citations, and Keywords

The Analysis of Keywords Co-occurrence

The clusters are connected to one another as illustrated in Figure 5. It is evident that the hot spots in the field of research are green purchase intention, attitudes, determinants, and behaviour, indicating that the frequency and centrality are high. This also suggests that scholars have conducted multi-angle and multi-dimensional research on consumers' awareness and behaviour of green purchase.

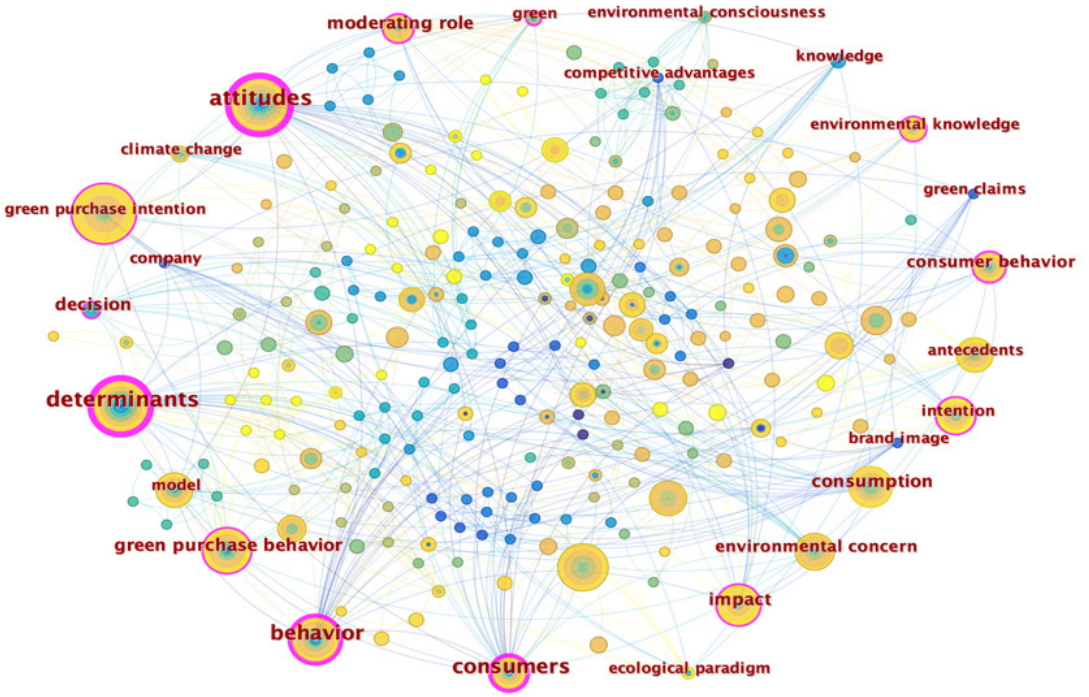

Figure 5: Keyword co-occurrence network

Based on the centrality and co-occurrence network of keywords, this study reveals the key themes and evolution path of Chinese consumers' purchase behaviour research. As depicted in Figure 6, there are 11 cluster labels: The TPB, green word of mouth, product category, green purchase behaviour, sustainable development, product attributes, green product, green enjoyment, circular economy, interpersonal influences, and multi-group analysis.

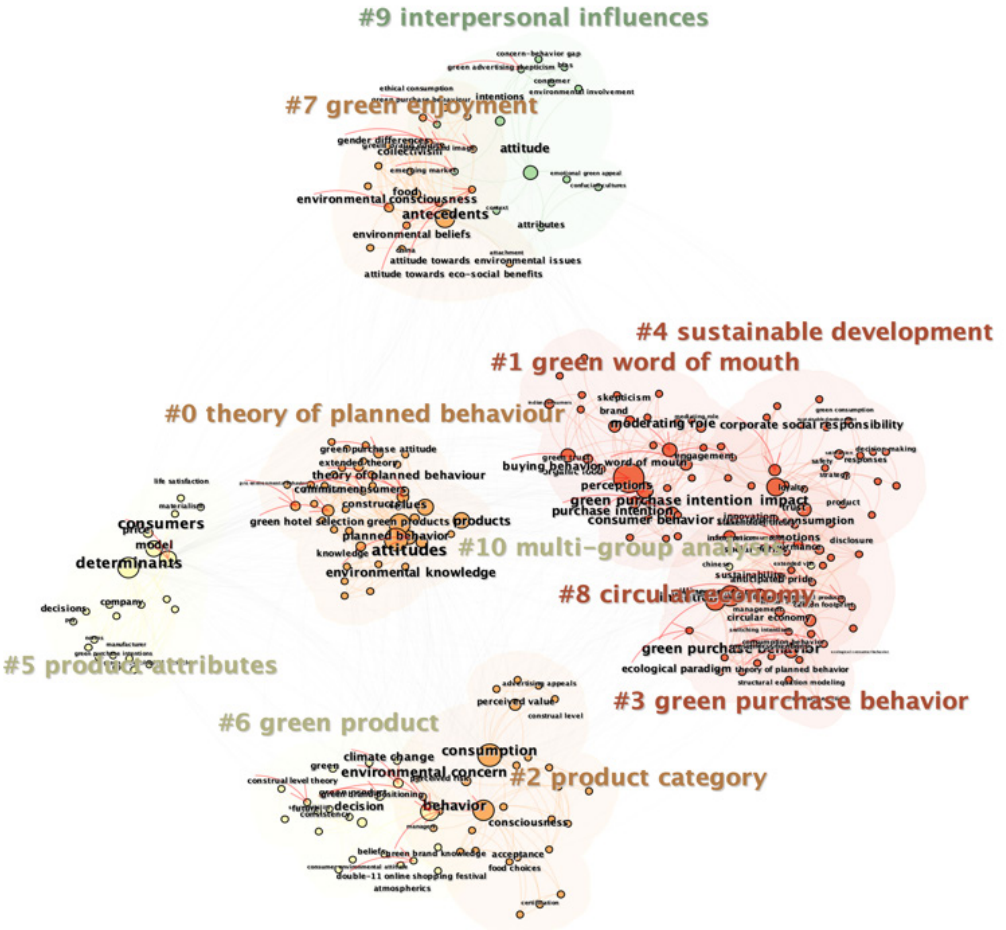

Figure 6: Clustering of keywords

Based on the cluster analysis of keywords, which summarises highly cited publications under cluster keywords and classifies clustering subjects, it is determined that the following two elements constitute the majority of Chinese consumers' green behaviour research hotspots:

1. The theoretical basis of the studies. Most studies used the TPB, VBN Theory, Value-Attitude-Behaviour Theory (VAB) and Stimulus-Organism-Response Theory (SOR). Wang *et al.* (2023) observed that the research on green hotel attendance has focused chiefly on TPB. Nonetheless, the conclusions of these studies are sometimes ambiguous or even debatable. They proposed that altruistic values favourably affect intrinsic environmental attitudes, though they adversely influence extrinsic environmental attitudes. Meanwhile, biospheric and collectivistic values favourably influence explicit environmental attitudes. Additionally, personal norms and intention to make green purchases are positively impacted by social norms. Based on an extended TPB, Zhang and Wang (2024) validated that farmers' intentions to engage in agroecology were positively impacted by their attitudes, perceived behavioural control, and subjective norms.

2. Furthermore, Cheung and To (2019) proposed an expanded VAB model to explain why customers make green purchases, and 399 Chinese consumers in Hong Kong were used as a random sample to verify the model. They discovered that consumers' values and attitudes towards environmental concerns and eco-social benefits were highly impacted by their environmental consciousness. These influences, in turn, had a favourable impact on their green purchasing behaviour. In addition, the study contributes to the understanding of environmentally driven micro-Corporate Social Responsibility (CSR) (individual-level CSR). This is achieved by illuminating the variables affecting consumers' intentions to use high-engagement items in a green economy based on SOR (Zhang *et al.*, 2024).
3. Various specific green products. Researchers focused on different green products, enriching the scope of research on consumers' green purchasing behaviour. For example, Chaturvedi *et al.* (2023)investigated hedonic, gainful, and normative consuming incentives that drive consumers' intent to purchase electric vehicles. The study targeted the consumers of green building industries in Taiwan and highlighted that green concern and trust were substantially connected to green purchase intention (Tao *et al.*, 2022). In addition, researchers from a variety of disciplines have also conducted extensive studies from the perspectives of green agricultural products (Li *et al.*, 2020; Dong *et al.*, 2022; Fu *et al.*, 2022; Liu *et al.*, 2023), apparel industry (Yang & Dong, 2017), organic food (Chang & Chang, 2017; Kamboj & Kishor, 2022), fast fashion industry (Lu *et al.*, 2022), green advertising (Luo *et al.*, 2020; Wang & Li, 2022), coffee industry (M.-F. Chen & Lee, 2015), green consumer chemicals (Patak *et al.*, 2021), and green tourism (X. V. Zhang & Chan, 2021).

The Analysis on Keywords Timeline

The keyword timeline displays the relationships between the clusters and the duration and growth of each cluster's hotspot (Guo *et al.*, 2022). As presented in Figure 7, the top 11 clusters were extracted and displayed with the node type set to keyword and the layout set to timeline view. Accordingly, the longer the time range, the earlier the cluster appeared in our research, and the longer it lasted, the more horizontally aligned the terms in the same cluster are.

Overall, the research clusters on Chinese consumers' green purchasing behaviour were strongly related to their everyday lives, which mainly consisted of housing, food, clothes, and transportation. Firstly, the green purchase intention in Cluster #0, consumption in Cluster #2, and determinants in Cluster #5 emerged early. Among them, the green hotel selection in Cluster #0, consumers' susceptibility in Cluster #2, green purchase behaviour in Cluster #3, CSR in Cluster #4, and coffee consumers in Cluster #5 were all early and persistent. Secondly, research on green buying behaviour among Chinese consumers benefited greatly from the sustainable consumption insight obtained in Cluster #6.

Thirdly, ethnic groups in Cluster #10 and sustainable living in Cluster #9 both emerged very late and were connected to the terms that came before and after them in other clusters. Additionally, stakeholders' management in Cluster #8 provided a bridging function in cross-study, which was an innovation and extension of fundamental research in a new setting with fresh requirements (Ahmad *et al.*, 2023; Liu *et al.*, 2023; Zhang *et al.*, 2024). According to antecedents of Cluster #7 fast fashion, the paper with the highest citation is "Green Branding In

Fast Fashion: Examining The Impact Of Social Sustainability Claims On Chinese Consumer Behaviour and Brand Perception". Essentially, the study underscored the significance of altruistic values in sustainability initiatives. It also provides marketers with helpful guidance to augment customer buying intentions in the context of green branding and sustainability advertising by promoting green satisfaction and brand equity (Javed *et al.*, 2024).

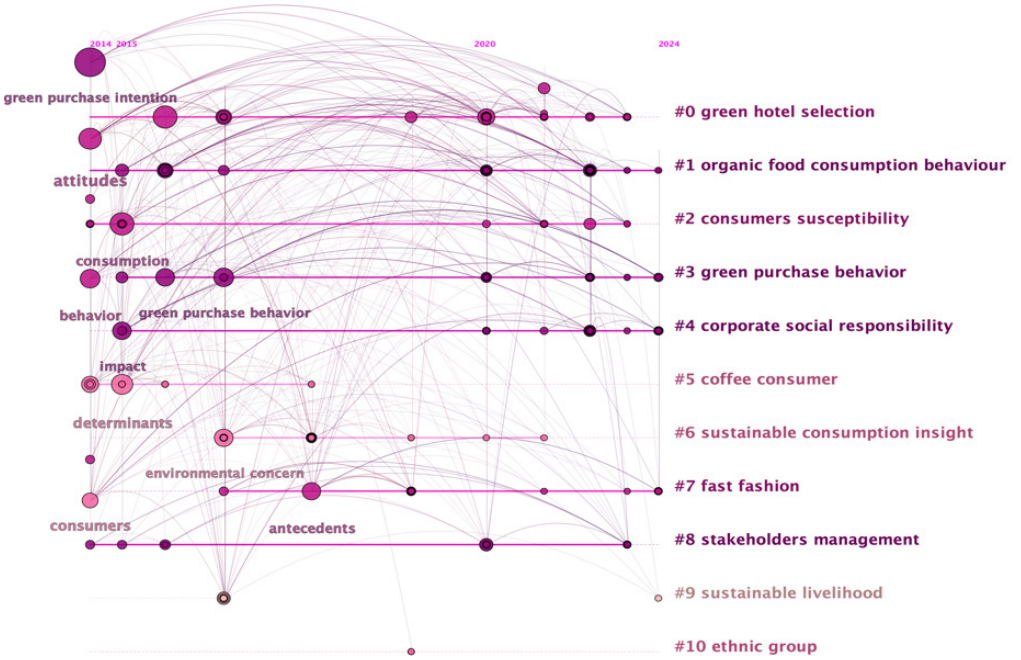

Figure 7: Timeline view of keywords analysis

The Analysis of Burst-citation Keywords

The term "burst of keywords" refers to terms that have seen a sharp rise in usage frequency over a brief amount of time and are further utilised to investigate the cutting-edge dynamics of the field of study. It also represents the abrupt influence of new concepts formed by policies or public events from a specific point forward in the field of study (Chen, 2006; Chen *et al.*, 2012). Remarkably, the explosion of keywords can highlight how hotspots and research topics in a field change over time. Moreover, it can be used to illustrate how scientific trends and hotspots are changing over time and to reflect compelling research themes throughout time (Niu *et al.*, 2022).

The research frontier is a topic or active direction in discipline growth that comes from the body of existing knowledge. The future of developing research frontiers can be observed via burst detection (Chen *et al.*, 2012). In order to represent cutting-edge circumstances and development trends in the study area, we may identify times and dynamic changes with a high keyword emergence intensity through the analysis of burst detection. Figure 8 displays the first 20 keywords, together with their start and end years, as well as their emergence frequency and intensity.

Correspondingly, the top five most bursting

keywords are "products", "information", "theory of planned behaviour", "organic food", and "values". In particular, "products" with a score of 2.8 is the term with the highest emergence intensity. The academic community has given the study under this term significant attention. Concurrently, knowledge has been a prominent subject from 2014 to 2017, with the most significant duration of emergence. Although study subjects related to Chinese consumers' green purchase behaviour are updated promptly, many research areas still exhibit ongoing development, as the strongest burst of keywords can be observed.

Top 20 Keywords with the Strongest Citation Bursts

Keywords	Year	Strength	Begin	End	2014 - 2024
knowledge	2014	1.58	**2014**	2017	
information	2015	2.43	**2015**	2017	
values	2017	1.89	**2017**	2018	
attitude	2017	1.41	**2017**	2017	
decision	2018	1.81	**2018**	2019	
green hotel selection	2019	1.59	**2019**	2020	
food	2019	1.49	**2019**	2020	
theory of planned behaviour	2020	2.28	**2020**	2021	
extended theory	2020	1.82	**2020**	2021	
green purchase attitude	2020	1.65	**2020**	2020	
willingness to pay	2020	1.36	**2020**	2020	
products	2020	2.8	**2021**	2021	
planned behavior	2016	1.46	**2021**	2021	
green products	2021	1.43	**2021**	2021	
organic food	2022	2.11	**2022**	2024	
green trust	2022	1.75	**2022**	2022	
satisfaction	2022	1.75	**2022**	2022	
perceived value	2022	1.58	**2022**	2024	
impact	2015	1.58	**2023**	2024	
corporate social responsibility	2022	1.37	**2023**	2024	

Figure 8: Top keywords with the strongest citation bursts

Overall, based on 109 articles from 2014 to 2024 compiled from the WoS database, this study addressed the current status of research on Chinese consumers' green behaviour and conducted a thorough analysis of five dimensions. According to basic statistical analysis, the trend of literature related to the green behaviour of Chinese consumers has been increasing as a whole, and future research is expected to become increasingly relevant. In terms of the cooperation network, this field study involves collaboration amongst several academics from various institutions. Eleven labels were clustered together based on the analysis of the keyword co-citation network, which characterised two current major study

issues: Theories and green products. Based on the keyword's timeline, Chinese consumers' daily lives, mainly comprised of housing, food, clothing, and transportation, were closely tied to the study clusters on their green purchasing behaviour. Meanwhile, perceived value, impact, and CSR were discovered to be likely to develop as new hotspots in this field by examining the list of bursts of keywords.

Conclusions

This study systematically reviewed 109 articles published between 2014 and 2024 on Chinese consumers' green purchasing behaviour, with the aim of providing a comprehensive overview of the field, identifying key trends, and outlining future research directions. Using bibliometric analysis and visualisation with CiteSpace, the review mapped the structure and thematic evolution of the research topic.

Although influenced by policy changes and the COVID-19 pandemic, the findings reveal that scholarship on green purchasing behaviour in China has expanded markedly over the past decade. Most of the early studies focused on consumer attitudes and intentions, drawing on the TPB, the VAB Theory, and the SOR model (Ahmad & Zhang, 2020; M. Zhang & Wang, 2024). More recent studies have broadened their scope to the influence of green branding, CSR, and sector-specific applications in hospitality, automotive, and agriculture (Fu *et al.*, 2022; Ahmad *et al.*, 2023; Troy *et al.*, 2023). Cluster analysis further indicates a shift from general purchase intentions towards examining specific product categories and socio-environmental factors, underlining the increasing importance of personal values and social norms.

Nonetheless, significant gaps still exist. That is, collaboration between authors and institutions remains limited, constraining the development of integrated analytical frameworks. In comparison, the field benefits from contributions in psychology, sociology, and economics; integration with environmental science, business ethics, and technology remains underdeveloped. Thus, many studies rely heavily on established theoretical models without adopting truly comprehensive approaches, and longitudinal analyses of behavioural change over time need to be investigated.

These findings pose important implications for practice and policy. For businesses, a clear understanding of the drivers of green purchasing behaviour is critical for developing products and marketing strategies. In response, communicating both the functional and symbolic value of green products, underpinned by credible CSR initiatives can strengthen consumer engagement and loyalty. For policymakers, advancing green consumption requires coherent regulatory frameworks, fiscal incentives, and sustained public education campaigns that enable informed, sustainable purchasing decisions.

Recommendations for Future Research

The present research on Chinese consumers' green purchasing behaviour has been comprehensively and systematically analysed. While substantial progress has been made, there remains considerable scope for further research. Due to time constraints, the current study focused on the period from 2014 to 2024. Hence, future research can identify the long-term developmental trends by extending the temporal coverage.

In addition to understanding the main characteristics of the literature through bibliometric analysis and social network analysis, this study examined collaboration networks among authors and institutions. The findings indicate that cooperation is often limited to a small number of academic institutions, with relatively low participation from industry and policy-making bodies. Therefore, future

research should explore mechanisms to strengthen cross-sectoral and interdisciplinary collaboration. This is particularly true involving environmental sciences, business, public policy, and psychology, to capture the multifaceted nature of green purchasing behaviour.

Moreover, although existing studies investigate from different perspectives such as social sciences and policy research, there is still a lack of integrative frameworks. Accordingly, future research should investigate more comprehensive ways to examine the complex relationships between socio-cultural norms, policy incentives, market mechanisms, technological developments, and green purchasing behaviour.

Finally, there is a lack of longitudinal studies that explore behavioural changes across different demographic groups, regions, and cultural contexts. Nevertheless, addressing these gaps will enhance theoretical understanding and inform targeted strategies for promoting sustainable consumption at both national and global scales.

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Conflict of Interest Statement

The authors agree that this research was conducted in the absence of any self-benefits, commercial, or financial conflicts, and declare the absence of conflicting interests with the funders.

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