

Make Your Publications Visible.

A Service of



Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre

Coman, Claudiu; Coman, Ecaterina; Cilan, Teodor Florin

Article

Emerging trends in food consumer behaviour

Amfiteatru Economic

Provided in Cooperation with:

The Bucharest University of Economic Studies

Suggested Citation: Coman, Claudiu; Coman, Ecaterina; Cilan, Teodor Florin (2025): Emerging trends in food consumer behaviour, Amfiteatru Economic, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, Vol. 27, Iss. 69, pp. 398-413, https://doi.org/10.24818/EA/2025/69/398

This Version is available at: https://hdl.handle.net/10419/319815

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.



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

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.





EMERGING TRENDS IN FOOD CONSUMER BEHAVIOUR

Claudiu Coman^{1*}, Ecaterina Coman² and Teodor Florin Cilan³

¹⁾²⁾ Transilvania University of Brasov, Brasov, Romania ³⁾ "Aurel Vlaicu" University of Arad, Arad, Romania

Please cite this article as:

Coman, C., Coman, E. and Cilan, T.F., 2025. Emerging Trends in Food Consumer Behaviour. *Amfiteatru Economic*, 27(69), pp. 398-413.

DOI: https://doi.org/10.24818/EA/2025/69/398

Article History

Received: 29 December 2024 Revised: 22 February 2025 Accepted: 31 March 2025

Abstract

Changes in consumer behaviour are shaping food industry strategies, and a broad analysis of the specialised literature is needed to provide a holistic view of trends in consumer behaviour trends. This article aims to identify the research directions in the field and the trends that could shape food markets. Through a bibliometric analysis of 947 publications indexed in the Web of Science over the past five years, five major research directions were identified and, for each of them, emerging trends were established. Key findings reveal a growing emphasis on health, sustainability and digitalisation. Consumers are demanding organic, locally sourced, healthier products due to concerns about environmental impact and personal well-being. Digital tools are transforming food consumption patterns, but innovative technologies, such as drone delivery and food innovations, 3D printed food, insect-based products or other alternative proteins, still face consumer resistance. Packaging innovations, including active and edible packaging, offer the potential to improve food quality and sustainability and change consumer behaviour. The study emphasises the importance of social norms, health consciousness and social media in shaping purchase intentions for sustainable products. This analysis offers valuable insights for academia, industry, and policymakers to anticipate market changes and effectively adapt to evolving consumer demands.

Keywords: food consumption trends, consumer behaviour, food innovations, food industry, bibliometric analysis.

JEL Classification: D11, L66, Q18, M31, Q01.

^{*} Corresponding author, Claudiu Coman – e-mail: claudiu.coman@unitbv.ro



This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. © 2025 The Author(s).



Introduction

The food industry is a crucial part of the economy and is continuously developing (Guiné et al., 2021). But in what direction is it developing? Changes in consumer preferences and behaviour are shaping food industry strategies, with significant implications for health, sustainability, and innovation (Vermeulen et al., 2020). Therefore, it is imperative to understand current and future behavioural changes. However, gaining a comprehensive understanding of consumer behaviour trends in the food sector remains a challenge for both researchers and food industry professionals. Most literature review articles in the field focus on specific, narrow topics that represent only pieces of a puzzle (Elsbach and van Knippenberg, 2020). Thus, their ability to provide a holistic view of consumer behaviour trends and their potential to influence the future of food markets is limited.

A large part of the literature reviews is focused on sustainable food consumption and organic food consumption. Vermeir et al. (2020) conducted a review of environmentally sustainable food consumption and concluded that even though many people have favourable attitudes towards sustainable food, they do not necessarily buy and consume it. Food preferences are difficult to change, given that they are part of culture and lifestyle. Vergura et al. (2023) performed an analysis of the literature from 1999 to 2021 on sustainable consumption. But the literature in the field has grown exponentially, and topics they identified as under researched, such as the effect of e-commerce on environmental sustainability and the sustainable packaging, have now become prominent trends. Other bibliometric analyses of the literature have been carried out on organic food consumption (Pant et al., 2024), recycling behaviour (Concari, Kok and Martens, 2022), ethical food consumption (Beciu, Arghiroiu and Bobeică, 2024), the influence of Social Media on consumer food behaviour (Lau et al., 2024). However, these analyses represent only small parts of the larger picture. Developing comprehensive strategies in the food market requires a broad understanding of consumer behaviour, and, to our knowledge, there is no integrative review of the literature that provides this insight.

This article aims to develop an interdisciplinary understanding of food consumer behaviour by identifying major research topics in the field of food consumer behaviour and emerging trends that may influence food markets in the future. To achieve this, the authors performed a bibliometric content analysis, which offers valuable insights into the development of the field (Donthu et al., 2021). The questions that underpinned this research are:

RQ1: What are the main research directions in the field of consumer behaviour within the food industry?

RQ2: What are the emerging trends in the field that could shape food markets?

To achieve the intended purpose, the authors structured the paper into four sections. In the first part of the paper, a brief review of the literature on food consumer behaviour is provided. In the second section, the research methodology is described. Next, the results obtained and the related discussions are presented, and the paper ends with the conclusions and implications of the research.



1. Literature review

Food consumer behaviour is a complex and dynamic field, constantly expanding, shaped by social, economic, technological, and cultural influences. Several specialised studies have aimed to capture recent developments and emerging research directions, including through the application of bibliometric analyses, which aim to provide a systematic mapping of the accumulated knowledge.

Based on the analysis of food balance sheets and national surveys on food consumption in various countries, Kearney (2010) predicted a significant increase in the consumption of processed foods, with a high intake of fats and calories, by 2050. This will be driven by accelerated urbanisation, rising incomes, the expansion of global trade, and the marketing strategies of the food industry. These changes are correlated with an increased prevalence of obesity and diet-related diseases. However, Casini et al. (2015) found that although there is still a tendency to consume processed foods and maintain a diet based primarily on animal proteins, especially among consumers with lower education levels, the emergence of a category of consumers orientated toward healthier diets became noticeable in 2011. The phenomenon is also due to messages on the social and environmental implications of food production (Pelletier et al., 2013), as well as the presence of young children in households (Frehner et al., 2021). This trend has stimulated the development of the organic food market.

In bibliometric research, significant attention has been paid to the consumption of ecological and sustainable foods. For example, Pant et al. (2024) conducted a bibliometric analysis of works indexed in the SCOPUS database on the consumption of organic foods, applying methods such as performance analysis, scientific mapping, and term co-word analysis. The results highlighted central themes such as purchase intentions, awareness of the impact of food on health, attitudes toward organic foods, the theory of planned behaviour, eco-marketing, and environmental concerns. The authors also emphasised relevant future research directions, such as deepening the understanding of organic food consumers' decision-making processes, investigating the relationship between organic food and health, supporting organic value chains, and the role of public policies in promoting food sustainability.

Also, Beciu, Arghiroiu and Bobeică (2024) conducted a bibliometric analysis on ethical behaviour in food consumption, using works indexed in the Web of Science from 1995 to 2024. The research identified five major thematic clusters, and among the emerging post-2020 terms were social media, the theory of planned behaviour, identity, masculinity, Generation Z, and alternative proteins. This orientation suggests that technological advancements and the integration of digital platforms into the food system play an increasingly important role in shaping ethical consumption behaviours.

In addition to these directions, behaviours associated with recycling and food waste reduction constitute another topic of interest. Concari, Kok and Martens (2022), through a bibliometric analysis of the literature, identified key terms such as subjective norms, the theory of planned behaviour, household food waste, food waste reduction, packaging, and environmental impact. The authors noted that the impact of technology, social media, and the COVID-19 pandemic on recycling behaviour is not adequately explored.

Lau et al. (2024) investigated, through bibliometric methods, the influence of social media on consumer food behaviour, identifying emerging themes such as the dissemination of food information through technology, the impact of digital marketing on purchase intentions, the



role of culture and education in food choices, perceptions of organic foods, and food waste management.

Overall, the literature reveals an increased focus on sustainable consumption, healthy eating, and reducing the ecological impact of food habits, trends that have been accentuated by the context of the COVID-19 pandemic, which has strengthened interest in food safety, functional foods, and online shopping (Budziński and Daziano, 2023). However, existing studies only partially capture the complexity of this field, without providing an integrative perspective on food consumption behaviour. In this context, the present article aims to provide a holistic view of current trends, which will allow the foundation of integrated strategies for the sustainable development of the food market.

2. Research methodology

To respond to the research questions, we conducted a bibliometric content analysis, applying the co-word analysis technique, as it allows one to examine "the existing or future relationship among topics in a research field by focusing on the written content of the publication" (Donthu et al., 2021, p.289). The identification of articles from the Web of Science database was carried out on November 22, 2024, applying two initial filters: works published in the last 5 years to capture current trends in the field, and those related to the topics "food industry" and "consumer behavior". The choice of these two terms was based on the objective of conducting a broad analysis without limiting the scope to specific subdomains. This allowed for the capture of thematic diversity. The exclusion criteria for the articles in the analysis are presented in Figure 1.

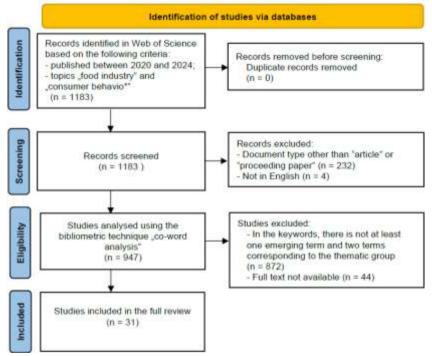


Figure no. 1. Graphical representation of the PRISMA flow



Raw data from 947 documents, published in the last five years, were downloaded from the Web of Science database in the "plain text files" format. Since the data included many similar terms, they were grouped into a thesaurus file that was uploaded to the VOSviewer software to improve the accuracy of the analysis. The type of analysis conducted was the cooccurrence of all keywords that are found in the title, abstract, and keywords established by the authors. Also, for a term to be included in the semantic map, it had to appear at least 4 times in different documents. This threshold was applied to ensure that the relationships between terms are reliably placed on the map. Thus, of the 4.798 terms, only 381 were included in the map. In the clustering process, the minimum group size was established at 50 terms, and the normalisation method was 'association strength'. Clusters were analysed, and emerging terms were identified using the overlay visualisation of the map. Since words can appear in different contexts, a comprehensive content analysis was performed on the most relevant articles from each cluster. The selection criteria required the articles to have full text available and to include at least one keyword identified as an emerging term within the authors' keyword list and two keywords corresponding to the thematic group. Therefore, a total of 31 articles were thoroughly reviewed.

3. Results and discussion

3.1. The main research directions in the field

To pinpoint the key research areas in the field of food consumer behaviour, we conducted a keyword co-occurrence analysis, which allows mapping the main topics addressed by researchers based on the keywords that are found in the title, abstract, and keywords established by the authors. The resulting network of themes highlights five main research directions (Figure no. 2), with 11.016 links between terms. It is observed that there are many connections, including between terms from different clusters, which means that many of the scientific papers analysed address broader themes. In the following, we will analyse each thematic group, specifying the main research directions identified.

The first cluster (Red) consists of 119 terms and can be named generically "Healthy food consumption behaviour". This thematic group focusses on understanding the complexity of consumer choices and their impact on health, the food industry, and sustainable development. There is growing concern about the impact of diet on health, with studies focussing on reducing nutritional risks (fat, sugar, and sodium). There is also an emphasis on preventing obesity and diabetes through nutrition education and public health policies, with researchers analysing how public policies on healthy eating influence consumers' food choices. In addition, public policies and management in the hospitality industry are focussing on strategies to reduce food waste, suggesting a growing concern about the environmental impact of food consumption.

The second group (Green) contains 73 terms and can be called "The impact of digital transformation on consumer behaviour". This cluster is focused on studying the impact of digital platforms and e-commerce on food consumer behaviour, satisfaction, and loyalty. One of the prominent keywords is COVID-19, highlighting that many consumers have become more inclined to adopt technology and mobile payment methods during the pandemic, as restrictions prevented them from eating out, prompting them to order food from home. Furthermore, this group also included studies focused on the influence of big data on improving the personalisation of the consumer experience. Emphasis is placed on how



perceived value and service quality influence consumer experiences and contribute to shaping satisfaction and loyalty. An important subtheme of this cluster is the role of social media and word-of-mouth in forming consumer behaviour.

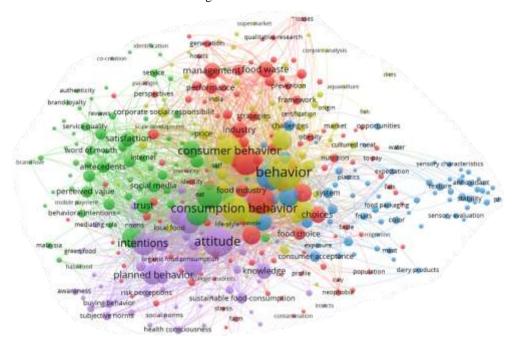


Figure no. 2. Keyword co-occurrence map for food consumer behaviour

The third research direction is focused on consumer acceptance of food innovations and forms the third thematic group (Blue), which includes 70 terms. This cluster explores new materials for smart packaging and innovative foods, studying consumer acceptance of sustainable food packaging and functional foods with radiological properties. Researchers evaluate the sensory characteristics of innovative foods and consumer perceptions of the consumption of edible insects or foods with new textures. Analysing consumers' psychological and behavioural responses to new products is important for their improvement. Another subtheme within this cluster is represented by the development of emerging technologies for food chains and sustainable production, while also analysing the migration of materials in food, as food safety is very important for the population.

The cluster 4 (Yellow) comprises 69 terms and is focused on ethical and sustainable food consumer behaviour. It explores topics such as the environmental impact of meat consumption, ecological footprints, animal welfare, responsible consumer behaviour, and sustainable labelling. The research also examines consumer preferences for local foods, cultured meat and fish, as well as the influence of complex digital and eco-labels on consumer perceptions. In addition, studies within this cluster focus on consumer segmentation based on lifestyle, motivation and involvement, emphasising the roles of ethnocentrism and materialism in food product choices.

Group 5 (Purple) contains 50 terms and focusses on studying attitudes, intentions, and food purchasing behaviours. It is known that the buyer is not necessarily the consumer of the



purchased products and, often, some of the purchased food products are not even consumed and end up being thrown away. Researchers examine the purchasing behaviour of ecoproducts, focussing on the factors that affect consumers' willingness to pay more for organic and sustainable products. These factors include personality traits, subjective norms, values, gender, and religion. Additionally, the investigation extends to purchase intentions and planned behaviours. The role of recycling behaviours and environmental concerns in product choices is also explored, as well as the significance of awareness of climate change and perceived risks. Furthermore, factors that influence food neophobia and acceptance of alternative foods, as well as people's perceptions of genetically modified foods, are analysed.

3.2. Emerging trends in the field

To identify emerging trends in consumer behaviour and preferences likely to shape food markets, we used the semantic map with overlay visualisation generated by VOSviewer based on the average year of publication (Figure no. 3). The terms highlighted in red and orange appear in more recent studies, therefore, we will consider them as emerging. Next, we will analyse the emerging terms in each cluster, highlighting how they were addressed in several articles included in the bibliometric research.

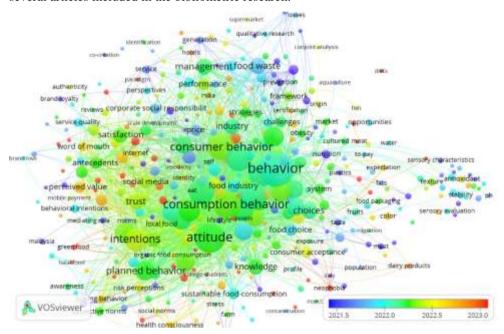


Figure no. 3. The overlay visualisation of the keyword co-occurrence map

3.2.1. Healthy food consumption behaviour

The first cluster contains most of the emerging terms. Key areas of focus include consumer health and customised marketing strategies. There is a growing interest in healthier food choices, as illustrated by terms such as: "nutrition labels", "organic products", "traditional food", "agriculture", "public health", "salt reduction", "reformulation", and "food policy". Now consumers can make healthier choices thanks to front-of-pack labels (FOPLs), which help them rank products according to healthiness to combat obesity and food-related diseases



(Muzzioli et al., 2022). An analysis of 18 countries (n=18,393) by Pettigrew et al. (2023) compared the effectiveness of five FOPLs. The Nutri-Score label proved to be the most effective, succeeded by the Multiple Traffic Lights system. On the contrary, the Reference Intakes label showed the weakest performance, while the Warning Label and Health Star Rating had moderate efficiency. Labels that feature a spectrum of colour codes have been proven to be the most impactful in the choice of healthier foods. Therefore, changing consumer behaviour towards healthier diets can be achieved gradually through clear and effective labelling strategies. In the future, these labelling systems could become industry standards, influencing both consumer purchasing behaviour and the way food manufacturers market their products.

Healthier food also means less salt. Given that excess salt leads to hypertension and cardiovascular disease, legislative measures have been taken in various countries to reduce salt consumption, such as salt taxes and sodium content labelling. Many companies have reformulated products to reduce the salt content, but consumer acceptance has been limited (Harun et al., 2023). Interestingly, research by Hurst, Hewson and Fisk (2022) revealed that salt content in crisps can be reduced by 15% without this being noticed by consumers, and by 30% by applying optimised model salts. Therefore, companies could resort to such tricks to reduce the amount of salt in products while maintaining the perception of saltiness. As more consumers demand healthier products, companies may face increasing pressure to reformulate products to conform to public health guidelines without compromising taste or consumer satisfaction.

Palm oil is another food ingredient with health implications, and consumer attitudes toward it vary significantly. On the one hand, there are compromise seekers, consumers who prioritise cost savings while favouring palm-oil-free products; and health-conscious consumers who avoid foods containing palm oil. On the other hand, there are brand-loyal consumers whose preferences remain unaffected by the presence of this ingredient (Baldassarre et al., 2023). The growing trend of people avoiding palm oil will push food companies to reformulate products and offer palm oil-free alternatives to meet this demand.

Marketing strategies to promote food products to different age groups also seem to be a trend in this cluster, reflected in terms such as "children", "college-students", "consumer choice", "food marketing", "generation z", "promotion", "source credibility". A study of 364 Romanian students found that for digital natives it is important to provide a mobile format for nutrition labelling, both to support healthier diets and to turn this information into added value (Bobe et al., 2024). In terms of marketing strategies, Generation Z is strongly influenced by social media influencers to visit fast-food restaurants. For Gen Z consumers, attractiveness, expertise, and trustworthiness of influencers are important characteristics, with micro-influencers being perceived as more credible (Ghosh et al., 2024). Additionally, Generation Z consumers take the performance of the CSR of companies into account when purchasing food products, reflecting their increased concern for environmental protection compared to other generations (Wong, 2021). Therefore, companies in the food industry should improve their green image and adopt eco-friendly marketing strategies (Ko and Jeon, 2024), as these consumers become more influential in shaping market trends.



3.2.2. The impact of Digital Transformation on consumer behaviour

The second cluster reflects the growing digitalisation of the food sector, especially due to the pandemic. Emerging terms such as: "technology acceptance", "apps", "mobile payment", "user acceptance", "online food delivery", "digital services", "consumer experience" and "word of mouth" highlight the growing role of digital platforms and tools in influencing consumer decisions, as online food ordering becomes more popular and mobile payment becomes more widely accepted. Repurchase behaviour on e-commerce platforms for fresh food is influenced on the one hand by the quality of the products and their price, and on the other hand by the quality of the services offered, more precisely, the ease of use of the online platforms, reliability, speed of response, and the convenience (Liu et al., 2023). To remain competitive, online food retailers must engage with customers and improve their online experience through innovative technologies. For example, they can use an anthropomorphic chatbot, which is positively associated with customer satisfaction compared to a standard chatbot (Klein and Martinez, 2023). And lesser-known brands need to invest in advanced website features to influence consumer behaviour (Yu, Liu and Hyun, 2024). Regarding the use of food delivery apps, it is influenced by task-technology fit, usability, social pressures, perceived expenses, validation of expectations, the quality of information, user satisfaction, and the influence of electronic word-of-mouth (Hoang, Chau and Tan, 2023). Recommendations from other customers and online reviews tend to be increasingly important in shaping consumer trust and driving the use of online and app-based food services.

Although people have accepted technology, especially due to the restrictions imposed by the pandemic, they are still reluctant to embrace some innovative technologies, such as drone food delivery services. First, because consumers are not familiar with how drones are used, considering it too complex, and they are unaware of the benefits of using them for food delivery. Moreover, it can be challenging to resolve certain issues in cases of non-compliant deliveries (Khalil et al., 2024). Therefore, to increase the acceptance of innovative technology in this area, it is important for retailers to address consumer doubts and conduct information and education campaigns. Thus, drone delivery could revolutionise last-mile logistics of food delivery, reducing costs, and improving speed.

3.2.3. Consumer acceptance of food innovations

In the cluster focused on consumer acceptance of food innovations, emerging terms suggest a strong emphasis on technological, sensory, and functional aspects of food products that influence consumer preferences and market trends. People are quite resistant to food innovations due to taste and safety concerns. In this regard, researchers are exploring how various additives influence the texture and sensory characteristics of 3D printed foods and consumer acceptance, suggesting that the incorporation of additives such as probiotics, polyphenols, and vitamins can effectively enhance the nutritional value of 3D printed foods (meat, dairy, cereals, and fruits), while also improving consumer attitudes and reducing neophobia (Abedini et al., 2024). In the future, 3D printed food could disrupt the traditional food industry, offering personalised products that could also be healthy.

Other innovative products are those based on edible insects, but producers face significant resistance due to consumer aversion. To reduce disgust, manufacturers could use transparent packaging with images of familiar ingredients instead of cricket images on the labels. Moreover, they should mention some claims about taste in order to create positive taste expectations (Naranjo-Guevara, Stroh and Floto-Stammen, 2023). Even if insect-based foods



are a source of sustainable protein, at this point, insect-based products are a niche and will likely remain so for a long time if consumer attitudes do not change.

Terms such as "active packaging", "antioxidant", "resistance", "shelf-life" highlights the efforts of producers to improve the safety, quality and shelf life of food, while also contributing to reducing food waste. Non-migratory active packaging extends the shelf life of products and prevents polymer migration in food, offering "cleaner" products, according to the demands of consumers (Kay and Goddard, 2024). Consumer food choices may be influenced by this type of packaging in the future. An alternative aimed at minimising the solid waste from traditional packaging is edible packaging. Products that use this innovative solution should be promoted to consumers with higher levels of personal innovation and lower attitudinal ambivalence (Zhang, Wen and Shao, 2024). Packaging has the power to influence consumers to try new products. An experiment revealed that exposure to incongruent colour-flavour packaging for popular flavour of a product increased participants' willingness to purchase the same product in novel flavours. Food brands could strategically use this packaging technique to differentiate themselves and this can lead to an expansion of flavour options across various food categories.

3.2.4. Ethical and sustainable food consumer behaviour

The emerging themes in the fourth cluster are related to "environmental sustainability", "environmental awareness", "eco-labels", "green" and "sustainable food", "supply chain management" and "consumer ethnocentrism". In this cluster, there is an emphasis on the consumption of green, eco-labelled foods due to environmental concerns. Moreover, consumer ethnocentrism fosters a strong preference for locally sourced fruits and vegetables (Miguel, Marques and Duarte, 2022), a trend observed even among chefs when preparing meals in restaurants (Ülker and Karamustafa, 2023). However, local products are not necessarily organic. One solution to offer fresh and organic local products is the use of hightech controlled environment agriculture (CEA). However, consumers have some doubts about its sustainability, resource use, and the perceived naturalness and affordability of such foods (Broad, Marschall and Ezzeddine, 2022). Drawing from the theory of planned behaviour, motivations to consume eco-innovative products are related to sustainable attitude (especially "belief in food manufacturing and packaging"), subjective norms ("Influence of social media and advertising") and perceived behavioural control ("experience with ecoinnovative products") (Mansilla-Obando et al., 2024). Therefore, companies should invest in sustainable production practices and effectively communicate these efforts to consumers, especially through social media.

To reduce the impact of animal farming on the planet, emphasis is placed on the need to decrease animal production and reduce consumption through various legislative methods such as: implementing taxes on meat, providing subsidies for alternatives to animal products, introducing carbon trading schemes in agriculture, and more drastic regulations of animal production (Bryant et al., 2024). In this regard, efforts are being made to promote a diet based on cultured proteins (cultured meat, fish, and dairy). A study conducted in Denmark, Finland, and Norway (N = 3862) revealed that factors such as high levels of innovation, social norms, and personal beliefs influence people's intentions to consume cultured proteins (Engel et al., 2024). But it will probably take years before consumers agree to consume such products. Until then, in some countries attempts are made to promote the consumption of game meat



instead of farmed meat, because it is healthier and the production does not raise ethical issues (Kempen, Wassenaar and Tobias-Mamina, 2023).

3.2.5. Attitudes, intentions and food purchasing behaviours

As can be seen, the clusters intersect on certain topics. And cluster 5 includes topics similar to those in the other clusters, but the emphasis is on attitudes and purchase intentions. Terms like "buying behaviour", "decisions", "intentions" and "risk perceptions" highlight the focus on understanding the processes and motivations behind the choice of the customer. Taking into account the elements of the theory of planned behaviour, research revealed that attitudes and perceived behavioural control significantly influence purchasing decisions related to green foods. Furthermore, the use of social media and digital marketing actions have a significant influence on intentions to buy more green food (Armutcu et al., 2024). Other factors influencing the intention to purchase organic products are health consciousness, the credibility that the product is organic, and the functional value (Garg, Narwal and Kumar, 2024), considering that there are many fraudulent organic foods on the market (Murphy et al., 2022). Moreover, consumers' willingness to pay for environmentally certified food is influenced by the perceived environmental benefits of eco-labels, as well as whether or not they have children. (Singh et al., 2023). Another important factor is the adequate advertising of sustainable products, as consumers are not willing to buy products they are not familiar with (Gallo et al., 2023). Thus, investing in consumer education and product awareness will be the key for brands to succeed in the green food market.

A study on genetically modified foods revealed that people who are more health conscious and environmentally aware tend to recognise the advantages and potential risks associated with to the consumption of these foods. However, the level of perception of risk does not significantly influence the likelihood of consuming genetically modified foods among consumers with different purchasing frequencies for these products (Hui et al., 2024). Therefore, the purchase of such products is influenced not only by risk perception but also by other pragmatic considerations that influence consumption patterns that should be investigated.

This study complements previous bibliometric analyses by providing a comprehensive view of food consumer behaviour and how it transforms as food markets evolve. These insights provide a roadmap for researchers and professionals in the food industry to focus on emerging areas of consumer demand and market evolution. Emerging trends in consumer behaviour reflect a growing concern for sustainability and health, with the results aligning with the bibliometric analysis conducted by Pant et al. (2024). Contrary to Kearney's (2010) forecast, there is a gradual shift of consumers towards healthier products, as well as an attempt by producers to offer alternatives to animal proteins, with low fat content but high nutritional value. On the other hand, we identified an increased importance of transparency, both in terms of labelling and packaging, as well as in terms of marketing strategies. Consumption of organic, local, and innovative products is on the rise, and factors such as eco-labelling, alternatives to animal-based products, reformulation of products, and media influences are playing an important role in shaping the food market. These results align with the research of Beciu, Arghiroiu and Bobeică (2024), which highlights the importance of social media and technology in influencing consumer choices, particularly in the context of ethical behaviour.



In addition to other bibliometric studies in the field, we identified important emerging trends regarding the impact of digital transformation on consumer behaviour and consumer acceptance of food innovations. Therefore, it is evident that the success of the future food market will depend on the ability to integrate digital technologies and online platforms into marketing strategies and the development of new products. However, the success of these trends depends on reducing consumer scepticism and perceived risks through transparency and effective communication strategies, and adapting the food industry to meet expectations related to sustainability, health, and social responsibility.

Conclusions

The study provides valuable information on consumer behaviour within the food sector. First, the bibliometric content analysis conducted in this research highlighted key clusters, which correspond to the main research directions (RQ1), namely healthy food consumption behaviour; the impact of digital transformation on consumer behaviour; consumer acceptance of food innovations; ethical and sustainable food consumer behaviour, and attitudes, intentions and food buying behaviours. Second, emerging trends in the field were identified and discussed how they could shape food markets in the future (RO2). Consumers are increasingly demanding organic, locally sourced, healthier, and sustainable products, driven by concerns for environmental impact and personal well-being. In fact, the food market is trying to respond to these demands with the help of technological innovations, such as hightech controlled environment agriculture, active and edible packaging, and useful digital tools. On the other hand, companies are trying to increase consumer acceptance of innovations that consumers are resisting, such as drone delivery, 3D printed food, insect-based products, cultured meat, or genetically modified products. The study highlights the role of social norms, health consciousness and social media in shaping consumer intentions to purchase sustainable products.

The findings have significant theoretical and practical implications for both academia and businesses. The article contributes to the existing literature by providing a broad understanding of food consumer behaviour and identifying emerging research directions, which will help academic researchers focus on less studied topics that represent behavioural trends in the field. For businesses and policymakers, the study provides valuable information to anticipate market changes and adapt effectively to address challenges and take advantage of emerging opportunities. Considering the importance of sustainability, for generation Z, and the role of social media and word-of-mouth in shaping consumer behaviour, it is important for firms to invest in sustainable production practices, as well as effectively communicate these efforts to all stakeholders, especially through social media. To reduce consumer neophobia about food innovations, food producers must be transparent and invest in consumer information and education campaigns, addressing perceived risks with respect to food safety and sustainability. On the other hand, local food companies can use the increase in ethnocentrism of consumers and promote the local origin of the products offered. These are just a few of the trends identified in the research, but many other emerging patterns in consumer behaviour also offer insight for businesses. Understanding these evolving trends, along with consumer scepticism and risk perceptions, can give businesses a competitive advantage.



The results of the study come with certain limitations. A single database was used to extract the documents included in the analysis, and the results could be slightly different if the research had been extended to other databases. In addition, the findings are based on current trends in consumer behaviour, which can change rapidly, because the food sector is highly dynamic and subject to rapid change.

Future research should focus on emerging topics identified in this paper to help food industry producers and policymakers to make informed decisions. For example, certain regulations, such as a salt tax, may not be the best option because products with less salt taste different and are not as easily accepted by consumers. Under these conditions, manufacturers reformulate products and include different additives to preserve taste, but are these healthier than salt? In addition, exploring the effectiveness of different educational and marketing strategies to address consumer scepticism about new technologies and innovative products will be crucial to fostering broader adoption.

References

- Abedini, A., Sohrabvandi, S., Sadighara, P., Hosseini, H., Farhoodi, M., Assadpour, E., Alizadeh Sani, M., Zhang, F., Seyyedi-Mansour, S. and Jafari, S.M., 2024. Personalized nutrition with 3D-printed foods: A systematic review on the impact of different additives. *Advances in Colloid and Interface Science*, 328, art. no. 103181. https://doi.org/10.1016/j.cis.2024.103181.
- Armutcu, B., Ramadani, V., Zeqiri, J. and Dana, L.-P., 2024. The role of social media in consumers' intentions to buy green food: evidence from Türkiye. *British Food Journal*, 126(5), pp.1923-1940.
- Baldassarre, F.F., Santovito, S., Campo, R. and Dilorenzo, G., 2023. Sustainable and healthy purchasing behaviors towards palm oil-based food in Italy. *British Food Journal*, 126(1), pp.156-172. https://doi.org/10.1108/BFJ-11-2022-0968.
- Beciu, S., Arghiroiu, G.A. and Bobeică, M., 2024. From origins to trends: a bibliometric examination of ethical food consumption. *Foods*, 13(13), p.2048.
- Bobe, M., Procopie, R., Pamfilie, R., Bumbac, R., Giuşcă, S., Mihai, M. and Jurconi, A., 2024. Towards a digital native era in nutrition: introducing the m-format labeling. *Journal of Business Economics and Management*, 25(2), pp.246-267.
- Broad, G.M., Marschall, W. and Ezzeddine, M., 2022. Perceptions of high-tech controlled environment agriculture among local food consumers: using interviews to explore sense-making and connections to good food. *Agriculture and Human Values*, 39(1), pp.417-433. https://doi.org/10.1007/s10460-021-10261-7.
- Bryant, C., Couture, A., Ross, E., Clark, A. and Chapman, T., 2024. A review of policy levers to reduce meat production and consumption. *Appetite*, 203, art. no. 107684. https://doi.org/10.1016/j.appet.2024.107684.
- Budziński, W. and Daziano, R., 2023. Preferences for online grocery shopping during the COVID-19 pandemic the role of fear-related attitudes. *Journal of Choice Modelling*, 47, art. no. 100416. https://doi.org/10.1016/j.jocm.2023.100416.
- Casini, L., Contini, C., Romano, C. and Scozzafava, G., 2015. Trends in food consumptions: what is happening to generation X? *British Food Journal*, 117(2), pp.705-718. https://doi.org/10.1108/BFJ-10-2013-0283.



- Concari, A., Kok, G. and Martens, P., 2022. Recycling behaviour: Mapping knowledge domain through bibliometrics and text mining. *Journal of Environmental Management*, 303, art. no. 114160. https://doi.org/10.1016/j.jenvman.2021.114160.
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N. and Lim, W.M., 2021. How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, pp.285-296. https://doi.org/10.1016/j.jbusres.2021.04.070.
- Elsbach, K.D. and van Knippenberg, D., 2020. Creating High-Impact Literature Reviews: An Argument for 'Integrative Reviews'. *Journal of Management Studies*, 57(6), pp.1277-1289. https://doi.org/10.1111/joms.12581.
- Engel, L., Vilhelmsen, K., Richter, I., Moritz, J., Ryynänen, T., Young, J.F., Burton, R.J.F., Kidmose, U. and Klöckner, C.A., 2024. Psychological factors influencing consumer intentions to consume cultured meat, fish and dairy. *Appetite*, 200, art. no. 107501. https://doi.org/10.1016/j.appet.2024.107501.
- Frehner, A., Zanten, H.H.E.V., Schader, C., Boer, I.J.M.D., Pestoni, G., Rohrmann, S. and Muller, A., 2021. How food choices link sociodemographic and lifestyle factors with sustainability impacts. *Journal of Cleaner Production*, 300, art. no. 126896. https://doi.org/10.1016/j.jclepro.2021.126896.
- Gallo, T., Pacchera, F., Cagnetti, C. and Silvestri, C., 2023. Do Sustainable Consumers Have Sustainable Behaviors? An Empirical Study to Understand the Purchase of Food Products. Sustainability, 15(5), art. no. 4462. https://doi.org/10.3390/su15054462.
- Garg, S., Narwal, K.P. and Kumar, S., 2024. Exploring the determinants of purchase intention of organic consumers for organic food items: an exploratory study in India. *British Food Journal*, 126(3), pp.1238-1258.
- Ghosh, P., Upadhyay, S., Srivastava, V., Dhiman, R. and Yu, L., 2024. How influencer characteristics drive Gen Z behavioural intentions of selecting fast-food restaurants: mediating roles of consumer emotions and self-construal. *British Food Journal*, 126(12), pp.4072-4092.
- Guiné, R.P.F., Florença, S.G., Barroca, M.J. and Anjos, O., 2021. The duality of innovation and food development versus purely traditional foods. *Trends in Food Science & Technology*, 109, pp.16-24. https://doi.org/10.1016/j.tifs.2021.01.010.
- Harun, Z., Shahar, S., You, Y.X., Manaf, Z.A., Majid, H.A., Chia, Y.C., Haron, H., Michael, V., Sukiman, N.S., Taib, A.F.M., He, F.J. and Brown, M.K., 2023. Perceptions, barriers and enablers of salt reduction in Malaysian out-of-home sectors (MySaltOH): from the point of view of policy-makers and food industries. *Health Research Policy and Systems*, 21(1), p.17. https://doi.org/10.1186/s12961-023-00965-z.
- Hoang, H., Chau, N.T. and Tan, T.L., 2023. Dataset of food delivery app users at a public university: Insights into digital transformation. *Data in Brief*, 48, art. no. 109161. https://doi.org/10.1016/j.dib.2023.109161.
- Hui, X., Amponsah, R.K., Antwi, S., Gbolonyo, P.K., Ameyaw, M.A., Bentum-Micah, G. and Adjei, E.O., 2024. Understanding the societal dilemma of genetically modified food consumption: a stimulus-organism-response investigation. Frontiers in Sustainable Food Systems, [online] 8. https://doi.org/10.3389/fsufs.2024.1364052.
- Hurst, K.E., Hewson, L. and Fisk, I.D., 2022. Sensory perception and consumer acceptance of commercial and salt-reduced potato crisps formulated using salt reduction design rules. *Food Research International*, 155, p.111022.

- Kay, I.P. and Goddard, J.M., 2024. Identifying Performance Conditions for a Radical Scavenging Active Packaging Material. *Packaging Technology and Science*, 37(10), pp.955-964. https://doi.org/10.1002/pts.2838.
- Kearney, J., 2010. Food consumption trends and drivers. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 365(1554), pp.2793-2807. https://doi.org/10.1098/rstb.2010.0149.
- Kempen, E., Wassenaar, A. and Tobias-Mamina, R., 2023. South African consumer attitudes underlying the choice to consume game meat. *Meat Science*, 201, art. no. 109175. https://doi.org/10.1016/j.meatsci.2023.109175.
- Khalil, A., Shankar, A., Bodhi, R., Behl, A. and Ferraris, A., 2024. Why Do People Resist Drone Food Delivery Services? An Innovation Resistance Theory Perspective. *IEEE Transactions on Engineering Management*, 71, pp.13038-13048. https://doi.org/10.1109/TEM.2022.3202485.
- Klein, K. and Martinez, L.F., 2023. The impact of anthropomorphism on customer satisfaction in chatbot commerce: an experimental study in the food sector. *Electronic Commerce Research*, 23(4), pp.2789-2825. https://doi.org/10.1007/s10660-022-09562-8.
- Ko, J.-H. and Jeon, H.-M., 2024. The Impact of Eco-Friendly Practices on Generation Z's Green Image, Brand Attachment, Brand Advocacy, and Brand Loyalty in Coffee Shop. *Sustainability*, 16(8), art. no. 3126. https://doi.org/10.3390/su16083126.
- Lau, E.A., Rukmana, A.Y., Uhai, S., Mokodenseho, S. and Tapaningsih, W.I.D.A., 2024. Mapping Research on the Influence of Social Media on Consumer Food Behavior a Bibliometric Approach. *The Eastasouth Journal of Social Science and Humanities*, 1(02), pp.84-94.
- Liu, M., Jia, W., Yan, W. and He, J., 2023. Factors influencing consumers' repurchase behavior on fresh food e-commerce platforms: An empirical study. *Advanced Engineering Informatics*, 56, art. no. 101936. https://doi.org/10.1016/j.aei.2023.101936.
- Miguel, L., Marques, S. and Duarte, A.P., 2022. The influence of consumer ethnocentrism on purchase of domestic fruits and vegetables: application of the extended theory of planned behaviour. *British Food Journal*, 124(13), pp.599-618. https://doi.org/10.1108/BFJ-11-2021-1208.
- Murphy, B., Martini, M., Fedi, A., Loera, B.L., Elliott, C.T. and Dean, M., 2022. Consumer trust in organic food and organic certifications in four European countries. *Food Control*, 133, art. no. 108484. https://doi.org/10.1016/j.foodcont.2021.108484.
- Muzzioli, L., Penzavecchia, C., Donini, L.M. and Pinto, A., 2022. Are Front-of-Pack Labels a Health Policy Tool? *Nutrients*, 14(4), art. no. 771. https://doi.org/10.3390/nu14040771.
- Naranjo-Guevara, N., Stroh, B. and Floto-Stammen, S., 2023. Packaging Communication as a Tool to Reduce Disgust with Insect-Based Foods: Effect of Informative and Visual Elements. *Foods*, 12(19), art. no. 3606. https://doi.org/10.3390/foods12193606.
- Pant, S.C., Saxena, R., Pant, D.K. and Singh, R., 2024. Organic food consumption: A bibliometric–content analysis. *Journal of Consumer Behaviour*, 23(5), pp.2730-2750. https://doi.org/10.1002/cb.2367.
- Pelletier, J.E., Laska, M.N., Neumark-Sztainer, D. and Story, M., 2013. Positive Attitudes toward Organic, Local, and Sustainable Foods Are Associated with Higher Dietary



- Quality among Young Adults. *Journal of the Academy of Nutrition and Dietetics*, 113(1), pp.127-132. https://doi.org/10.1016/j.jand.2012.08.021.
- Pettigrew, S., Jongenelis, M.I., Jones, A., Hercberg, S. and Julia, C., 2023. An 18-country analysis of the effectiveness of five front-of-pack nutrition labels. *Food Quality and Preference*, 104, art. no. 104691. https://doi.org/10.1016/j.foodqual.2022.104691.
- Ülker, M. and Karamustafa, K., 2023. Understanding the use of Local Food Through the Extended Theory of Planned Behaviour. *DETUROPE The Central European Journal of Tourism and Regional Development*, 15(1), pp.66-94. https://doi.org/10.32725/det.2023.004.
- Vergura, D.T., Zerbini, C., Luceri, B. and Palladino, R., 2023. Investigating sustainable consumption behaviors: a bibliometric analysis. *British Food Journal*, 125(13), pp.253-276.
- Vermeir, I., Weijters, B., De Houwer, J., Geuens, M., Slabbinck, H., Spruyt, A., Van Kerckhove, A., Van Lippevelde, W., De Steur, H. and Verbeke, W., 2020. Environmentally Sustainable Food Consumption: A Review and Research Agenda From a Goal-Directed Perspective. *Frontiers in Psychology*, [online] 11. https://doi.org/10.3389/fpsyg.2020.01603.
- Vermeulen, S.J., Park, T., Khoury, C.K. and Béné, C., 2020. Changing diets and the transformation of the global food system. *Annals of the New York Academy of Sciences*, 1478(1), pp.3-17. https://doi.org/10.1111/nyas.14446.
- Wong, M.C., 2021. Does corporate social responsibility affect Generation Z purchase intention in the food industry. *Asian Journal of Business Ethics*, 10(2), pp.391-407. https://doi.org/10.1007/s13520-021-00136-9.
- Yu, S., Liu, Y. and Hyun, E., 2024. From Technology to Traffic: How Website Technological Sophistication, Brand Recognition, and Business Model Innovation Drive Consumer Traffic in Korean E-Commerce. *Journal of Theoretical and Applied Electronic Commerce Research*, 19(3), pp.2051-2069. https://doi.org/10.3390/jtaer19030100.
- Zhang, X., Wen, H. and Shao, X., 2024. Understanding consumers' acceptance of edible food packaging: The role of consumer innovativeness. *Journal of Retailing and Consumer Services*, 80, art. no. 103903. https://doi.org/10.1016/j.jretconser.2024.103903.