The 7th International Conference on Economics and Social Sciences
Exploring Global Perspectives:
The Future of Economics and Social Sciences
June 13-14, 2024
Bucharest University of Economic Studies, Romania

Analysing Consumer Behaviour:
The Pathway to Sustainable Food Consumption

Cezara-Georgiana RADU[1]

Abstract

This article aims to analyse the relationship between consumer behaviour and sustainable food choices. It will investigate factors influencing consumer behaviour. Understanding these factors is crucial to guide efforts to promote sustainable food consumption. The connections analysed between consumer behaviour and sustainability will provide a good opportunity to understand clearer and better the role of the environment in our lives. The research will be based on the examination of specialised scientific articles, as well as the utilisation of field data accessed through databases and specialised websites. Subsequently, the collected data will be used and interpreted to better understand consumer behaviour regarding sustainable food consumption and to offer suggestions for improving sustainability within the food industry.

Keywords: consumer behaviour, sustainability, agrifood, sustainable food consumption, nutrition.

JEL Classification: Q01, Q56, O10, M20.

1. Introduction

In terms of the level of sustainability of food, it is considered an increasingly present problem today. Furthermore, the environmental footprint of households is influenced by food production and consumption. The fact that people are not actively involved and have trouble truly understanding the concept of food sustainability leads to the fact that those measures that are supposed to improve the situation cannot be applied and analysed effectively. These measures are based on internal factors, such as the level of awareness of food sustainability issues among consumers, shopping in an environmentally friendly manner, the reuse of food waste, and also external factors such as sustainable sales (Hansen, 2022).

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[1] Bucharest University of Economic Studies, Bucharest, Romania, radu.cezara.georgiana@gmail.com.

An important aspect to achieve sustainable food systems and processes consists of examining food habits. How individuals choose to consume products actually influences the entire production and distribution process of that product. However, today there is an increasing emphasis on sustainable diets that are friendly to the environment and that are closely related to social and economic norms. All these things underline the fact that there is a growing requirement to improve consumption behavioural patterns in the area of food sustainability (Panatsa & Malandrakis, 2024).

Taking into account that today food sustainability has become an extremely important topic at the global level, it is necessary to analyse the consumption patterns of individuals to be able to better identify the way in which their actions affect the environment and what impact there is on it. The role of the article is to identify the factors that influence consumers to make certain food decisions, but also how food sustainability can be improved by adopting certain eating habits in a sustainable manner.

In order to understand how a sustainable food system can be achieved, it is very important to understand what are the reasons behind consumer choice, what makes them choose, for example, food waste over sustainable consumption at certain time, and also what are the obstacles they face in this process. The purpose of these analyses is to better understand the behaviour of consumers in certain situations and implicitly to offer solutions, so that we can integrate sustainability in the food field.

2. Problem Statement

Sustainability at a global level has become an increasingly studied aspect and, at the same time, consumers, seeing the impact that their consumption decisions have on the environment, have begun to be more attentive to them. An example of this is India, where consumers have understood that a sustainable consumption model is also based on decisions and habits that benefit it, from simple recycling to efficient use of food resources (Sharma et al., 2022).

Among the factors that influence consumers' food choices are those related to supply and technology. More specifically, it is well known that for a consumer, it is essential that the products purchased to be found in the vicinity of his home and the range to be varied, with a well-made stock. It has been observed that technology can help in this regard by the fact that if you opt for an online order, then the products do not necessarily have to be in the consumer area but simply have to exist in the stock of the stores. Thus, more and more companies have started to invest considerably in online stores, helped by technology, in order to have as many customers as possible, but looking at it from another perspective, many consumers who do not have much time available have made the transition to online shopping, and the choices related to sustainable products can be analysed in much more detail, not being pressured by the time allocated for physical shopping activity (Panatsa & Malandrakis, 2024).

Studies have also shown that many consumers find it difficult to trace the origin of the food they eat. Specifically, if a food product is considered organic or sustainably sourced, simply mentioning it is not enough, and product labels can often be misleading. For this reason, the best sources of information are those of accredited institutions that can offer certificates regarding these types of products (Dolfsma et al., 2021). At the national and international levels, specialised organisations have formulated a series of nutritional guidelines. However, implementing it is not easy as consumer habits are very difficult to change, especially if consumers have formed it over the years. However, it is necessary to promote nutritional guidelines among consumers to increase awareness about food sustainability (Irz et al., 2015).

However, greenhouse gas emissions, the damage to biodiversity, and also the excessive use of natural resources, such as water or the pollution of the seas and oceans, are directly related to the level of production of agri-food companies and to the consumption of individuals. For these reasons, recommendations have been made for people to focus more on eating whole foods, respectively to consume fish from sustainable sources. However, the implementation of these suggestions also depends a lot on how consumers perceive them and whether they are biased toward them (Ford et al., 2023).

3. Research Questions / Aims of the Research

Q1: What are the main reasons behind consumers' choice to purchase sustainable food?
Q2: What are the main barriers consumers face in adopting a sustainable food consumption behaviour?
Q3: What are the social and ecological consequences of adopting a sustainable food consumption behaviour?

4. Research Methods

The research methodology is based on VOSviewer analyses and data collection. Initially, a search was conducted in the academic literature to identify relevant articles on consumer behaviour in the context of sustainable food consumption. This search was based on the use of academic databases such as Science Direct and Scopus, accessed through the database provided by the University of Economic Studies. A relevant number of articles, totalling 723, were downloaded for bibliometric analysis using VOSviewer.

This software identified the visualisation of keyword networks and their co-occurrence in the academic literature. It is important to note that the 723 downloaded articles were not used directly in the drafting of the literature review. For this purpose, a smaller subset of relevant and significant articles was selected. These served as the basis for reviewing and synthesising the literature within the article.

5. Findings

As stated previously, VosViewer software was used for bibliometric analysis. It processed 723 downloaded articles, focussing on their keywords. VOSViewer suggested a minimum frequency of 5 appearances for a keyword, which was adhered to. Out of the initial 4086 keywords, 374 met this requirement. Then a more specific set of 60 keywords was extracted and 29 keywords were chosen as relevant for the study. Generic terms such as "article," "study," and "survey" were removed.

The nodes represent keywords or ideas, and their size reflects how often they appear. VOSViewer uses unique colours for each group of keywords or ideas (Cruz-Cárdenas et al., 2021). Thus, 3 clusters, 394 links, and a total link strength of 3913 were recorded.

The main node of cluster 1 (red) is formed around the keyword 'sustainability', which continues to contribute to the appearance of other groups such as 'food waste' and 'environmental impact'. This red node has a very strong connection with a green node, named 'consumer behaviour', which represents the main node of cluster 2 (green). It contains groups such as 'food preference', 'nutritional value', 'food packaging', 'decision making'. On the other hand, compared to cluster 1, which has 14 keywords, cluster 2 has only 12. Finally, group 3 (blue) includes only 3 keywords, but one of them is a node name 'perception' and the other 2 groups are 'awareness' and "willingness to pay".

Figure 1. Co-occurrence network of articles - Keywords
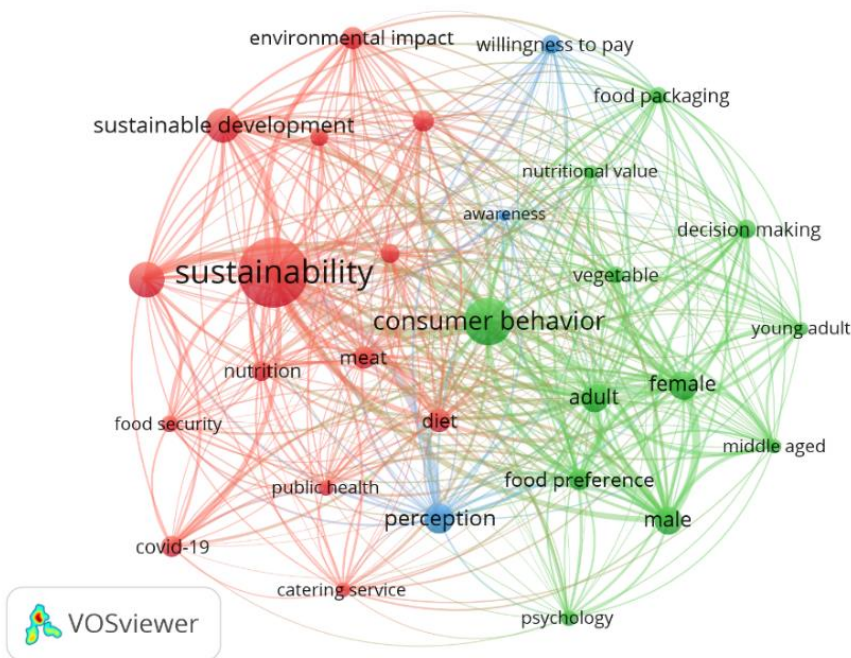
Source: VOSviewer software.

In the figure above, it can be seen that the main link between the 3 clusters is given by the term sustainability. Thus, consumer behaviour is analysed from several points of view, such as whether or not they emphasise food safety or how much they are willing to pay to buy sustainable agri-food products. Studies have shown that during the COVID-19 pandemic, people used home ordering a lot, but there were also many people who began to learn to cook and even to do it in a sustainable way, reusing food scraps. At the same time, it was found that many consumers began to pay attention to the nutritional values of the products purchased, this being done by analysing the product labels. However, it is known that these labels are not always made for the benefit of consumers and are difficult to understand. On the other hand, consumers' food preferences are also related to the taste and price of the products. Sustainable products have been observed to not always taste as pleasant as traditional ones, making consumers slightly reluctant to buy them, and most of them are much higher in price.

Thus, in order to achieve sustainable purchasing and consumption systems among individuals, it is necessary for each person to become more aware of the fact that their actions affect the environment, and better meal planning is a smart way to combat food waste, which is a factor that affects the population globally.

**Table 1. Trend of food sustainability in 2021 for Romania**

Romania		
Trend	**Score**	**Rank**
Food loss and waste	55	45/78
Sustainable agriculture	63	49/78
Nutritional challenges	65	45/78

Source: The Economist
https://impact.economist.com/projects/foodsustainability/interactive-world-map/.

In Table 1 it can be seen that Romania is among the countries that do not excel in terms of food sustainability, this sustainability index was achieved in 2021, from which it can conclude that things have improved now, but not significantly. Food waste is the main problem and one that persists. Although sustainable agriculture leaves much to be desired in Romania, because first of all, the infrastructure does not help farmers so that they consider opting for sustainable cultivation and production methods, but also because drought and the lack of professional irrigation systems contribute to smaller harvests. For this reason, many farmers resort to various ways to force the growth of agricultural products. However, consumers are starting to emphasise more and more nutritional values because they are directly related to quality of life, better eating habits, and implicitly this can ultimately lead to better sustainable agri-food systems for both people and the environment.

Figure 1. The level of concern about food sustainability in the UK in 2023 (%)
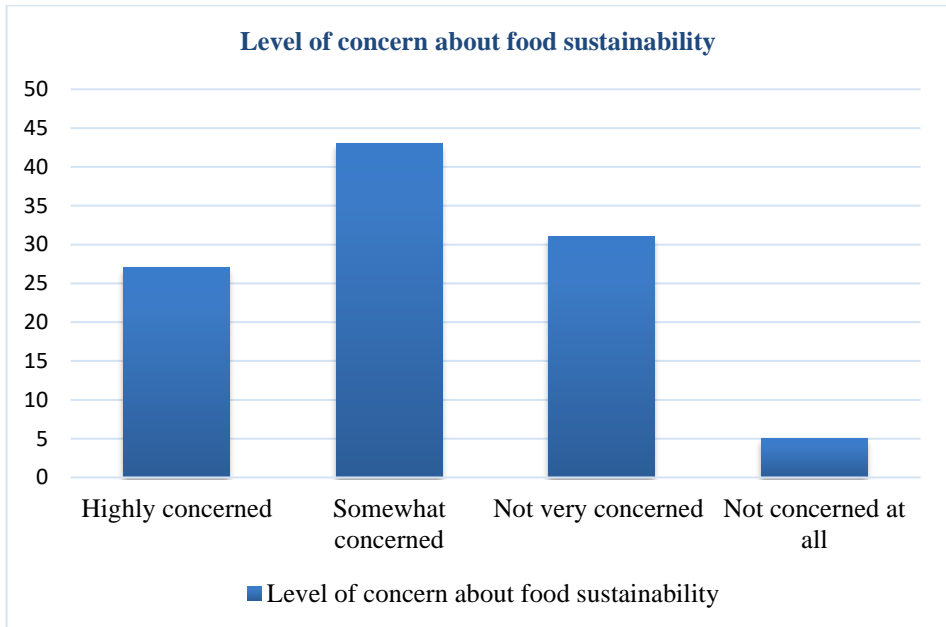
On the other hand, in graph 1 it can be seen that the level of concern for food sustainability is not high in the UK either, but compared to Romania, these consumers are more concerned about this aspect than those in Romania. The main reasons can be a better awareness of the problem, but also higher income, which allow these consumers to allocate a larger budget for sustainable food products.

6. Conclusions

In order to achieve sustainable food systems, collaboration between consumers and producers is essential. Profit is the main goal of a company from an economic point of view, but it must be obtained in a way that respects the environment and its resources. On the other hand, consumers must understand that natural resources are not unlimited, quite the opposite, with their main characteristic being scarcity. This means that a consumer should think twice before wasting food.

At the same time, good involvement of specialized institutions and the promotion of nutritional guidelines can help in time create new healthy eating habits, both for humans and the environment.

Following the bibliometric analysis, it was found that there is a strong link between sustainability and consumer behaviour, the latter being influenced by various factors, such as the price of products, their availability, and also the contribution they bring to their own health.

Globally, there are improvements related to food sustainability, but for things to progress even further, it is necessary for individuals to understand that rational and sustainable consumption is a benefit for both their own health and the environment.

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