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# A literature review on the drivers and barriers of organic food consumption in China

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## Abstract

Research interest in organic food consumption has increased significantly worldwide, but a systematic analysis of this phenomenon in China is still lacking. The existing studies in this area are wide-ranging and fragmented, and there is a lack of comprehensive research into the drivers and barriers specific to the Chinese context. Based on a literature review of 26 articles spanning from 2011 to 2021, this article employs the consumption values theory and the innovation resistance theory to discern patterns on the drivers and barriers of organic food consumption in China. The findings show that the most explored drivers include the functional values of healthiness and safety. Within the social value realm, environmental concern and symbolic value emerge as important influences on Chinese consumers. Conditional values shed light on factors such as perceived healthiness and certification/organic labeling. Regarding barriers, an aspect of research less analyzed, the article finds key obstacles being price sensitivity, perceived uncertainty, lack of knowledge or information, lack of reliability, and lack of availability or visibility.

**Keywords:** Organic food consumption, Systematic literature review, Consumption values theory, Innovation resistance theory, Barriers and drivers, China

## Introduction

In recent decades, the demand for organically produced food has increased significantly worldwide (Willer et al. 2023), which has been accompanied by a growing interest in academic research on drivers and barriers of organic food consumption (Kushwah et al. 2019a, b, c). The most crucial driver for organic food consumption is rising health consciousness (Gundala and Singh 2021; Rana and Paul 2020). People easily associate organic food consumption with a healthy lifestyle. They associate organic food with better taste, high nutritional value, non-genetic modified organisms (non-GMOs), non-synthetic food additives, and no residues (Bosona and Gebresenbet 2018; Brata et al. 2022; Hernández et al. 2019; Iqbal et al. 2021; Ishaq et al. 2021; Leyva-Hernández et al. 2021; Melović et al. 2020; Migliorini et al. 2020; Milić et al. 2022; Nafees et al. 2022; Nagy-Pércsi and Fogarassy 2019; Nguyen et al. 2019; Rana and Paul 2020; Rodríguez-Bermúdez et al. 2020; Slamet et al. 2016; Soroka and

Wojciechowska-Solis 2019; Soroka et al. 2021; Stolz et al. 2017; Tandon et al. 2021; Tomić Maksan 2021; Ünal et al. 2019; Vehapi and Mitić 2021; Wojciechowska-Solis et al. 2022). Such self-centered or egoistic values are the premier reasons driving people to buy organic food (Vega-Zamora et al. 2014).

As environmental issues, especially climate change, have increasingly become the focus of public and governmental attention in recent decades, environmental protection is becoming another important reason for consuming organic food (see Bazaluk et al. 2020; Brata et al. 2022; Czudec 2022; Hashem et al. 2018; Iqbal et al. 2021; Ishaq et al. 2021; Leyva-Hernández et al. 2021; Łuczka 2019; Nafees et al. 2022; Slamet et al. 2016; Stolz et al. 2017; Ünal et al. 2019). Other altruistic reasons also have an impact on organic food consumption, such as animal welfare, supporting regional farmers and the local economy. However, some altruistic reasons also point to the value of reputation (Leyva-Hernández et al. 2021; Milestad et al. 2017; Van de Grint et al. 2021; Wojciechowska-Solis and Barska 2021). Health, the environment, and other altruistic reasons make the analysis of organic food consumption a complex one that contains elements of structure and agency at different levels.

In terms of the barriers of organic food consumption, the generally high price is the most important reason inhibiting purchasing behavior (Dangi et al. 2020; Gallar Hernández et al. 2019; Gundala and Singh 2021; Rodríguez-Bermúdez et al. 2020; Soroka and Wojciechowska-Solis 2019; Vehapi and Mitić 2021; Vega-Zamora et al. 2014; Kushwah et al. 2019a, b, c). Especially in the regions commonly referred to as the Global South, organic products do not have a large market share and belong to niche products (Wu and Takács-György 2022). Many people simply cannot afford to pay the high prices for organic food. The lack of information prevents consumers from acquiring knowledge about organic products (Dangi et al. 2020; Vehapi and Mitić 2021). Few people really know about the characteristics of organic products and the corresponding certifications, which, in addition to food scandals, is also a reason for a lack of trust (Gundala and Singh 2021; Lin et al. 2021; Winter 2017).

China is the third largest market for organic food in 2021 with 9.1 percent (11.3 billion euros) of the global market (Willer et al. 2023: 22) with an increase of 319.000 ha (+ 13%) between 2020 and 2021 (Willer et al. 2023: 19); however, its per capita consumption is with eight Euro per person far from the top ten countries, which are mostly from North America and Europe (Willer et al. 2023: 63). The organic products industry in China started in the 1990s (Zhang et al. 2020). Recently, food safety, environmental and health issues have become increasingly important in China and many other countries around the world, especially under the influence of the COVID 19 pandemic (Qi et al. 2020; Qi and Ploeger 2021; Rodríguez-Pérez et al. 2020; Scacchi et al. 2021; Xie et al. 2020). The demand for organic products is increasing rapidly, not only in the regions commonly referred to as the Global North but also in China (Li et al. 2019). The Chinese government is actively promoting environmentally sustainable agriculture (Wilkes and Zhang 2016; Yu 2016) while at the same time striving for poverty reduction initiatives (Wang et al. 2020a, b). Traditionally, agricultural economists have seen these goals as contradictory in the context of wealth creation. However, the increasing environmental problems arising from conventional agricultural practices have led to a re-evaluation of this historical perspective.

Over the past decade, several papers have been published on the drivers and barriers to organic food consumption in China. However, a comprehensive review has not yet been published, and this article aims to fill this research gap. A systematic literature review (SLR) summarizes and critically analyzes the existing literature. It cannot only provide transparent and reproducible research results, but also helps researchers identify research gaps and future research directions in the area under study. Because studies on organic food consumption come from a variety of journals with varying scope, regions, and audiences, conducting a SLR has the advantage of limiting the scope of the review through a set of criteria (Kushwah et al. 2019a, b, c). This article, therefore, aims to systematically organize the results of previous work and present a structured understanding using the SLR approach (Paul et al. 2021). The objective is to summarize the drivers and barriers of the selected papers with the theory of consumption values (Sheth et al. 1991) and with the innovation resistance theory (Ram and Sheth 1989) as organizing principles. To the best of our knowledge, Kushwah et al. (2019a, b, c) are the first to present the framework for a SLR on motives and barriers of organic food consumption without limiting the geographical scope. This article focuses on reviewing the drivers and barriers of organic food consumption in the Chinese context, drawing support from Kushwah's et al. (2019a, b, c) framework. We focus on answering the following research question: *What are the drivers and barriers of organic food consumption in China?*

The article is organized as follows: The second section provides an explanation of the theories of consumption values and innovation resistance. Following this, the third section details the methodology employed. Sections “[Drivers of organic food consumption in China](#)” and “[Barriers of organic food consumption in China](#)” analyze the drivers and barriers related to organic food consumption in China. The concluding section offers insights drawn from the study, identifies potential avenues for future research, and outlines the paper's limitations.

## Theories of consumption values and innovation resistance

Kushwah et al. (2019a, b, c) used the theory of consumption values (Sheth et al. 1991) and the theory of innovation resistance (Ram and Sheth 1989) to arrange the drivers and barriers of organic food consumption. This section presents these two theories for a better understanding of the guiding principles for the SLR.

### Theory of consumption values

The theory of consumption values contributes to the general understanding of consumer choice behavior (Sheth et al. 1991) and to determine if consumers' purchase decisions are influenced by consumption values or not (Chakraborty et al. 2022). The theory proposes five consumption values: functional, social, emotional, epistemic, and conditional. Sheth et al. (1991: 160–162) define each value as follows:

*Functional value: The perceived utility acquired from an alternative's capacity for functional, utilitarian, or physical performance. An alternative acquires functional value through the possession of salient functional, utilitarian, or physical attributes. Functional value is measured on a profile of choice attributes.*

*Social value: The perceived utility acquired from an alternative's association with one or more specific social groups. An alternative acquires social value through*

*association with positively or negatively stereotyped demographic, socio-economic, and cultural-ethnic groups. Social value is measured on a profile of choice imagery.*

*Emotional value: The perceived utility acquired from an alternative's capacity to arouse feelings or affective states. An alternative acquires emotional value when associated with specific feelings or when precipitating or perpetuating those feelings.*

*Emotional value is measured on a profile of feelings associated with the alternative.*

*Conditional value: The perceived utility acquired by an alternative as the result of the specific situation or set of circumstances facing the choice maker. An alternative acquires conditional value in the presence of antecedent physical or social contingencies that enhance its functional or social value. Conditional value is measured on a profile of choice contingencies.*

*Epistemic value: The perceived utility acquired from an alternative's capacity to arouse curiosity, provide novelty, and/or satisfy a desire for knowledge. An alternative acquires epistemic value by questionnaire items referring to curiosity, novelty, and knowledge.*

As previous studies on organic food define functional value in terms of biological attributes of products (Govindasamy et al. 2006; Rahnama 2017), Kushwah et al. (2019a, b, c) categorize all drivers related to product-related attributes of organic food into functional value, i.e., quality, no harmful ingredients, sensory aspects, food safety, nutritional value, natural content, freshness, and health attributes of organic food. "Health as a functional value" refers to the fact that organic food has a health-promoting function as a product attribute. The answer to this category would be, for example, "I buy organic food because it is healthy."

The social value of organic food is related to consumers' self-concept and utilitarian motives (Sweeney and Soutar 2001; Yoo et al. 2013), such as recommendation, social recognition, reputational interest, self-identity, environmental interest, support for local farmers and regional production, animal welfare (Ditlevsen et al. 2019; Nandi et al. 2016; Puska et al. 2018; Shin et al. 2019). Previous studies suggest that individual emotions such as happiness, satisfaction, joy, pleasure, fun, and enjoyment (Hamzaoui Essoussi and Zahaf 2009; Janssen 2018) are part of emotional value and significantly related to purchasing decisions (Kushwah et al. 2019a, b, c).

The conditional value associated with organic food consumption includes convenience, health as a personal attribute, media exposure, children at home or members at home, and local pollution risk (Aschemann-Witzel and Aagaard 2014; Orlando 2018; Pham et al. 2019). In addition, Kushwah et al. (2019a, b, c) group personal health concerns caused by actual health problems or a proactive approach to maintaining health into conditional value. We have assigned conditional values to all factors when it comes to "attitude", "awareness", "perception", e.g. "attitude towards food safety", "health awareness", "perceived health". We assume that these values belong to the individual attitude, not to the function of the products themselves. If the "attitude" or "awareness" is very high, then we would expect someone to buy the "healthy food" no matter how high the price is or how much effort it takes them to get it. For example, the answer to the category "Health as a conditional value" would be: "I buy organic food because it is healthy, and health is very important to me."

The epistemic value connected with organic food consists of nostalgia, fashion, knowledge, and familiarity with organic food (Kushwah et al. 2019b).

### **Theory of innovation resistance**

Ram and Sheth (1989) developed the innovation resistance theory to explain why customers resist innovations even though they are considered necessary and desirable. They define innovation resistance as the resistance consumers have to an innovation, either because it represents a potential change from a satisfactory status quo or because it conflicts with their belief structure. The most important barriers are divided into three functional barriers (usage, value, and risk barriers) and two psychological barriers (tradition and image barriers) (Ram and Sheth 1989).

The usage barrier is caused by an innovation that is not compatible with existing workflows, practices, or habits (Ram and Sheth 1989). In context with organic food consumption, barriers like limited variety, availability, low visibility in the shop (Vega-Zamora et al. 2014), inadequate information, and convenience, belong to the usage barrier (Kushwah et al. 2019a, b, c).

A value barrier arises if an innovation cannot offer a strong performance-to-price value compared with product substitutes, so that the customers are not motivated to change their previous options (Ram and Sheth 1989). In the organic food context, time and price are the two main barriers caused by value differences that hinder consumption (Kushwah et al. 2019a, b, c).

The risk barrier refers to the resistance caused by the risk and uncertainty inherent in a new product (Ram and Sheth 1989). In terms of organic food, previous studies suggest three leading risk barriers, i.e., doubt about the labelling and certification agencies, skepticism about the processes, and uncertain authenticity of the label or certificate (Sondhi 2014; Torres-Ruiz et al. 2018a).

The tradition barrier arises when an innovation leads to a culture change among customers (Ram and Sheth 1989). In the context of organic food, a tradition barrier is associated with the change of sensory characteristics. For example, a customer may traditionally judge the quality of a product based on sensory experiences (smell, taste, appearance, odor). However, this tradition may not be appropriate for the new product, so the customer is not motivated to adopt this innovation (Kushwah et al. 2019a). Another form of tradition barrier arises from shorter shelf life. For example, a customer might be used to buying food once a week and storing it for a long time. Therefore, the customer would have to change his or her lifestyle to adapt to the shorter shelf life of organic food (Lillywhite et al. 2013; Vega-Zamora et al. 2014). A third form of tradition barriers concerns satisfaction with conventional products and lack of knowledge about organic food (Vega-Zamora et al. 2014). Customers may not consider buying organic food if they are satisfied with conventional products (Botonaki et al. 2006; Vega-Zamora et al. 2014).

The image barrier is due to stereotypical ideas associated with some identities of the new product, such as origin, brand, product category (Ram and Sheth 1989). In the case of organic food consumption, prior studies have mentioned two major types, i.e., perceived skepticism and lack of any perceived difference (Kushwah et al. 2019a, b, c). For



**Fig. 1** The application of the SPAR-4 SLR protocol to organic food consumption in China. Source: Authors based on Paul et al. (2021: 6)

example, customers may not believe that there are any differences between conventional food and organic food (Misra and Singh 2016; Torres-Ruiz et al. 2018b).

## Methodology

### Process of the systematic literature review

We use a SLR to assemble, arrange and assess peer-reviewed journal articles (see Paul et al. 2021; Castro Campos 2022) on organic food consumption in China (Fig. 1). Performing a SLR allows researchers to discover patterns of previous findings, understand

the depth and details of current findings, and identify gaps for further investigation (Shaffril et al. 2020; Xiao and Watson 2019).

In the *identification* phase, we try to find out what are the drivers and barriers of organic food consumption in China. The articles used are journal articles written in English from Web of Science (WoS). In the *acquisition* phase, we search the *WoS Collection* using the following criteria: The editions are *all*. The search field is limited to the topic, which includes searches title, abstract, author keywords, and keywords plus. The search keywords are *organic food consumption in China*. The total number of papers returned from the search is 280. Since the number of papers is manageable to read and purify, the search period remained unlimited.

In the *organization* phase, we focus on the publication period, geographic coverage, and variables applied in the selected articles used to analyze and interpret the drivers and barriers to organic food consumption in China.

In the *purification* phase, we read the abstracts of 280 papers and identified 30 relevant papers for review. After we read all 30 papers, another four papers were excluded because they did not fit the topic perfectly, leaving a total of 26 papers for analysis (see attachment Table 2).

For the *evaluation* phase, following Kushwah et al. (2019a, b, c), we develop a coding structure based on the theory of consumption values (Sheth et al. 1991) and the theory of innovation resistance (Ram and Sheth 1989). The theory of innovation resistance proposes five consumption values: *functional*, *social*, *emotional*, *conditional*, and *epistemic* values (Sheth et al. 1991). The innovation resistance theory is used to divide the barriers of organic food consumption into two categories: *functional* and *psychological* barriers (Ram and Sheth 1989). This SLR follows these two theories to classify the different dimensions of drivers and barriers of organic food consumption in China.

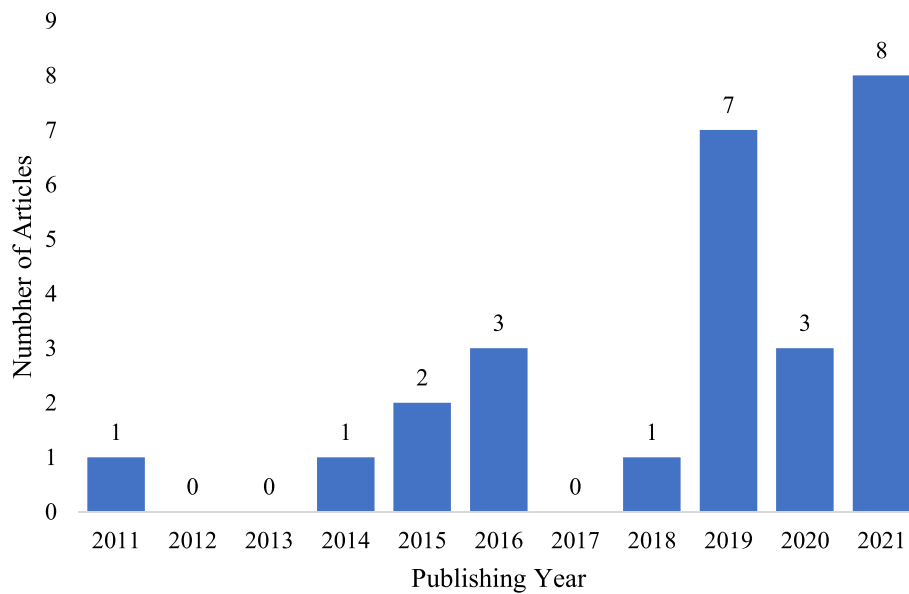
### **Publishing timeline**

The 26 articles were all published between 2011 and 2021. Although the search year was not restricted, no articles on organic food consumption in China before 2011 could be found in WoS. This suggests that organic food consumption in China may not have been a topic of research interest before 2011. According to Li (2020), the first organic product appeared in 1990 for export. After that, the Chinese organic food certification system developed gradually. In addition, the Ministry of Agriculture was unwilling to support organic agriculture in the early years because of the need to feed the large population and the lack of arable land in China (Sternfeld 2009).

Figure 2 shows the number of articles published in the years from 2011 to 2021. The number of published articles shows an increasing trend of research on organic food consumption in China over the last decade, which might also indicate that organic food consumption has recently become more important for the Chinese market.

### **Methods and theories used**

In this review, 22 of the selected articles used a quantitative approach, while two articles used qualitative methods (articles 20, 26) and two articles (articles 22, 24) used a mixed methods approach (see list of articles in the attachment Table 2).



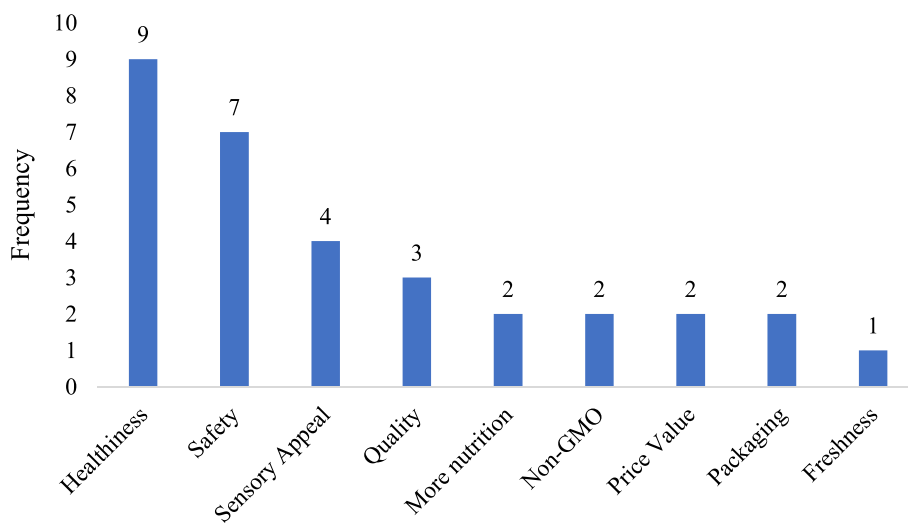
**Fig. 2** Number of publications by year. Source: Authors based on the literature (attachment Table 2)

This suggests that there is an underrepresentation of qualitative or mixed methods research to investigate organic food consumption in China.

Of the 22 quantitative articles, six articles used the Theory of Planned Behavior (TPB) (articles 3, 12, 15, 17, 19, 25) and three articles used the Extended Theory of Planned Behavior (E-TPB) (articles 5, 8, 16); these were the most used theories to study organic food consumption in China. Under the TPB the independent variables are attitude towards behavior, subjective norms, and perceived behavioral control (Ajzen 1991). The E-TPB widens the independent variables with more perspectives, for example moral attitude, health consciousness, the impact of COVID-19 (Qi and Ploeger 2021) or moral norms, health consciousness, and environmental concern (Chang and Chen 2022; Pangaribuan et al. 2020).

**Geographical scope**

In terms of geographical scope, seventeen of the selected articles are from eastern China (articles 1, 3, 4, 8, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, 23, 24, 26). Most consumers of organic food belong to the affluent class living mainly in the big cities in eastern China. Eight articles (articles 2, 5, 7, 9, 14, 16, 22, 25) use nationwide samples to represent the situation in mainland China as a whole. One article (article 6) uses samples from southwest China, but mainly from the major city of Chengdu. This shows that articles primarily focus on regions where economic development is strongest. Fewer articles address the situation in medium-sized and small towns, let alone in rural areas, although it could be assumed that traditional agricultural practices in remote regions of China might be organic, but without being certified, and that consumption of organic food might actually be widespread.



The Effective Factors within Funtional Values

**Fig. 3** Frequency of Occurrence of the Effective Factors within Functional Values from the Reviewed Papers. Source: Authors based on the literature (attachment Table 2)

### Drivers of organic food consumption in China

#### Functional value

According to Sheth et al. (1991), functional value is the perceived benefit derived from the ability of an alternative to perform functionally, usefully, or physically. In terms of organic food consumption, functional attributes such as quality, absence of harmful ingredients, sensory properties, food safety, nutritional value, freshness, and health confer functional value to organic foods (Kushwah et al. 2019a, b, c). According to the classification, 13 of the reviewed papers analyze functional values as drivers (see attachment Table 2 papers 1, 4, 10, 12, 14, 15, 16, 20, 22, 23, 24, 25, 26). The different effective factors are organized according to the frequency of their occurrence in the reviewed papers (Fig. 3). The most frequently analyzed factor is healthiness ( $n=9$ ) as a product attribute, followed by safety ( $n=7$ ), sensory appeal ( $n=4$ ), quality ( $n=3$ ), more nutrition ( $n=2$ ), non-GMO ( $n=2$ ), price value ( $n=2$ ), packaging ( $n=2$ ), and freshness ( $n=1$ ) (Fig. 3).

We cover specific findings in the literature as follows. Thøgersen et al. (2015) found that believing in healthiness, better taste (sensory appeal), and absence of pesticide residues (safety) was significantly positively correlated with the attitude of buying organic vegetables. Liu et al. (2021) found that functional value and health value had a direct significant effect on purchase behavior. Sirieix et al. (2011a, b) reported that health was the main motive for consuming organic products. James et al. (2019) found that the perception of organic tea as a healthy alternative was a significant predictor for the organic tea purchase intention. Lu et al. (2019) indicated that the perceived health benefits of consuming organic wines positively influenced consumers' attitudes toward organic wines and their purchase intentions. In the study of Hasimu et al. (2017), health care and safety concerns were the key factors influencing organic consumption.

In addition, the observed importance of packaging suggests that an adequate packaging is also a key purchase driver at least for unaware consumers (Hasimu et al.

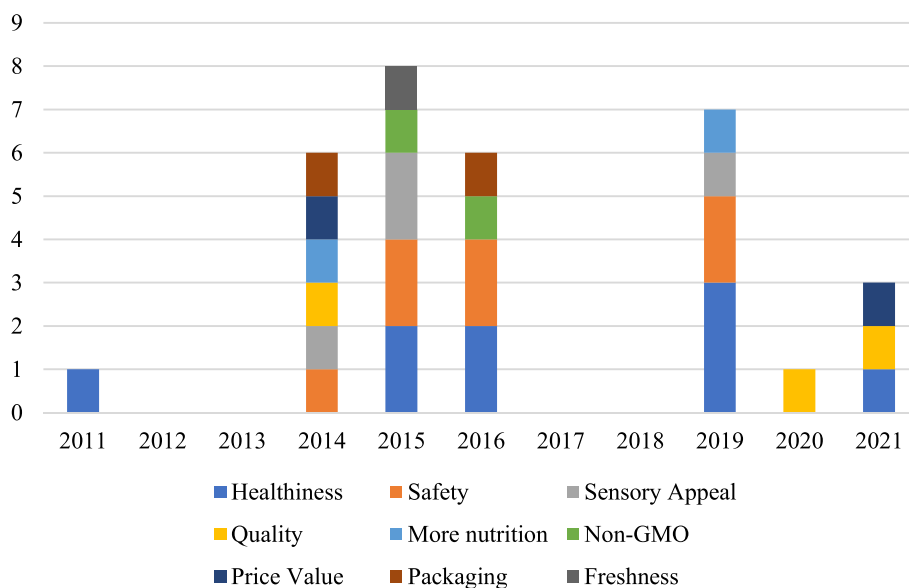
2017). Jan et al. (2019) found that health value and safety value had positive effects on purchase attitude, while purchase attitude had a significant effect on purchase behavior. Xie et al. (2015) revealed that the most important motive of buying organic food was the expected positive health effects. According to the results, the second most important motive was the absence of chemical residues (safety). In addition, better taste (sensory appeal), freshness and GMO-free were also cited as the main motives for buying organic food (Xie et al. 2015).

Bai et al. (2019) found that beliefs about being safe and more nutritious were significantly positive predictors of attitudes toward organic food. Further, the belief that organic food was “safer” had the most contribution to the attitude (Bai et al. 2019). Unlike Thøgersen et al. (2015) and Xie et al. (2015), Bai et al. (2019) found that taste did not have a significant impact, mainly because it had a low average score. Chen et al. (2014) divided the respondents in three groups: safety conscious, gastronomes, and sceptics. According to their results, the group “safety conscious” and “gastronomes” believed food safety and information about nutritional value and quality to be most important. The sensory appeals like smell, taste and appearance of the organic food was relatively more important for the group of “safety conscious” in the purchase decision compared with the other two groups, and the value of organic food relative to its price was important to this group as well (Chen et al. 2014). Packaging was one of the important considerations for the group of “sceptics” in deciding on whether to buy organic food (Chen et al. 2014).

Bu et al. (2020) indicated that product quality had a positive effect on perceived healthiness of organic tea, while the perceived healthiness had a positive influence on purchase intention directly as well as indirectly through attitude toward organic tea. However, the results of Cao et al. (2021) revealed that quality did not have a statistically significant effect on purchase behavior. McCarthy et al. (2016) investigated the difference of the reasons for buying organic food between certified organic buyers and non-certified organic buyers. The reason of “non-GMO” revealed a significant difference between the two groups, while the reasons about “safety and health” did not show a significant difference (McCarthy et al. 2016). This indicates that safety and healthiness as product attribute of organic food are already known to most people, but non-GMO is not. McCarthy et al. (2016) also reported that only 31 percent of the sample knew that GMOs were not allowed in certified organic food.

Figure 4 shows the trends and differences in the functional value category from 2011 to 2021. Healthiness is the main concern, with attention increasing in 2019, while safety was an important factor from 2014 to 2019. Sensory appeal is considered in 2014, 2015 and 2019. Quality and higher nutritional value are also factors, albeit less frequently, with a mention in 2014, 2020 and 2021. GMO-free labeling gains importance in 2015 and 2016, while price value plays a role in 2014 and 2021 and packaging in 2014 and 2016. Freshness plays a subordinate role but is given some consideration in 2015.

In summary, in the category of functional value, “healthiness” and “safety” are the most researched and mentioned drivers among the reviewed papers. These are also the key drivers in most of the other countries in both emerging markets and mature markets (Brata et al. 2022; Gundala and Singh 2021; Iqbal et al. 2021; Ishaq et al. 2021; Leyva-Hernández et al. 2021; Melović et al. 2020; Migliorini et al. 2020; Milić et al. 2022; Nafees

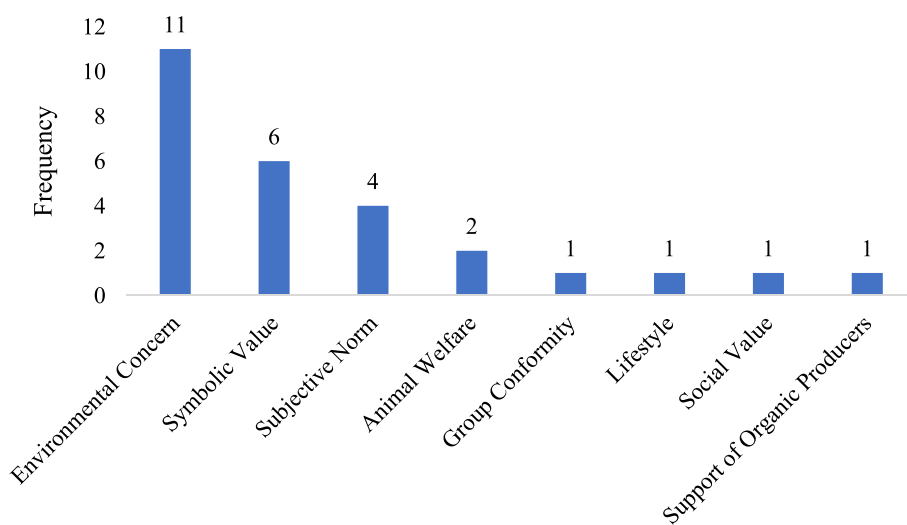


**Fig. 4** Trends and Differences from 2011 to 2021 of the Effective Factors within Functional Values from the Reviewed Papers. Source: Authors based on the literature (attachment Table 2)

et al. 2022; Nagy-Pércsi and Fogarassy 2019; Nguyen et al. 2019; Rodríguez-Bermúdez et al. 2020; Slamet et al. 2016; Soroka and Wojciechowska-Solis 2019; Soroka et al. 2021; Stolz et al. 2017; Tandon et al. 2021; Tomić Maksan 2021; Ūnal et al. 2019; Vehapi and Mitić 2021). To some extent, the attribute “more nutrition” can be related with “healthiness”, because people intent to consume food with more nutrition for better health. This indicates that the distinction between health as a personal attribute and as a product attribute is often intertwined. As food with GMOs is a controversial issue and there is still no strong evidence about its influence on food safety (Spendrup et al. 2021), consumers are often skeptical of it. The attribute “non-GMO” can, thus, be related to the “safety” issue. The attributes “sensory appeal” and “quality” are quite often investigated and confirmed as drivers for organic food consumption among the reviewed papers, which is consistent with the studies of Migliorini et al. (2020), Rodríguez-Bermúdez et al. (2020), and Stolz et al. (2017), conducted in European markets.

**Social value**

Social value refers to how useful people think something is because it is linked to certain social groups with particular characteristics or preferences (Sheth et al. 1991). With reference to organic food consumption, the social value is related to consumers’ self-image and utilitarian motives like recommendation, social approval, reputation concern, self-identity, environmental concern, support for local farmers and regional supply chains, as well as animal welfare (Ditlevsen et al. 2020; Puska et al. 2018). Out of the 26 reviewed papers, 18 of them analyze social values as drivers (see attachment Table 2 papers 1, 4, 5, 7, 8, 11, 13, 14, 15, 16, 17, 19, 21, 22, 23, 24, 25, 26). Figure 5 shows the frequency of occurrence of different factors in terms of social value in the reviewed papers. The most frequently analyzed factor is environmental concern (n = 11), followed by symbolic value



#### The Effective Factors within Social Values

**Fig. 5** The Frequency of Occurrence of the Effective Factors within Social Value from the Reviewed Papers. Source: Authors based on the literature (attachment Table 2)

( $n=6$ ), subjective norm ( $n=4$ ), animal welfare ( $n=2$ ), group conformity ( $n=1$ ), lifestyle ( $n=1$ ), social value<sup>1</sup> ( $n=1$ ), support of organic producers ( $n=1$ ).

Regarding specific results, Chu (2018) found that environmental awareness and the subjective norm had a positive influence on consumer attitude toward organic food and purchase intention. Wang et al. (2020a, b) found that environmental consciousness is positively associated with perceived food quality and organic food purchase intention. Xie et al. (2015) found that politically/ethically minded consumers consider the environmental benefit and animal welfare when purchasing organic food. More than half of the respondents in the organic buyer group stated that they buy organic food for a healthy lifestyle (Xie et al. 2015). Thøgersen et al. (2015) found that the belief of organic vegetables being better for the environment was a significant predictor of the buying attitude. Surprisingly, the belief that organic vegetables were more expensive was positively associated with this attitude. This result was explained by the fact that the high price could be seen as a status symbol (Thøgersen et al. 2015). Liu and Zheng (2019) found that the environmental orientation had a significantly positive effect on purchase behavior directly as well as indirectly through cognition. Liu et al. (2021) found that the environmental value had a significant positive influence on the purchase behavior. Yuan and Xiao (2021) come to the conclusion that the value perception of environmental protection was significantly positively correlated with the purchase intention. Loebnitz and Aschemann-Witzel (2016) revealed that priming environmental values increased product expectations only for respondents to whom environmental values were central to their self-identity. This result is consistent with the result of Xie et al. (2015). Bai et al. (2019) found that the belief concerning environmental friendliness was one of the top two considerations when making purchase decisions.

<sup>1</sup> Cao et al. (2021) used “social value” in their analysis; therefore, we use the same name for the factor and the category.

In addition, the belief that organic food was a “luxury for the rich” and “more upscale” impacted the consumers’ attitude toward organic food, while the identity expressiveness had a significantly positive effect on the purchase intention (Bai et al. 2019).

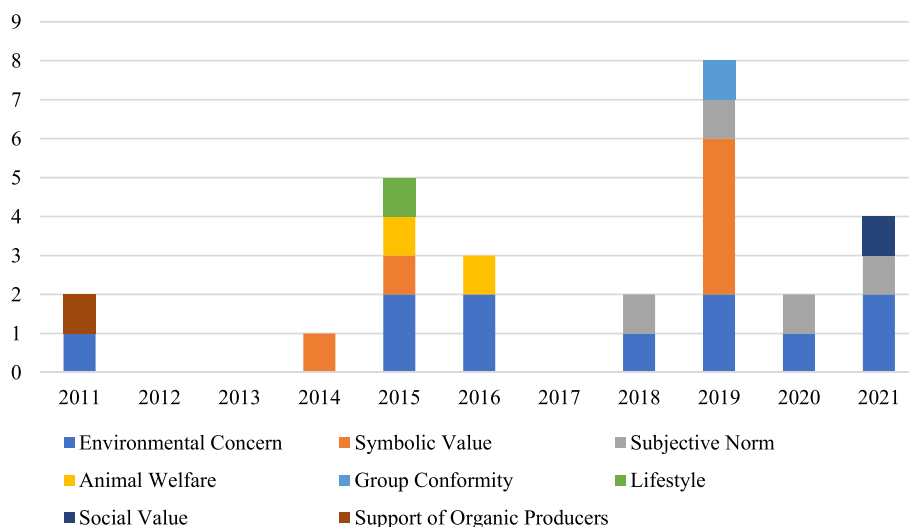
Moreover, subjective norms were the most important consideration for purchase attitude (Bai et al. 2019). In the study of McCarthy et al. (2016), the considerations that the food was coming from humanely treated stock and was environmentally friendly were regarded as important motivating factors for buying organic food. However, in contrast with the above results, Sirieix et al. (2011a, b) disclosed that the environmental concern was still an emerging motive in China and the support of organic producers was not important according to the results of their interviews. This contrast may indicate that the concern about the environment is growing more and more over the years, because the study of Sirieix et al. (2011a, b) is the earliest of the reviewed papers and the latest studies found that environmental concern was one of the most important motivators for buying organic food.

Lu et al. (2019) found that symbolism had a significant positive effect on both the attitude of consumers and their purchase intention. James et al. (2019) found that the perception of organic tea as a status symbol was positively correlated with organic tea purchase intention. Qi and Ploeger (2019) revealed that face consciousness and group conformity were significant predictors for purchase intention. Chen et al. (2014) found that the group “sceptics” was most concerned about the social status when buying organic food, compared with the other consumer groups (“safety conscious” and “gastronomes”).

Qi and Ploeger (2021) applied the TPB and the E-TPB to analyze the influencers of purchase intention and found that the subjective norm is significantly positively associated with purchase intention, but non significantly and negatively in the model of the E-TPB. A possible explanation of this incongruence may be the unstable and poor predictive power of subjective norms (Qi and Ploeger 2021). Li and Jaharuddin (2020) revealed that subjective norms were significantly positively associated with purchase attitude, while purchase attitude had a significantly positive effect on purchase intention. Cao et al. (2021) found that the social value had a significantly positive effect on the purchase behavior.

Figure 6 shows the trends and differences in the “social value” category over time, as found in the literature from 2011 to 2021. Environmental concerns are the main driver, with attention remaining relatively stable over the years. Symbolic value shows an irregular interest, with a slight peak in 2019. Subjective norms have remained relatively stable since 2018. Animal welfare plays a minor role, with the exception of 2015 and 2016. Group conformity and lifestyle factors have minimal impact, with sporadic cases of importance in 2019 and 2015 respectively. Social value gains slightly in importance, especially in 2021, indicating a growing awareness of social values related to sustainability. Supporting organic producers is only of interest in 2011.

In summary, environmental concern was the major researched driver and had the most significant influence on the purchase behavior of organic food (Bai et al. 2019; Chu 2018; Liu et al. 2021; Liu and Zheng 2019; Loebnitz and Aschemann-Witzel 2016; McCarthy et al. 2016; Sirieix et al. 2011a, b; Thøgersen et al. 2015; Wang et al. 2020a, b; Xie et al. 2015; Yuan and Xiao 2021). Environmental concern was also a key driver of organic



**Fig. 6** Trends and differences between 2011 and 2021 of the Effective Factors within Social Value from the Reviewed Papers. Source: Authors based on the literature (attachment Table 2)

food consumption in other countries (Bazaluk et al. 2020; Brata et al. 2022; Czudec 2022; Gundala and Singh 2021; Hashem et al. 2018; Iqbal et al. 2021; Ishaq et al. 2021; Leyva-Hernández et al. 2021; Nafees et al. 2022; Slamet et al. 2016; Stolz et al. 2017; Ünal et al. 2019), though this has not been a concern in earlier studies (Vega-Zamora et al. 2014).

The symbolic value was quite often researched in the reviewed papers (Bai et al. 2019; Chen et al. 2014; Lu et al. 2019; James et al. 2019; Qi and Ploeger 2019; Thøgersen et al. 2015). This was not only an important aspect in the Chinese society but also in some other societies. Leyva-Hernández et al. (2021) and Van de Grint et al. (2021) found that some altruistic reasons reflect reputational utility and some consumers intended to appear more moral than they really were.

The subjective norm was a factor in the TPB-model and was related to perceived social influences or pressures to engage or disengage in a given behavior (Ajzen 1991). It disclosed the individuals’ beliefs about how their reference groups would view them if they performed a certain behavior (Al-Swidi et al. 2014). Therefore, factors like “environmental concern”, “animal welfare”, “group conformity”, “lifestyle”, and “support of organic producers” may be related to “subjective norm” to some extent.

### Emotional value

Sheth et al. (1991) defined emotional value as the perceived utility acquired from an alternative’s capacity to arouse feelings or affective states. Based on individual experience, the emotional value is classified as positive, negative or neutral (Kushwah et al. 2019a, b, c). In terms of organic food consumption, the emotional value embodies happiness, satisfaction, joy, enjoyment of fun and pleasure associated with the alternatives, influencing to some extent the purchase behavior (Hamzaoui Essoussi and Zahaf 2009; Janssen 2018). Out of the 26 reviewed papers, only three analyzed emotional values as drivers (see attachment Table 2 papers 1, 9, 14).

Cao et al. (2021) found that the emotional value had a positive and significant influence on the purchase behavior. Chi et al. (2021) found that consumers' positive emotions about organic wines significantly impacted their purchase intention. For example, the consumers' health consciousness could be regarded as an implicit motive driving the purchase behavior. As a result, those consumers tended to consider organic wine consumption as achieving their health-goals, which induced their positive emotions. Furthermore, the symbolic value could also achieve a positive emotion. Lu et al. (2019) reported that the emotional assessment of organic wines had a positive influence on attitudes, but did not influence purchase intentions, which was in contrast to the result of Chi et al. (2021). Purchase intentions could be more influenced by external barriers despite a positive attitude. Research on the impact of emotional value on organic food consumption appeared to be limited, unlike research on the other factors. Organic wines had so far been the most researched product.

In an international context, preceding studies found that individual emotions such as happiness, satisfaction, joy, enjoyment fun and pleasure (Hamzaoui Essoussi and Zahaf 2009; Janssen 2018) were part of emotional value and are significantly related to purchase decisions (Kushwah et al. 2019a, b, c).

### Conditional value

Conditional value refers to the benefit gained from choosing one option over another based on the situation or circumstances confronting the decision maker. When certain physical or social factors come into play beforehand, they increase the practical or social worth of that option (Sheth et al. 1991). The conditional value associated with organic food consumption includes convenience, health as personal attribute, media exposure, children or senior members at home, and local pollution risks (Orlando 2018; Pham et al. 2019). In addition, Kushwah et al. (2019a, b, c) assigned personal health concerns caused by current health problems or a proactive approach to maintaining health. Out of the 26 reviewed papers, 19 analyze conditional values as drivers (see attachment Table 2 papers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 16, 17, 18, 19, 21, 22, 25). The effective factors in terms of conditional value are diverse. The most frequently analyzed factors are perceived healthiness (n=6), certification/organic label (n=5), perceived behavior control (n=4), attitude towards organic food/purchase attitude (n=4), perceived trustworthiness/social trust (n=3) (Fig. 7). Food safety attitude and sustainable consumption attitude (SCA) are each presented two times in the reviewed papers. All the other factors (e.g., food therapy culture, confidence, conditional value,<sup>2</sup> moral attitude, impact of Covid-19, organic cognitive level, perceived quality of traceability information, marketing communication, food safety incidents, store innovativeness, in-store experience, customer service, store prestige, green product awareness, corporate social responsibility image, corporate ability image, government regulation and policies, perceived food quality) are only presented one time (Fig. 7). There is no discernible trend in the factors over time, but the conditional value as a category has been increasingly observed since 2019, with a peak in 2021 with a total of 18 mentions of various of the factors mentioned.

<sup>2</sup> Cao et al. (2021) used "conditional value" in their analysis; therefore, we use the same name for the factor and the category.



**Fig. 7** The Frequency of Occurrence of the Effective Factors within Conditional Value from the Reviewed Papers. Source: Authors based on literature (attachment Table 2)

Regarding specific results, Bu et al. (2020) found that customer service, in-store shopping experience, store innovativeness, and store prestige had a positive effect on the perceived healthiness of organic tea, while the perceived healthiness of organic tea had a positive impact on purchase intention. Moreover, perceived healthiness of organic tea correlated positively with the attitude toward organic tea, which in turn had a positive influence on purchase intention as well (Bu et al. 2020). Chu (2018) found that health consciousness had a significantly positive direct and indirect effect on purchase intention through attitudes toward organic food, while marketing communication had a significant positive influence on the purchase intention (Chu 2018). Yuan and Xiao (2021) found that consumers who know more about organic food perceive it as more beneficial to health. Moreover, this perception of health value is strongly linked to their intention to purchase. McCarthy et al. (2016) discovered that the motivation “protecting the health of my family” significantly distinguished between those who buy certified organic products and those who do not. However, the motivation related to the “green food label” did not show a significant difference. This suggests that certified organic buyers are mainly driven by the belief that organic food is healthier, and they want to safeguard their family’s health, though their understanding of labeling may be limited. Qi and Ploeger (2021) found that the moral norm, health consciousness, and perceived behavioural control had a significant effect on purchase intention. Furthermore, the impact of COVID-19 had a significant positive effect on purchase intention directly and indirectly

via health consciousness (Qi and Ploeger 2021). Chi et al. (2021) found that consumers' health consciousness and consumers' social trust significantly promoted their purchase intention.

Chen et al. (2014) revealed that having a positive attitude towards organic food strongly correlated with the intention to purchase it. Additionally, all groups studied ("safety conscious," "gastronomes," "sceptics") considered certification crucial. Specifically, the "sceptics" group also emphasized the importance of factors such as the availability of organic food in convenient locations and government regulations and policies related to its sale. Loebnitz and Aschemann-Witzel (2016) found that the presence of an organic label raised consumers' product expectations. Wong and Tzeng (2019) found that the organic label, the food safety attitude, and the green product awareness impacted the purchase intention positively and directly; moreover, the organic label was significantly associated with consumers' food safety attitude and green product awareness. Wong and Tzeng (2021) revealed that green product awareness did not affect the purchase intention, but it had a significant effect on organic labeling awareness and food safety attitude, and the organic labeling awareness and food safety attitude impacted the purchase intention significantly. Bai et al. (2019) found that perceived easiness significantly and positively influenced purchase intention and behavior. Moreover, perceived control was proven to influence purchase behavior significantly but negatively (Bai et al. 2019). Perceived trustworthiness influenced purchase intention directly but did not influence purchase attitude and behavior (Bai et al. 2019). Qi and Ploeger (2019) presented that attitude, perceived behavioral control, and consumers' confidence had a significant effect on purchase intentions. Li and Jaharuddin (2020) found that perceived behavioral control, purchase attitude, and food therapy culture had a significant effect on purchase intention. The indirect effects of perceived behavioral control, purchase attitude and food therapy culture on purchase decision via purchase intention was also proven as significant (Li and Jaharuddin 2020).

Wu et al. (2021) found that perceived quality of traceability information significantly and positively influenced purchase intention for organic food. Liu and Zheng (2019) revealed that food safety incidents influenced organic food purchase directly, as well as indirectly through cognition. Yu et al. (2021) disclosed that corporate ability image and corporate social responsibility image of organic food impacted consumer trust, which inspired the purchase behavior. Wang et al. (2020a, b) found that perceived food quality had a significantly positive effect on purchase intention of organic food. Liu et al. (2021) disclosed that the SCA had a significant positive influence on the purchase behavior. Furthermore, the SCA was proven as a significantly positive moderator for the relationship between functional value-price and purchase behavior (Cao et al. 2021). In contrast with the above findings, Cao et al. (2021) found that conditional value had no significant effect on purchase behavior.

In the international context, the conditional value associated with organic food consumption includes convenience, health as a personal attribute, media exposure to messages, children at home or members at home, and local pollution risk (Aschemann-Witzel and Aagaard 2014; Orlando 2018; Pham et al. 2019).

In summary, the factors in the category of the conditional value are diverse and depend on various circumstances and contingencies. The most researched and mentioned

factor is perceived healthiness (Bu et al. 2020; Chi et al. 2021; Chu 2018; McCarthy et al. 2016; Qi and Ploeger 2021; Yuan and Xiao 2021). Unlike health in the functional value category, perceived health was considered a personal characteristic. Another often researched factor is the certification/organic label (Chen et al. 2014; Loebnitz and Aschemann-Witzel 2016; McCarthy et al. 2016; Wong and Tzeng 2019; 2021). There could be an interaction between the certification/organic label and the perceived trustworthiness/social trust. As social trust in food safety in China is not very strong due to recent food scandals, consumers do not seem to have confidence in organic certification. And to some extent, attitudes towards food safety can influence perceived trustworthiness/social trust. The perceived behavior control and purchase attitude are two other major factors in the TPB-model. The perceived behavior control depends on how easy or difficult it is for a person to perform an intended behavior. The attitude refers to the degree to which an individual has a favorable or unfavorable evaluation of the intended behavior (Ajzen 1991). Therefore, the perceived behavior control may contain the factors “perceived quality of traceability information”, “marketing communication”, “in-store experience”, “information anxiety”, “revealed information”, and “customer service”. The purchase attitude may include the factor SCA.

### **Epistemic value**

The epistemic value is the perceived utility obtained from an alternative’s capacity to arouse curiosity, provide novelty, and/or satisfy a desire for knowledge, as defined by Sheth et al. (1991). In terms of organic food consumption, the epistemic value consists of nostalgia, fashion, knowledge, and familiarity with organic food (Kushwah et al. 2019b). Out of the 26 reviewed papers, only two analyze epistemic values as drivers (see attachment Table 2 papers 1, 8).

Cao et al. (2021) presented that the epistemic value had a significantly positive impact on purchase behavior. Li and Jaharuddin (2020) found that the knowledge correlated significantly and positively with purchase attitude and the purchase attitude had a significant positive effect on the purchase intention. These results supported the statement of Laroche et al. (2001) and Lin and Huang (2012) that knowledge could influence all stages of the decision process.

There are few studies that examine epistemic value or the factors associated with it. This can be explained by the relatively late start of the organic food system in China (Li 2020), and the initially limited governmental support for organic food production (Sternfeld 2009). In addition, the organic food certification system has experienced a number of adjustments (Li 2020; Liu et al. 2013; Moruzzo et al. 2020; Paull 2008; Sheng et al. 2009; Sternfeld 2009; Xu et al. 2020). These adjustments and the involvement of multiple certifiers and agencies may have led to confusion among consumers.

### **Barriers of organic food consumption in China**

There are only six papers (see attachment Table 2 papers 2, 4, 11, 20, 24, 26) researching the barriers of organic food consumption in China. The barriers can be summarized as perceived uncertainty, purchase experience, price sensitivity, lack of knowledge or information, lack of availability or visibility, and lack of reliability (Hasimu et al. 2017; Liu et al. 2021; Sirieix et al. 2011a, b; Wang et al. 2020a, b; Wu et al. 2021; Xie et al. 2015).

**Table 1** The classification of the researched barriers from the reviewed papers

| Classification according to innovation resistance theory                             | Researched barrier of the reviewed papers | Paper      |
|--|---|------------|
| Risk Barrier   | Perceived Uncertainty                     | 2, 4       |
|  | Lack of Knowledge or Information          | 24         |
|  | Lack of Reliability                       | 20, 24     |
| Usage Barrier  | Lack of Availability or Visibility        | 24         |
| Value Barrier  | Price Sensitivity                         | 11, 24, 26 |
| Usage Barrier or Risk Barrier or Value Barrier or Tradition Barrier or Image Barrier | Purchase Experience                       | 11         |

Source: Authors based on literature (attachment Table 2)

According to the innovation resistance theory as discussed in Sect. "Theory of innovation resistance", the main barriers can be grouped into three functional barriers (usage barrier, value barrier, and risk barrier) and two psychological barriers (tradition barrier and image barrier) (Ram and Sheth 1989). The researched barriers are classified as shown in Table 1. In general, four papers analyzed risk barriers, three papers studied value barriers, and one paper researched usage barriers. These three types of barriers belong to the functional barriers according to the innovation resistance theory. Only one paper analyzed psychological barriers, i.e., tradition barrier and image barrier.

Wu et al. (2021) found that perceived uncertainty was a crucial barrier for organic food purchase. This result is in line with the finding of Ünal et al. (2019). However, Liu et al. (2021) revealed that uncertainty had only a significant influence on the perceived values (i.e., functional, health and environmental values), but no significant direct effect on organic purchasing. According to their results the uncertainty had a significant effect on purchase behavior via environmental value (Liu et al. 2021). Since the perceived uncertainty was closely related to perceived risk (Pavlou et al. 2007), the perceived uncertainty was classified as a risk barrier for organic food consumption. For example, the consumers received counterfeit products, or the consumers were disappointed with the quality of the organic food they bought. The more uncertain they were about organic food, the riskier it seemed to them to buy it.

A proper product information could dilute the perceived uncertainty, which in turn supported the purchase intention (Wu et al. 2021). Nonetheless, Xie et al. (2015) observed a lack of organic products advertising during the visits of shops, indicating that the channels to obtain information about organic food were limited. In the interviews of Xie et al. (2015), 83 percent of the respondents confirmed the need to improve advertising. Consumers who did not know about organic food and the labeling would not buy organic food. That was why lack of knowledge and information was classified as a risk barrier.

In addition, a lack of reliability, availability and visibility of organic food are other barriers for the organic food market development. According to Xie et al. (2015) 86.9 percent of the respondents stated that they needed more information about organic products from the media, particularly where to buy organic foods. One respondent mentioned that it was difficult to see organic food in the local supermarkets. In this

context, the absence of reliability was seen as a barrier of risk, as it was linked to uneven access to information and a lack of strong confidence in organic food. Conversely, the absence of availability and visibility was seen as a barrier to usage, which complicates purchasing behavior. Wang et al. (2020a, b) found that purchase experience had a significant negative influence on purchase intention. The reason for the dissatisfaction with the purchase experience might lie in all these barriers.

The price sensitivity as a moderator diminished the association between perceived food quality and purchase intention, so that it might also hinder the organic food consumption (Wang et al. 2020a, b). Xie et al. (2015) found that nearly half of the respondents could accept a premium of not higher than 30 percent, while the premium of 50 percent and more would be accepted by only 32.5 percent of the respondents. This indicates that the high price of organic food could be a barrier for the organic market development in China (Xie et al. 2015). Moreover, they found that merely 44.8 percent of the respondents had accurate knowledge about organic food, which was noticeably lower than in countries commonly referred to as the Global North (Xie et al. 2015). This result is consistent with the findings of Sirieix et al. (2011a, b). Yet price and availability turned out to be critical issues in the study of Hasimu et al. (2017), because high price and low product availability could be perceived as high quality and value of the product. This point relates to the consumption drivers about functional value and social value in the previous section. The high price, on the one hand, is regarded as the value barrier to organic food consumption, but on the other hand, it brings the functional value and social value that some consumers perceive. According to several studies, in most of the other countries, the price is also considered as a major barrier to purchase behavior (Dangi et al. 2020; Sandhu et al. 2018; Soroka et al. 2021; Vehapi and Mitić 2021).

## Conclusions

In China, there is a gradual rise in the demand for organic products, particularly in major cities. This trend is fueled by the growing income and prosperity of Chinese consumers, who are increasingly inclined toward adopting a more upscale lifestyle (Golijan and Dimitrijević 2018; Lin et al. 2010). However, the official certification system for organic products in China started relatively late (Sternfeld 2009) and has been subject to adjustments during its development (Li 2020; Liu et al. 2013; Moruzzo et al. 2020; Xu et al. 2020). As a result, many consumers do not know exactly what information the organic certifications or labels convey (Xie et al. 2015).

This article's primary goal is to categorize the factors that encourage and impede the consumption of organic food in China. To achieve this, the study employs the systematic literature review method (Paul et al. 2021) and adopts the frameworks of Kushwah et al. (2019a, b, c), the consumption values theory (Sheth et al. 1991), and the innovation resistance theory (Ram and Sheth 1989) for the classification process. The theory of consumption value proposes five consumption values: *functional*, *social*, *emotional*, *conditional*, and *epistemic* values (Sheth et al. 1991). The innovation resistance theory is used to divide the barriers of organic food consumption into two categories: *functional* and *psychological* barriers (Ram and Sheth 1989). The 26 papers thoroughly chosen for this review have all been published within the years of 2011–2021.

Considering the classification of the researched consumption values, 13 of the reviewed papers analyze functional values as drivers, 18 papers examine social values as drivers, three papers scrutinize emotional values as drivers, 19 papers research conditional values as drivers, and two papers study epistemic values as drivers. Referring to the functional values, healthiness as a product attribute and safety are the two most researched drivers. Under the classification of the social value, environmental concern and symbolic value are the major drivers of Chinese consumers. In terms of the conditional values, the perceived healthiness as a personal attribute and the certification/organic label are the two mostly focused factors. These factors correspond to the main drivers of consumer purchasing behavior in other countries (Bazaluk et al. 2020; Brata et al. 2022; Czudec 2022; Gundala and Singh 2021; Hashem et al. 2018; Iqbal et al. 2021; Ishaq et al. 2021; Leyva-Hernández et al. 2021; Melović et al. 2020; Migliorini et al. 2020; Milić et al. 2022; Nafees et al. 2022; Nagy-Pércsi and Fogarassy 2019; Nguyen et al. 2019; Rodríguez-Bermúdez et al. 2020; Slamet et al. 2016; Soroka and Wojciechowska-Solis 2019; Soroka et al. 2021; Stolz et al. 2017; Tandon et al. 2021; Tomić Maksan 2021; Ünal et al. 2019; Vehapi and Mitić 2021).

Drivers such as supporting local farmers and concerns about animal welfare, which are prevalent in regions commonly referred to as the Global North, have not yet assumed a prominent role as primary motivators among Chinese consumers (Bosona and Gebresenbet 2018; Hashem et al. 2018; Milestad et al. 2017). The determinants under the classification of the emotional values and epistemic values are seldom researched. Future studies can fill this research gap. Understanding the level of knowledge Chinese consumers possess about organic products holds particular significance for policy makers and entrepreneurs.

Regarding the categorization of barriers, four papers delve into risk barriers, three papers focus on value barriers, and one paper investigates usage barriers. These three barrier types align with the functional barriers as per the innovation resistance theory. Notably, there is limited research on psychological barriers, namely tradition barriers and image barriers. This research gap can be addressed in future studies. In general, the barriers to organic food consumption in China have not been researched thoroughly enough. This highlights the opportunity to pay more attention to this aspect in the future.

Acknowledging that barriers are of equal importance as drivers is crucial when aiming to advance the consumption of organic food. From the barriers investigated in the reviewed papers, certain recurring themes emerge, including price sensitivity, perceived uncertainty, insufficient knowledge or information, unreliability, and issues with availability or visibility. These barriers are not unique to China but are also identified in various other countries. Rising prices are affecting purchasing behavior not only in China, but also in most other regions of the world (Dangi et al. 2020; Sandhu et al. 2018; Soroka et al. 2021; Vehapi and Mitić 2021). Perceived uncertainty, insufficient knowledge or information, and lack of reliability highlight opportunities for agencies and community groups to enhance transparency and information dissemination. For instance, implementing a product traceability system stands as an effective strategy to bolster consumer trust in organic certification and products (Lin et al. 2021). Given that China's organic food market is in its emerging phase, the availability of organic products and shops

remains limited. If the goal is to promote organic food consumption, then producers, particularly smallholders, necessitate increased governmental support (Tang et al. 2019). In the same vein, elevating public consciousness about sustainable consumption holds substantial significance.

Regarding the limitations, the categorization of influential factors is based on individual interpretation, and the literature search was confined solely to the WoS database. However, there are also other academic databases that could be used for a more comprehensive collection of data (Kushwah et al. 2019a, b, c). Moreover, a quantitative approach such as meta-analysis could be integrated in future research to provide a better understanding of the identified drivers and barriers from a statistical perspective.

## Appendix

See Table 2.

**Table 2** List of reviewed papers

| Paper nr. | Topic  | References               |
|-----------|--|--------------------------|
| 1         | Consumption values, anxiety and organic food purchasing behaviour considering the moderating role of sustainable consumption attitude  | Cao et al. (2021)        |
| 2         | Perceived quality of traceability information and its effect on purchase intention towards organic food  | Wu et al. (2021)         |
| 3         | Mediating Role of Organic Labeling Awareness and Food Safety Attitudes in the Correlation Between Green Product Awareness and Purchase Intentions                                    | Wong and Tzeng (2021)    |
| 4         | Similarity Effect and Purchase Behavior of Organic Food Under the Mediating Role of Perceived Values in the Context of COVID-19  | Liu et al. (2021)        |
| 5         | Explaining Chinese Consumers' Green Food Purchase Intentions during the COVID-19 Pandemic: An Extended Theory of Planned Behaviour   | Qi and Ploeger (2021)    |
| 6         | Organic food corporate image and customer co-developing behavior: The mediating role of consumer trust and purchase intention  | Yu et al. (2021)         |
| 7         | Cognition, Value Perception and Purchase Intention of Organic Food-Evidence from China's Organic Milk Market   | Yuan and Xiao (2021)     |
| 8         | Identifying the key purchase factors for organic food among Chinese consumers  | Li and Jaharuddin (2020) |
| 9         | Drinking "Green": What Drives Organic Wine Consumption in an Emerging Wine Market  | Chi et al. (2021)        |
| 10        | A Comprehensive Model of Consumers' Perceptions, Attitudes and Behavioral Intention toward Organic Tea: Evidence from an Emerging Economy  | Bu et al. (2020)         |
| 11        | Environmental Consciousness and Organic Food Purchase Intention: A Moderated Mediation Model of Perceived Food Quality and Price Sensitivity   | Wang et al. (2020a, b)   |
| 12        | Values and Green Product Purchase Behavior: The Moderating Effects of the Role of Government and Media Exposure  | Jan et al. (2019)        |
| 13        | The Predictors of Consumer Behavior in Relation to Organic Food in the Context of Food Safety Incidents: Advancing Hyper Attention Theory Within an Stimulus-Organism-Response Model | Liu and Zheng (2019)     |
| 14        | Determinants of Chinese consumers' organic wine purchase   | Lu et al. (2019)         |
| 15        | Predictors of organic tea purchase intentions by Chinese consumers Attitudes, subjective norms and demographic factors   | James et al. (2019)      |
| 16        | Understanding the Antecedents of Organic Food Purchases: The Important Roles of Beliefs, Subjective Norms, and Identity Expressiveness   | Bai et al. (2019)        |
| 17        | Explaining consumers' intentions towards purchasing green food in Qingdao, China: The amendment and extension of the theory of planned behavior                                      | Qi and Ploeger (2019)    |

**Table 2** (continued)

| Paper nr. | Topic  | References                           |
|-----------|--|--------------------------------------|
| 18        | Consumers' psychographics and green consumption intention: Community supported agriculture business model in China                     | Wong and Tzeng (2019)                |
| 19        | Mediating Influences of Attitude on Internal and External Factors Influencing Consumers' Intention to Purchase Organic Foods in China  | Chu (2018)                           |
| 20        | A concept mapping study on organic food consumers in Shanghai, China   | Hasimu et al. (2017)                 |
| 21        | Communicating organic food quality in China: Consumer perceptions of organic products and the effect of environmental value priming    | Loebnitz and Aschemann-Witzel (2016) |
| 22        | Innovations in the agro-food system Adoption of certified organic food and green food by Chinese consumers                             | McCarthy et al. (2016)               |
| 23        | Consumer buying motives and attitudes towards organic food in two emerging markets China and Brazil                                    | Thogersen et al. (2015)              |
| 24        | Consumer perceptions and attitudes of organic food products in Eastern China   | Xie et al. (2015)                    |
| 25        | Drivers of organic food purchase intentions in mainland China—evaluating potential customers' attitudes, demographics and segmentation | Chen et al. (2014)                   |
| 26        | Organic food consumers' trade-offs between local or imported, conventional or organic products: a qualitative study in Shanghai        | Sirieix et al. (2011a, b)            |

**Abbreviations**

|            |  |
|------------|--|
| E-TPB      | Extended theory of planned behavior                                    |
| GMOs       | Genetically modified organisms   |
| SCA        | Sustainable consumption attitude                                       |
| SLR        | Systematic literature review   |
| SPAR-4 SLR | Scientific procedures and rationales for systematic literature reviews |
| TPB        | Theory of planned behavior   |
| WoS        | Web of Science   |

**Acknowledgements**

We extend special appreciation to the two anonymous reviewers and the journal's editor for their constructive feedback, which greatly enhanced the quality of this manuscript.

**Author contributions**

Conception and Design: Castro Campos; data Collection: Qi; data analysis: Qi; writing and drafting: Castro Campos and Qi; review and editing: Castro Campos; supervision: Castro Campos; conceptual contributions: Castro Campos.

**Funding**

Open Access funding enabled and organized by Projekt DEAL.

**Availability of data and materials**

The supporting data is available upon request.

**Declarations****Competing interests**

Not applicable.

Received: 15 September 2023 Revised: 17 April 2024 Accepted: 30 May 2024

Published online: 04 June 2024

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