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# A review of sustainability, deterrents, personal values, attitudes and purchase intentions in the organic food supply chain

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## ABSTRACT

This study aims to enhance our understanding of the organic food supply chain among practitioners, academicians and researchers by underlining the major factors affecting the growth of the organic food business. Previous articles on organic food have been quantitative in nature; therefore, we proposed a qualitative study as a pathfinder for prospective researchers to understand the complex factors involved in the organic food supply chain (OFSC). To do so, this study reviewed eighty-four previous studies on organic foods and proposed a conceptual model for future research; customers' attitudes shall be influenced by sustainability, market deterrents, personal values, demographic and the socioeconomic environment. A customer's attitude has a direct impact on the purchase intention of the OFSC. The study also suggests an investigation of the indirect impact of sustainability, market deterrents, personal values and demographic and the socioeconomic environment on organic purchase intentions. The findings affirmed globally that environment protection, pesticide-free food and animal protection are major sustainability issues. In addition, premium price, insufficient availability and low awareness are the greatest deterrents, considering that personal values such as health benefits, natural contents, superior quality and better taste foster customers to purchase organic foodstuffs. In demographic and socioeconomic environmental contexts, education and income have emerged as major predictors of organic product purchases.

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## 1. Introduction

Currently, organic food (OF) is one of the fastest-growing segments of the food market, with outstanding improvements collectively in production and sales volumes in many countries (Liang, 2016). In the last decade, production areas under the organic farming and sales volume have gained 10% in compound annual growth rate (Willer and Kilcher, 2012). Factors such as environmental sustainability, health issues, food safety, quality, consumer dissatisfaction with conventional food (CF) and pressures from various stakeholders have imposed serious considerations towards OFSC (Hughner et al., 2007; Reisch et al., 2013). Krystallis et al. (2008)

claimed that societal and individualistic inputs are key drivers behind organic food consumption. However, "Organic food: buying more safety or just peace of mind" is an idea that continues to be questioned by consumers, researchers and authorities (Magkos et al., 2006). Lack of standard measures for evaluating the organic credibility and customers' unawareness are two major traits that are blamed by scholars (Meixner et al., 2014).

According to World Health Organization (2015), unsafe food containing harmful bacteria, viruses, parasites or chemical substances causes more than 200 diseases, ranging from diarrhoea to cancers. Globally each year, approximately 600 million people, almost 1 in 10 individuals, fall ill after consuming contaminated food, and 4,20,000 die. Additionally, children under 5 years of age carry 40% of the foodborne disease burden, with 1, 25,000 deaths every year. Moreover, some serious ecological problems pertaining to CF production and consumption comprises climate change, air and water pollution, scarcity of natural resources, soil degradation, loss of habitats and biodiversity (Reisch et al., 2013). Therefore, to overcome

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the above-mentioned problems, promoting organic production, availability and consumption is highly important for environmental protection, sustaining life and furthering congenial health.

Generally, OF product categories cover fruits and vegetables, meat, poultry, condiments, sauces, breads, grains, packaged/prepared foods, snacks, dairy and beverages. The retailing of organic foodstuffs has evolved since 1997, when OF stores were the main outlets (Dimitr and Oberholtzer, 2009). Although, the global OF market has gained significant growth but declining opportunity, high prices are recurrently dement demand, which is effecting supply reliability, therefore, organic product sale doesn't represent its fair proportion in total food sales (Kottila and Ronni, 2008). The available literature sheds light on the most common issues associated with OF supply chain and existing studies have been conducted using qualitative methods. According to Hjelmar (2011), qualitative research methods help offset the limitations of qualitative methods. Thus, there is a substantial need to conduct more research to develop a comprehensive framework for the OF supply chain. Therefore, the intention of this article is to review the OF literature and formulate an appropriate framework for a sustainable OF supply chain.

The remaining sections of this paper are organized as follows: Section 2 outlines the objectives and methodology. In Section 3, the concept of a sustainable OF supply chain is discussed. In Section 4, the findings of the literature review are presented. The conceptual framework is discussed in Section 5. Finally, conclusions and suggestions for future research are presented in Section 6.

## 2. Objectives and research methodology

In this section, we discuss the objectives and research methodology to build a comprehensive understanding of our current work.

### 2.1. Research objectives

The objectives of this research are:

- ❖ To review the sustainability aspects of the OF supply chain from different perspectives.
- ❖ To review and identify the deterrents in the OF market.
- ❖ To highlight customers' personal values.
- ❖ To draw a clear picture of the demographic and socioeconomic environment pertaining to OF consumption.

- ❖ To review customers' attitude towards OF at global scale.
- ❖ To develop a synthesized conceptual framework for future research.

### 2.2. Research methodology

As this study is qualitative in nature, efforts have been made to review previous studies on the OF supply chain and consumption, which are published in refereed international journals. To do so, we have selected 84 studies based on the following selection criteria:

- a) Subject: key words used are organic food, sustainability, barriers, drivers, attitude, and purchase intentions.
- b) Publication years: from 2001 to 2016.
- c) Publishers: Emerald, Elsevier, Wiley, Taylor & Francis and Springer.
- d) Paper citations: Other than renowned publishers (excluding Emerald, Elsevier, Wiley, Taylor & Francis and Springer), if the paper has 50 citations.

Fig. 1 highlights the name of publishers considered for the literature review in this study. Out of the 84 papers, 26 are published in Emerald, which has emerged as the dominant publisher in the OF context. However, of 26 papers, 25 are published in the British Food Journal and one paper in the International Journal of Retail & Distribution Management. 20 papers have been published in Elsevier, of which 5 were considered from food quality and preference, 4 from appetite, 2 from food policy, and the other 9 belong to other Elsevier journals.

In addition, 17 papers were published in the Wiley Online Library and journal covering 3 papers each in *Agribusiness: An International Journal*, *International Journal of Consumer Studies*, and *Journal of Consumer Behaviour*. Similarly, there were two papers each in *The Journal of Consumer Affairs* and *Sociologica Ruralis*. Indeed, 16 publications belong to other renowned publishers. Taylor & Francis and Springer contributed 3 and 2 publications, respectively, as shown in Fig. 1.

## 3. Organic food supply chain

Organic farming is one of the most sustainable agricultural methods extensively being promoted and practiced across the

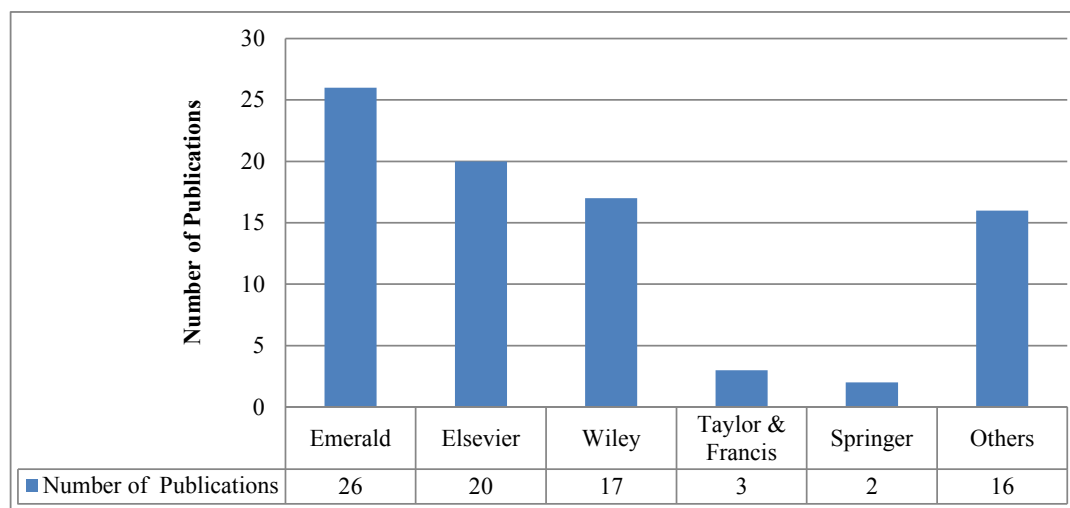


Fig. 1. Number of publications.

globe and has been significantly noticed by researchers, academicians and practitioners (Reisch et al., 2013; Bravo et al., 2013; Annunziata and Vecchio, 2016). Jones et al. (2001) and Hughner et al. (2007) defined sustainable organic production as biological practices which assist in improving environmental conditions, human health, soil fertility, animal welfare and conservation of natural resources. Rapid changes in consumption patterns, awareness of pesticide poisoning and diseases from CF, as well as environment consciousness, have been regularly influencing customers to consume sustainable food (Sangkumchaliang and Huang, 2012). However, organic products are differentiated by input and practices used in their production process and not by their inherent properties (Lea and Worsley, 2005). Thus, there is no legal definition of organic farming, and the word 'organic' is inferred to a process claim, not a product claim (Żakowska-Biemans, 2001). However, there have been a number of studies which claimed that customers have a positive attitude towards OF consumption (Hoppe et al., 2013; Basha et al., 2015; Cavdar and Aydin, 2015; Yadav and Pathak, 2016), but the gap between attitude and actual behaviour also exists within the literature (Shafie and Rennie, 2012).

The expansion in the global food business has created severe ecological and socioeconomic drawbacks, along with bringing issues associated with environmental protection, food safety, animal welfare and biological preservation into the public discussion (Risku-Norj and Muukka, 2013). The regular outbreaks of food scandals such as "mad cow disease", "pig plagues", "the foot and mouth outbreak" (Vindigni et al., 2002), "BSE and dioxin food scandals" and "tainted milk scandal" (Dellios et al., 2009) have increased health consciousness among consumers. This means that sustainability in the food supply chain has gained momentum on a global scale and that OF has emerged as the most suitable option for consumption.

From consumption and industrial perspectives, sustainability issues such as biodiversity preservation, natural resources conservation, waste reduction, food security, lower energy consumption, and supply of high nutrition products have high value (Joshi and Rahman, 2015; Meyer-Höfer et al., 2015). As a result, frequently cited articles on sustainable food SC have been reported in the last decade (Seyfang, 2004; Risku-Norj and Muukka, 2013). In today's food sector, company goodwill, along with investor reputation, will be at risk if companies fail to justify their rational position in the domain of sustainability (Tseng and Chang, 2015). Hence, regulatory and non-government organizations' pressures are regularly coercing to food SC companies and their partners to adopt a triple-bottom-line approach dealing with environmental, economic and social benefits (Carter and Easton, 2011).

In the literature, few studies revealed that biodiversity preservation is one of the major challenges, and numerous conventional farming systems have been regularly affected (Aertsens et al., 2009; Meyer-Höfer et al., 2015; Annunziata and Vecchio, 2016). Similarly, the world population is increasing at a rapid growth rate; thus, to fulfil the needs of billions of people with depleting natural resources seems impossible (Reisch et al., 2013). Therefore, promotion, adoption and consumption of organic products could significantly assist in fulfilling consumers' needs and tackling sustainability barriers. However, the literature highlights numerous deterrents in the diffusion of the OF market, despite the green trends in food supply.

According to Sangkumchaliang and Huang (2012), lack of information is a major obstacle in the growth of the organic market. Their study reported that consumers have no awareness of the potential benefits of sustainable food consumption, and approximately 90% of food customers feel a need to see organic product advertisements. Hughner et al. (2007) reported that information retrieval has a strong influence on trust development and OF

purchase intentions. From these findings it could be hypothesized that significant improvement in marketing efforts will make a significant improvement in market share. Apart from this, the literature identified these common barriers: premium price, insufficient availability, less variety and changed consumers' food habits (Padel and Foster, 2005; Yiridoe et al., 2005; Hughner et al., 2007). Magnusson et al. (2001) noted that consumer satisfaction with CF is an another major deterrent. The skepticism with certifications and logos, and a lack of trust pertaining to OF, could be possible reasons behind the high customer satisfaction with CF.

However, although price is not an absolute matter of concern, the complex decision-making process seems to be a major difficulty. Customers consider price in the context of disposable income and "value for money"; thus companies need to justify a price premium through sustainable gains of organic consumptions (Padel and Foster, 2005). Moreover, quality of organic product alone is not able to attract or retain customers (Buder et al., 2014). This indicates that the price of organic products is not meeting its worth, which is a serious issue for consideration and now needs to be reported. Trust has also emerged as a prerequisite for growth because customers will hesitate to purchase OF unless they fully trust the retailer (Kim et al., 2008). Apart from this, Padel and Foster (2005) reported an interesting problem in the OF context, which is a lack of cooking skills, whereas other studies failed to address that issue.

Despite the existence of many deterrents, there are drivers which stimulate consumers to buy organic products. The literature highlights that one major motivation behind OF consumption is the production process (without the use of synthetic pesticides); thus OF seems more environmentally friendly, healthier, to have superior quality and to taste better (Sangkumchaliang and Huang, 2012). However, Hoefkens et al. (2009) claimed there are no significant differences in any additional health benefits or in the nutritional contents of OFs in comparison to CF, even though Vieira et al. (2013) stressed that OF consumers have high personal values that are predictors of their attitude.

According to Chen (2009), health benefits are more dominant in determining OF preference and purchase intentions compared to ecological benefits. One interesting fact defined by researchers is the idea of supporting local farmers and economy by purchasing natural foodstuffs. This idea could play a vital role in the market growth because it may provide income certainty to OF producers, which could further motivate them to foster their production scale. However, this idea is fully dependent upon the customers' viewpoint. Moreover, Aertsens et al. (2009) concluded that such values as security, hedonism, stimulation, universalism, self-direction, benevolence, conformity, and power are drivers for OF consumption.

Demographic and socioeconomic variables, namely age, marital status, income, education and family size, are effective measures in determining demand and buying behaviour (Wier et al., 2003). The majority of international articles reveal that highly educated consumers have a positive attitude and purchase intentions towards OF (Magnusson et al., 2001; Fotopoulos and Krystallis, 2002; Tsakiridou et al., 2008). Lockie et al. (2002) observed that consumers, especially those with science background, have a strong correlation with sustainable OF consumption. The study also highlights income as a predictor of purchase behaviour, whereas Lea and Worsley (2005) highlighted the minimal effect of education on organic product buyers' attitude and intentions. Countering the above findings, another research article emphasized that a high level of education has a negative influence on organic consumption (Durham, 2007). This means that the higher the education level, the lower the rate of organic consumption. Diversity in cultural and socioeconomic factors in different countries might be a possible reason for this contradictory view.

From a gender and age perspective, older women are more keen to buy natural foods in large quantities, for health and environmental sensitivity reasons, in comparison to men (Krystallis and Chrysosohoidis, 2005; Gracia et al., 2012). This shows a positive attitude and intentions of females and older persons, although Ureña et al. (2008) reported that men have a greater willingness to pay for organic foodstuffs than women, in spite of women's high organic product purchase frequency. Tsakiridou et al. (2008) also gauged the effect of age on attitude and purchase intention. As we discussed earlier, income affects purchase quantity. Kenanoğlu and Karahan (2002) emphasized that one of the major barriers in Turkey to OF market expansion is the average low income of its citizens, which does not allow them to spend a great deal on OF products.

Pino et al. (2012) conducted a consumer-based survey study, which classified OF consumers into two types: regular and occasional consumers. For this classification, buying frequencies were taken as a base. The results indicate that ethical motivation is highly correlated with the purchase intention of regular consumers, while food safety is highly correlated with occasional consumers' purchase intentions. In addition, a survey conducted in 2008 in Brazil by the Brazilian Environmental Ministry acknowledged that 73% of consumers show an interest in buying OF products. The majority of international studies quoted a positive attitude related to organic product consumption (Arvola et al., 2008; Tarkiainen and Sundqvist, 2009; Dias et al., 2016). Aside from this, Loebnitz and Aschemann-Witzel (2016) also pointed out that to examine the impact of sustainability and personal values on OF customer behaviour is an important future research agenda.

#### 4. Conceptual model

At this junction, as a part of review, an effort was made to develop a framework for this study, as shown in Fig. 2.

##### 4.1. Sustainability

To support organic production is a promising policy for increasing sustainability in the food industry, which would affect both customer attitude and purchase intention (Bravo et al., 2013; Aschemann-Witzel and Zielke, 2015). Organic production assists in environmental protection, health, animal welfare, biodiversity preservation, natural resource conservation, food safety, etc (Meyer-Höfer et al., 2015). Many scholars acknowledged that all

these sustainability issues somehow motivate customers to purchase and recommend OF (Wier et al., 2008; Van Loo et al., 2010; Reisch et al., 2013; Cavdar and Aydin, 2015). However, Tsakiridou et al. (2008) reported that the gap between attitude and actual behaviour of customers is related to organic product consumption. This means that the majority of customers are aware of the gains of sustainability and, due to this, have a positive attitude towards OF but do not prefer to purchase natural foodstuffs regularly. Based on the above arguments, the hypotheses framed are these:

- H1.** Sustainability is positively associated with customer attitude.  
**H2.** Sustainability is positively but less associated with purchase intentions.

##### 4.2. Deterrents

The literature highlighted the existence of many deterrents that have confined the growth of the global OF industry: premium price, scarce or inadequate marketing, lack of trust, lack of variety, customer unawareness and skepticism of certifications and logos (Lea and Worsley, 2005; Sadati et al., 2010; Kihlberg and Risvik, 2007; Bruschi et al., 2015). Uncertainty in information and availability as well as lack of variety negatively affect customer confidence, which leads them to be consumers of CF (Padel and Foster, 2005; Hughner et al., 2007; Buder et al., 2014). Moreover, Dias et al. (2016) also documented that these barriers affect customer loyalty and could have a negative impact on customer bucket size (purchase quantity) at a retail store. Therefore, we develop these hypotheses:

- H3.** Deterrents are negatively associated with organic products customers' attitude.  
**H4.** Deterrents are negatively associated with organic products purchase intentions.

##### 4.3. Personal values

Personal values influence customers' willingness to pay (Chrysosohoidis and Krystallis, 2005); hence, to support local farmers, health benefits, consumption of natural content, high quality and better taste of organic products significantly affect customer perception (Chakrabarti, 2010; Stolz et al., 2011; Urban et al., 2012). In support of the above argument, Vieira et al. (2013)

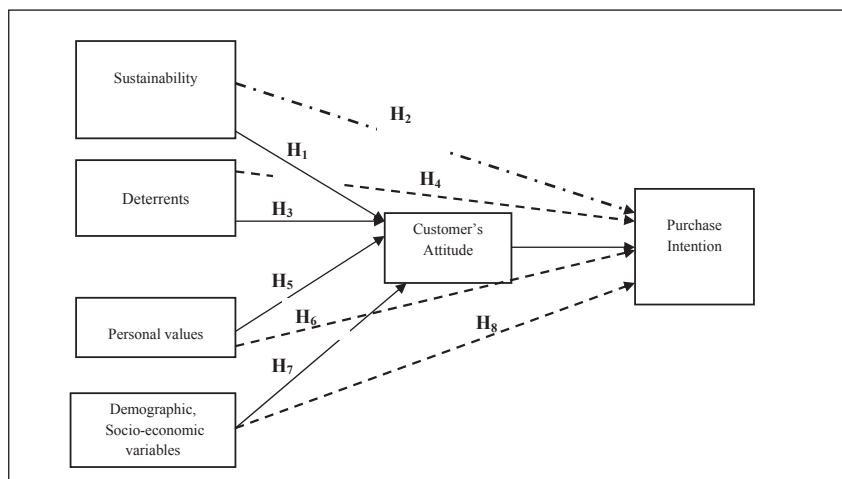


Fig. 2. Conceptual model for organic food consumption.



noted that OF buyers have strong personal values, which build a positive attitude in consumers. In other words, strong personal values attract organic consumption and foster consumer belief that OF is virtually free from hazards. Recently, a study conducted by Annunziata and Vecchio (2016) advocated that the major drivers behind OF market growth are health benefits, natural content, taste and quality. In addition, the idea of supporting local farmers and the economy also motivates consumers to buy OF products (Essoussi and Zahar, 2009; Annunziata and Vecchio, 2016). From the above discussion, the following hypotheses emerged:

**H5.** Personal values are positively associated with organic products customers' attitude.

**H6.** Personal values are positively but less associated with organic products purchase intentions.

#### 4.4. Demographic and socioeconomic environment

Demographic and socioeconomic variables are key metrics, which predict buying behaviour of consumers in a particular place or region (Wier et al., 2003). According to Tsakiridou et al. (2008), education level has a significant impact on consumption level, whereas Durham (2007) contradicted this and proposed the viewpoint that education level has a negative impact on the scale of consumption. Similarly, in the context of age and gender, Dettmann (2008) and Kim et al. (2008) emphasized that companies need to evaluate the demographic and socioeconomic environment to attain paramount business performance. Although young people are more conscious about ecological issues, they have less of a willingness to pay for OF because of their lower purchasing power, while older people are more health-conscious and have a higher willingness to pay the extra cost (Fotopoulos and Krystallis, 2002; Tsakiridou et al., 2008). Additionally, cultural differences lead customers to perceive different values at the time of OF purchases (Baker et al., 2002). However, in the literature, there is an ongoing debate on the importance of demographic and socioeconomic indicators in OF consumption (Shafie and Rennie, 2012). Thus we expect the demographic and socioeconomic variables to affect attitude and intentions. Hence, we proposed the following hypotheses:

**H7.** Demographic and socioeconomic factors have an effect on organic customer attitude.

**H8.** Demographic and socioeconomic factors have an effect on organic purchase intentions.

#### 4.5. Attitude

Attitude predicts customer's purchase intentions. Certain similarities have been found in consumer attitudes towards OFs in previous studies (Hoppe et al., 2013; Teng and Wang, 2015; Yadav and Pathak, 2016). Kareklas et al. (2014) and Basha et al. (2015) found that consumers have a positive attitude towards purchasing OF because of its better taste, health benefits and environment-friendly nature but also that its premium price, lesser variety and scarcity restrict consumer attitude and do not allow them to become successful OF product buyers (Yin et al., 2010). Moreover, in the literature, the results pertaining to the relationship between consumer attitude and purchase intentions do not reveal consistency (Arvola et al., 2008; Chen, 2009). Tarkiainen and Sundqvist (2005) also reported a gap between attitude and actual buying behaviour of organic product consumers. Considering the above viewpoints, we contemplated the following hypothesis:

**H9.** Customer attitude has positive effect but one less associated with organic food purchase intentions.

## 5. Results

At this juncture, an attempt has been made to analyse the previous studies to draw a clear picture of the organic market.

Table 1 shows that all analysed studies reported environmental protection as a dominant sustainability issue. The majority of studies showed that food consumers have little awareness of the role of organic production in environmental protection. This is a concrete predictor of the future growth of the organic market. The absence of chemicals, animal welfare and food safety also emerged as key sustainability determinants of organic product SC, with 85%, 80% and 75% literature support, respectively. Soil and water

**Table 1**  
Organic food supply chain (OFSC) sustainability issues.

No.	Study	Environmental protection	Animal welfare	Biodiversity preservation	Food safety	Low energy inputs	Soil & water conservation	Waste reduction	Free from chemicals
1	Jones et al. (2001)	✓	✓	✓			✓	✓	
2	Reed (2001)	✓	✓	✓	✓		✓	✓	✓
3	Lockie et al. (2002)	✓	✓		✓				✓
4	McEachern and McClean (2002)	✓	✓		✓				✓
5	Magnusson et al. (2003)	✓	✓			✓	✓	✓	✓
6	Seyfang (2004)	✓			✓			✓	✓
7	Hole et al. (2005)	✓		✓			✓	✓	✓
8	Pimentel et al. (2005)	✓				✓			✓
9	Honkanen et al. (2006)	✓	✓		✓			✓	✓
10	Hughner et al. (2007)	✓	✓		✓		✓		✓
11	Wier et al. (2008)	✓	✓		✓				
12	Aertsens et al. (2009)	✓	✓	✓					
13	Van Loo et al. (2010)	✓	✓		✓		✓		✓
14	Aertsens et al. (2011)	✓	✓		✓				✓
15	Larceneux et al. (2012)	✓			✓				✓
16	Reisch et al. (2013)	✓	✓	✓	✓	✓	✓	✓	✓
17	Bravo et al. (2013)	✓	✓		✓				✓
18	Cavdar and Aydin (2015)	✓	✓		✓				✓
19	Meyer-Höfer et al. (2015)	✓	✓	✓	✓	✓	✓	✓	✓
20	Annunziata and Vecchio (2016)	✓	✓	✓	✓		✓	✓	✓
<b>Percentage support</b>		<b>100</b>	<b>80</b>	<b>35</b>	<b>75</b>	<b>20</b>	<b>40</b>	<b>45</b>	<b>85</b>
<b>Rank</b>		<b>1</b>	<b>3</b>	<b>7</b>	<b>4</b>	<b>8</b>	<b>6</b>	<b>5</b>	<b>2</b>

conservation and waste reduction through organic farming improve an identical preponderance in the literature, with 45% and 40% support. This shows that practitioners and customers are not fully aware of promoting water conservation and waste reduction through organic production and consumption.

In addition, biodiversity preservation gained only 35% literature support. This shows that despite the inevitable role of organic production in biodiversity preservation, previous studies failed in highlighting this issue, which is to be addressed as a future research direction. Similarly, 20% of the literature revealed that the organic farming system needs low energy inputs.

Indeed, premium price emerged as a dominant factor for not purchasing OF, with 100% literature support (Table 2). All the studies in this review claimed that the high price of organic products has restricted market growth. Likewise, 80% of the studies noted that scarcity is coercing food customers to continue CF consumption. The low scale of production could be blamed for the imbalance between supply and demand. As analysed studies represent different countries, this means that premium price and insufficient availability are two global deterrents. However, fear of uncertain income is also addressed as a constraint by some researchers and it gained 30% literature support through this review.

Meanwhile, all food customers are not fully knowledgeable or aware of the benefits pertaining to OF. Generally, customer knowledge of the potential benefits of products builds positive attitude and intentions, and thus low awareness of customers has hindered the efforts of practitioners. However, although government and non-governmental organizations are playing a crucial role in promoting the organic trend, more strategic efforts are required. Moreover, half of the studies reviewed also blamed the lack of OF variety, which is unable to fulfil the changed consumers' food preferences. Moreover, presentation of CF as an OF, as well as skepticism of organic certification and logo, are serious subjects with 45% literature support. Thus customers do not easily trust OF, which results in less perceived value and sales volume.

The results of consumers' personal values are quoted in Table 5. This table concludes that health benefits and the natural contents of organic products are dominant personal values. Both variables gained 100% literature support. Similarly, OF quality and tastes are playing a significant role in persuading customers of organic

consumption. Both gained 95% literature support, which is supreme from an organic market growth perspective. However, 25% reported in the literature reviewed, inferring that there was no significant reason behind purchasing OF to support local level farmers Table 3.

The review results of demographic and socioeconomic factors are reported in Table 4, which indicates that education is an important determinant of consumer buying behaviour, with 75% literature support. Furthermore, this is followed by income, age and gender, with 65%, 35% and 35% literature support, respectively. Additionally, 20% of the studies also claimed the influence of lifestyle on customer attitude and purchase intentions towards OF. This reveals that buyers who are willing to adopt a healthy diet and balanced lifestyle have favourable intentions of buying OF products. Marital status came out as the least valuable indicator, with 15% literature support.

Studies reported in Table 5 show that food consumers have a positive attitude towards OF, and it gained 100% literature support. All studies representing different countries and researchers used different statistical tools to come up with generalizable answers, but structural equation modelling is a widely used statistical tool for proposing a new theory and build a body of knowledge about OFSC. However, the gap between attitude and purchase intentions also exists in the literature.

## 6. Discussion

Sustainability in food SC has been threatened by substantial environmental deterioration, and by cultural, social and economic problems. However, OFSC draws special attention globally and is driven by sustainability and personal values. However, the premium price of organic products is the impediment in the industry. Therefore, an increase in production scale of organic foodstuffs and its sale at supermarkets due to good crowd gathering could be a good strategy for the industry to foster sales. For example, initially "Patanjali Ayurved" announced a tie-up with India's largest retail house "Future Group" to make Patanjali products available on the shelves of Big Bazaar with the intention of boosting their sales volume (Jain, 2015). Concurrently, as consumers of OF are few, producers should focus on total customer satisfaction that would

**Table 2**  
Deterrents in organic food market.

No.	Studies	Price	Uncertain income	Insufficient marketing	Insufficient availability	Less variety	Lack of perceived value	Lack of knowledge	Lack of trust	Skepticism of certifications & logos
1	Baecke et al. (2002)	✓	✓	✓	✓					
2	Fotopoulos and Krystallis (2002)	✓			✓	✓		✓		
3	Vindigni et al. (2002)	✓	✓	✓				✓		✓
4	Lea and Worsley (2005)	✓			✓				✓	✓
5	Padel and Foster (2005)	✓		✓				✓		✓
6	Yiridoe et al. (2005)	✓		✓	✓	✓		✓	✓	✓
7	Hughner et al. (2007)	✓		✓	✓					✓
8	Kihlberg and Risvik (2007)	✓	✓	✓	✓	✓	✓	✓		
9	Rodríguez et al. (2012)	✓	✓	✓	✓			✓		
10	Essoussi and Zahar (2009)	✓			✓	✓		✓	✓	
11	Constance and Choi (2010)	✓	✓	✓	✓			✓		
12	Sadati et al. (2010)	✓			✓	✓		✓	✓	✓
13	Sangkumchaliang and Huang (2012)	✓						✓	✓	
14	Meixner et al. (2014)	✓	✓		✓			✓	✓	✓
15	Buder et al. (2014)	✓			✓	✓	✓	✓	✓	
16	Bruschi et al. (2015)	✓		✓	✓	✓	✓	✓	✓	✓
17	Joshi and Rahman (2015)	✓		✓	✓	✓	✓	✓	✓	✓
18	Yip and Janssen (2015)	✓			✓	✓		✓		
19	Liang (2016)	✓			✓	✓		✓		
20	Yadav and Pathak (2016)	✓			✓			✓		
<b>Percentage support</b>		<b>100</b>	<b>30</b>	<b>45</b>	<b>80</b>	<b>50</b>	<b>15</b>	<b>65</b>	<b>40</b>	<b>45</b>
<b>Rank</b>		<b>1</b>	<b>7</b>	<b>5</b>	<b>2</b>	<b>4</b>	<b>8</b>	<b>3</b>	<b>6</b>	<b>5</b>

**Table 3**  
Personal values.

No.	Study	To support local farmers	Health benefits	Natural content	Quality	Taste
1	Lockie et al. (2002)		✓	✓	✓	✓
2	McEachern and McClean (2002)		✓	✓	✓	✓
3	Zanoli and Naspetti (2002)		✓	✓	✓	✓
4	Magnusson et al. (2003)		✓	✓	✓	✓
5	Saba and Messina (2003)		✓	✓	✓	✓
6	Seyfang (2004)	✓	✓	✓	✓	✓
7	Wilkins (2005)		✓	✓	✓	✓
8	Hughner et al. (2007)		✓	✓	✓	✓
9	Biel and Thøgersen (2007)		✓	✓		✓
10	Dean et al. (2008)		✓	✓		✓
11	Aertsens et al. (2009)	✓	✓	✓	✓	✓
12	Essoussi and Zahar (2009)	✓	✓	✓	✓	✓
13	Chakrabarti (2010)		✓	✓	✓	✓
14	Kearney (2010)		✓	✓	✓	✓
15	Stolz et al. (2011)		✓	✓	✓	✓
16	Sangkumchaliang and Huang (2012)	✓	✓	✓	✓	✓
17	Shafie and Rennie (2012)		✓	✓	✓	✓
18	Urban et al. (2012)		✓	✓	✓	✓
19	Joshi and Rahman (2015)		✓	✓	✓	✓
20	Annunziata and Vecchio (2016)	✓	✓	✓	✓	✓
<b>Percentage support</b>		<b>25</b>	<b>100</b>	<b>100</b>	<b>95</b>	<b>95</b>
<b>Rank</b>		<b>3</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>

**Table 4**  
Demographic and socioeconomic factors.

No.	Studies	Education	Income	Age	Gender	Marital status	Lifestyle
1	Lockie et al. (2004)	✓	✓	✓	✓		
2	Hoefkens et al. (2006)	✓	✓		✓		
3	Honkanen et al. (2006)	✓					✓
4	Krystallis and Chrysohoidis (2005)	✓	✓	✓	✓		
5	Onyango et al. (2007)	✓	✓	✓	✓	✓	
6	Dettmann (2008)	✓	✓	✓	✓		
7	Rodríguez et al. (2012)	✓	✓			✓	
8	Tsakiridou et al. (2008)	✓	✓				
9	Aertsens et al. (2009)	✓	✓		✓		
10	Kim et al. (2009)	✓		✓	✓		✓
11	Smith et al. (2009)	✓	✓	✓		✓	
12	Ngobo (2001)	✓	✓				
13	Żakowska-Biemans (2011)	✓	✓				
14	Chen and Lobo (2012)						✓
15	Dimitri and Dettmann (2012)	✓	✓			✓	
16	Forman and Silverstein (2012)	✓					
17	Chen et al. (2014)	✓	✓				
18	Nasir and Karakaya (2014)			✓			
19	Basha et al. (2015)						✓
20	De-Magistris and Gracia (2016)	✓		✓	✓		
<b>Percentage support</b>		<b>70</b>	<b>65</b>	<b>35</b>	<b>35</b>	<b>15</b>	<b>20</b>
<b>Rank</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>4</b>

lead to significant customer retention and be reflected in sustainable business growth. The reason behind this inference is that there is a significant positive attitude towards OF products.

In addition, if non-government organizations and food authorities motivate farmers to adopt organic production, as well as customers to begin organic consumption, this would significantly contribute to environmental, economic and social sustainability. Meanwhile, it would assist in reducing prices, and in improving resources and variety, which would further jolt OF product demand. Similarly, direct marketing at the producer end has an immense importance and will surely facilitate in gaining a reasonable income. Findings indicate that a lack of customer knowledge of the paybacks of organic consumption has confined market growth, but the knowledge of producers is also a hidden deterrent, as they continue to use obsolete production techniques. In other words, the majority of producers are inefficient in farm management. Hence, there is a strong need to invest in research

and development programs, information technology and to promote best farm management practices.

As the world organic market is still small and undeveloped, unorganized food consumers generally have a limited knowledge and understating the entities of OFSC. Therefore, development of trust by effective marketing, and delivering unprecedented value experience to customers, could work as a strategic weapon to cope with the many market challenges and to secure competitiveness. If firms integrate their business partners of OFSC, which it is accessible in handling the market complexities. Thus, taking both upstream and downstream integration of OFSC into account may result in a reduction of inventory levels, cost, lead-time and delivery errors, as well as improvement in production, flexibility, accuracy, information sharing, demand measurement and distribution. Similarly, to address problem of OF variety, the development of organic product lines according to age, income, family size and price, etc., would assist marketers in gaining



**Table 5**  
Customers' attitude towards organic products.

No.	Study	Country	Data collection	Analysis/Tools/Techniques used	Positive	Negative
1	Fotopoulos and Krystallis (2002)	Greek	Interview	Descriptive	✓	
2	Saba and Messina (2003)	Italy	Survey	Cluster analysis & Structural equation modelling	✓	
3	Honkanen et al. (2006)	Norway	Survey	Structural equation modelling	✓	
4	Chen (2007)	Taiwan	Survey	Regression analysis	✓	
5	Stobbelaar et al. (2007)	Dutch	Survey	Descriptive	✓	
6	Arvola et al. (2008)	Italy, Finland & U.K.	Survey	Structural equation modelling	✓	
7	Tsakiridou et al. (2008)	Greek	Survey	Mann–Whitney and Kruskal–Wallis test	✓	
8	Wier et al. (2008)	Britain & Denmark	Panel data	Regression	✓	
9	Tarkiainen and Sundqvist (2009)	Finland	Survey	Confirmatory factor analysis & regression	✓	
10	Pieniak et al. (2010)	Belgium	Survey	Factor analysis & Structural equation modelling	✓	
11	Aertsens et al. (2011)	Belgium	Survey	Regression	✓	
12	Zagata (2012)	Czech Republic	Survey	Descriptive & regression	✓	
13	Hoppe et al. (2013)	Brazil	Survey	Descriptive	✓	
14	Kareklas et al. (2014)	U.S.	Survey	Structural equation modelling	✓	
15	Basha et al. (2015)	India	Survey	Regression & ANOVA	✓	
16	Bruschi et al. (2015)	Russia	Interview & Survey	Descriptive statistics & regression	✓	
17	Teng and Wang (2015)	Taiwan	Surveys	Structural equation modelling	✓	
18	Xie et al. (2015)	China	Survey	Descriptive	✓	
19	Dias et al. (2016)	Brazil	Survey	Structural equation modelling	✓	
20	Yadav and Pathak (2016)	India	Survey	Structural equation modelling	✓	
<b>Percentage support</b>					<b>100</b>	<b>000</b>

consumer confidence. However, the perception is that organic buyers are mainly associated with organic fruit and vegetable consumption and that less preference is given to organic meat and eggs (Tsakiridou et al., 2008).

Study results also reported that many customers are facing the problem of identification of sustainable foodstuffs, certifications and logos. This is an emerging gap between attitude and purchase intention. In other words, in customers who hold a positive attitude, uncertainty and other hindrances are not pushing them to become a successful and regular buyers of organic producers. Hence regular promotions and inspection of organic product certifications, logos, labelling and quality by government agencies can spread awareness among people and build knowledge, trust and involvement in organic purchases. Similarly, claims about health and environment benefits from OF could motivate customer willingness to pay higher prices for organic foodstuffs.

Although the overall satisfaction level of consumers of OF is higher than those of CF, nevertheless this study also noticed some variations in this satisfaction level due to different perceived values. As organic production is lower, products transported to those markets where more chances of high earning. Thus, high lead time affects quality, tastes, appearance of product packaging, and when it reaches the market, leads to high rejection rate by customers. Thus, past unpleasant consumption experience adversely affect customer attitude and preferences. Therefore, the use of cold chain to supply these highly perishable products would help prolong product life and enhance consumer satisfaction. *Furthermore, in the long run this can surely minimize the early reported gap between attitude and purchase intentions.*

The study findings indicated that demographic and socio-economic variables affect attitude and intention. The seriousness of this for children and family health rests with women, who are responsible for the high purchase frequency homemaker role influencing factor for less willingness to pay for OF products. Similarly, higher age group and higher education level, leads to positive affect on attitude and organic purchase intention. One hidden market opportunity would be to build a positive attitude within all ages, education levels, genders and income groups by approaching consumers via print and broadcast media. However, it is equally important for companies to single out any hidden factors that might also affect their business growth before formulating and implementing their plans.

## 7. Managerial implications and concluding remarks

This is the first systematic qualitative study to consider sustainability, deterrents, personal values, demographic and socio-economic factors, attitude and purchase intentions pertaining to OF production and consumption. Extensive literature revision from various refereed journals was taken as a criterion for the development of a conceptual model for future research. It would be interesting to test this conceptual model with structural equation modelling techniques. As far as study results are concerned, environmental protection, pesticide-free food and animal welfare emerged as major sustainability issues, whereas premium price, scarcity and knowledge emerged as dominant deterrents in the expansion of the global organic food market.

As findings show, environmental protection, animal welfare, waste reduction and biodiversity preservation are primary sustainability factors that stimulate the food customers to search for OF products.

Additionally, health benefits, natural content quality, and taste are four major personal OF consumption values. Levels of education and income regularly affect customer attitude and purchase intentions.

As concerns managerial implications, the study suggests three important areas that jolt the demand, production and supply of organic foodstuffs. In the 21st century, competition is no longer between firms' SC but has shifted towards value-added SC. Companies would do well by understand the market environment by formulating best marketing strategies to reduce lead-time, waste rate, inventory, and cost by increasing quality, taste, labelling, packaging, certification, availability and product presentation. However, this requires a collective effort, and firms would have to integrate other business partners of the OFSC. Therefore, producers, suppliers, processors, distributors, wholesalers and retailers, as well as government authorities, need to work together to improve OF sales in total food sales. *Thus, environmental education through broadband media could change the perception of customers and encourage them to adopt a healthy and sustainable lifestyle.*

The present study is beneficial for practitioners, researchers and academicians. It includes all organic product categories; thus deterrents, personal values and attitudes might differ with reference to products, which is one of the limitations. Therefore, in future research, it might be worthwhile to study early discussed factors

according to OF product categories. Meanwhile, examining the impact of information flow on building trust and positive attitude and intentions would be an emerging research area in OFSC.

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### References

- Aertsens, J., Sociol, Rural, Mondelaers, K., Verbeke, W., Buysse, J., Huylenbroeck, G.V., 2011. The influence of subjective and objective knowledge on attitude, motivations and consumption of organic food. *Brit. Food J.* 113 (11), 1353–1378.
- Aertsens, J., Verbeke, W., Mondelaers, K., Huylenbroeck, G.H., 2009. Personal determinants of organic food consumption: a review. *Brit. Food J.* 111 (10), 1140–1167.
- Annunziata, A., Vecchio, R., 2016. Organic farming and sustainability in food choices: an analysis of consumer preference in Southern Italy. *Agric. Agric. Sci. Proc.* 8, 193–200.
- Arvola, A., Vassallo, M., Dean, M., Lampila, P., Saba, A., Lahteenmaki, L., Shepherd, R., 2008. Predicting intentions to purchase organic food: the role of affective and moral attitudes in the theory of planned behaviour. *Appetite* 50 (2–3), 443–454.
- Aschemann-Witzel, J., Zielke, S., 2015. Can't buy me green? A review of consumer perceptions of and behavior toward the price of organic food. *J. Consum. Aff.* Retrieved from: <http://onlinelibrary.wiley.com/doi/10.1111/joca.12092/epdf>.
- Baecke, E., Rogiers, G., De Cock, L., Van Huylenbroeck, G., 2002. The supply chain and conversion to organic farming in Belgium or the story of the egg and the chicken. *Brit. Food J.* 104 (3/4/5), 163–174.
- Baker, B.P., Benbrook, C.M., Groth 3rd, E., Lutzenbrock, K., 2002. Pesticide residues in conventional, integrated pest management (IPM)-grown and organic foods: insights from three US data sets. *Food. Addit. Contam.* 19, 427–446.
- Basha, M.B., Mason, C., Shamsudin, M.F., Hussain, H.I., Salem, M.A., 2015. Consumers attitude towards organic. *Proc. Econ. Fin* 31, 444–452.
- Biel, A., Thøgersen, J., 2007. Activation of social norms in social dilemmas: a review of the evidence and reflections on the implications for environmental behaviour. *J. Econ. Psychol.* 28, 93–112.
- Bravo, C.P., Cordts, A., Schulze, B., Spiller, A., 2013. Assessing determinants of organic food consumption using data from the German National Nutrition Survey II. *Food Qual. Prefer* 28, 60–70.
- Bruschi, V., Shershneva, K., Dolgoplova, I., Canavari, M., Teuber, R., 2015. Consumer perception of organic food in emerging markets: evidence from Saint Petersburg, Russia. *Agribusiness* 31 (3), 414–432.
- Buder, F., Feldmann, C., Hamm, U., 2014. Why regular buyers of organic food still buy many conventional products. *Brit. Food J.* 116 (3), 390–404.
- Carter, C.R., Easton, P.L., 2011. Sustainable supply chain management: evaluation and future directions. *Int. J. Phys. Distrib. Logistics Manage.* 41 (1), 46–62.
- Cavdar, S.C., Aydin, A.D., 2015. Consumer attitudes towards organic food applications, environmental issues and genetically modified organisms (gmOs). *Food Sci. Qual. Manage.* 41, 115–128.
- Chakrabarti, S., 2010. Factors influencing organic food purchase in India – expert survey insights. *Brit. Food J.* 112 (8), 902–915.
- Chen, M.F., 2007. Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: moderating effects of food-related personality traits. *Food Qual. Prefer* 18, 1008–1021.
- Chen, M.F., 2009. Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle. *Brit. Food J.* 111 (2), 165–178.
- Chen, J., Lobo, A., 2012. Organic food products in China: determinants of consumers' purchase intentions. *Int. Rev. Retail Distrib. Consum. Res.* 22 (3), 293–314.
- Chen, J., Lobo, A., Rajendran, N., 2014. Drivers of organic food purchase intentions in mainland China – evaluating potential customers' attitudes, demographics and segmentation. *Int. J. Consum. Stud.* 38, 346–356.
- Chrysosohoidis, G.M., Krystallis, A., 2005. Organic consumers' personal values research: testing and validating the list of values (LOV) scale and implementing a value-based segmentation task. *Food Qual. Prefer.* 16 (7), 585–599.
- Constance, D.H., Choi, J.Y., 2010. Overcoming the barriers to organic adoption in the United States: a look at pragmatic conventional producers in Texas. *Sustainability* 2, 163–188.
- De-Magistris, T., Gracia, A., 2016. Consumers' willingness to pay for light, organic and PDO cheese. *Brit. Food J.* 118 (3), 560–571.
- Dean, M., Raats, M.M., Shepherd, R., 2008. Moral concerns and consumer choice of fresh and processed organic foods. *J. Appl. Soc. Psychol.* 38 (8), 2088–2107.
- Dellios, R., Yang, X., Yilmaz, N.K., 2009. Food safety and the role of the government: implications for CSR policies in China. *iBusiness* 1, 75–84.
- Dettmann, R.L., 2008. Organic Produce: who's eating it? A demographic profile of organic produce consumers. In: American Agricultural Economics Association, Annual Meeting.
- Dias, V.D.V., Schuster, M.D.S., Talamini, E., Revillion, J.P., 2016. Scale of consumer loyalty for organic food. *Brit. Food J.* 118 (3), 697–713.
- Dimitri, C., Oberholtzer, L., 2009. Marketing U.S. Organic Foods Recent Trends from Farms to Consumers. Retrieved from: [http://www.ers.usda.gov/media/185272/eib58\\_1\\_1.pdf](http://www.ers.usda.gov/media/185272/eib58_1_1.pdf).
- Dimitri, C., Dettmann, R.L., 2012. Organic food consumers: what do we really know about them? *Brit. Food J.* 114 (8), 1157–1183.
- Durham, C.A., 2007. The impact of environmental and health motivations on the organic share of purchases. *Agric. Agric. Resour. Econ. Rev.* 36 (2), 304–320.
- Essoussi, L.H., Zahar, M., 2009. Exploring the decision-making process of Canadian organic food consumers. *Qual. Mark. Res.* 12 (4), 443–459.
- Forman, J., Silverstein, J., 2012. Organic foods: health and environmental advantages and disadvantages. *Pediatrics* 130 (5), e1406–e1415.
- Fotopoulos, C., Krystallis, A., 2002. Organic product avoidance: reasons for rejection and potential buyers identification in a countrywide survey. *Brit. Food J.* 104 (9), 730–765.
- Gracia, A., deMagistris, T., Nayga, R.M., 2012. Importance of social influence in consumers' willingness to pay for local food: are there gender differences? *Agribusiness* 28 (3), 361–371.
- Hjelmar, U., 2011. Consumers' purchase of organic food products. A matter of convenience and reflexive practices. *Appetite* 56 (2), 336.
- Hoefkens, C., Camp, J.V., Verbeke, W., Aertsens, J., Mondelaers, K., 2009. The nutritional and toxicological value of organic vegetables: consumer perception versus scientific evidence. *Brit. Food J.* 111 (10), 1062–1077.
- Hole, D.G., Perkins, A.J., Wilson, J.D., Alexander, I.H., Grice, P.V., Evans, A.D., 2005. Does organic farming benefit biodiversity? *Biol. Conserv.* 122, 113–130.
- Honkanen, P., Verplanken, B., Olsen, S.O., 2006. Ethical values and motives driving organic food choice. *J. Consum. Behav.* 5, 420–430.
- Hoppe, A., Vieira, L.M., Barcellos, M.D.D., 2013. Consumer behaviour towards organic food in portoalegre: an application of the theory of planned behaviour. *Rev. Econ. Soc. Rural.* 51 (1), 69–90.
- Hughner, R.S., McDonagh, Prothero, A., Shultz, C.J., Stanton, J., 2007. Who are organic food consumers? A compilation and review of why people purchase organic food. *J. Consum. Behav.* 6, 94–110.
- Jain, V., 2015. Patanjali enters big retail with future group tie-up. *Econ. Times.* Oct 10, 2015.
- Jones, P., Clarke-Hill, C., Shears, P., 2001. Retailing organic foods. *Brit. Food J.* 103 (5), 358–365.
- Joshi, Y., Rahman, Z., 2015. Factors affecting green purchase behaviour and future research directions. *Int. Strat. Manage. Rev.* 3 (1–2), 128–143.
- Kareklas, I., Carlson, J.R., Muehling, D.D., 2014. I eat organic for my benefit and yours: egoistic and altruistic considerations for purchasing organic food and their implications for advertising strategists. *J. Advert.* 43 (1), 18–32.
- Kearney, J., 2010. Food consumption trends and drivers. *Philos. Trans. R. Soc. B.* 365, 2793–2807.
- Kenanoğlu, Z., Karahan, O., 2002. Policy implementations for organic agriculture in Turkey. *Brit. Food J.* 104 (3–4–5), 300–318.
- Kihlberg, I., Risvik, E., 2007. Consumer of organic foods—value segments and liking of bread. *Food Qual. Prefer.* 18 (3), 471–481.
- Kim, R., Suwunnamek, O., Toyoda, T., 2008. Consumer attitude towards organic labeling schemes in Japan. *J. Int. Food Agr. Bus. Mark.* 20 (3), 55–71.
- Kim, Y.G., Eves, A., Scarles, C., 2009. Building a model of local food consumption on trips and holidays: a grounded theory approach. *Int. J. Hosp. Manage.* 28, 423–431.
- Kottila, M., Ronni, P., 2008. Collaboration and trust in two organic food chains. *Brit. Food J.* 110 (4/5), 376–394.
- Krystallis, A., Chrysosohoidis, G., 2005. Consumer's willingness to pay for organic food: factors that affects it and variation per organic product type. *Brit. Food J.* 107 (4/5), 320–323.
- Krystallis, A., Vassallo, M., Chrysosohoidis, G., Perrea, T., 2008. Societal and individualistic drivers as predictors of organic purchasing revealed through a portrait value questionnaire (PVQ)-based inventory. *J. Consum. Behav.* 7, 164–187.
- Larceneux, F., Beniot-Moreau, F., Renudin, V., 2012. Why might organic labels fail to influence consumer choices? Marginal labelling and brand equity effects. *J. Consum. Pol.* 35, 85–104.
- Lea, E., Worsley, T., 2005. Australians' organic food beliefs, demographics and values. *Brit. Food J.* 107 (11), 855–869.
- Liang, R., 2016. Predicting intentions to purchase organic food: the moderating effects of organic food prices. *Brit. Food J.* 118 (1), 183–199.
- Lockie, S., Lyons, K., Lawrence, G., Mummery, K., 2002. Eating 'Green': motivations behind organic food consumption in Australia. *Sociol. Rural.* 42 (1), 23–40.
- Lockie, S., Lyons, K., Lawrence, G., Grice, J., 2004. Choosing organics: a path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite* 43, 135–146.
- Loebnitz, N., Aschemann-Witzel, J., 2016. Communicating organic food quality in China: consumer perceptions of organic products and the effect of environmental value priming. *Food Qual. Prefer.* 50, 102–108.
- Magkos, F., Arvaniti, F., Zampelas, A., 2006. Organic food: buying more safety or just peace of mind? A critical review of the literature. *Crit. Rev. Food Sci. Nutr.* 46, 23–56.
- Magnusson, M., Arvola, A., Hursti, U.K., Aberg, L., Sjoden, P., 2001. Attitudes towards organic foods among Swedish consumers. *Brit. Food J.* 103 (3), 209–226.

- Magnusson, M.K., Arvola, A., Hursti, U.K., Aberg, L., Sjoden, P., 2003. Choice of organic foods is related to perceived consequences for human health and to environmentally friendly behavior. *Appetite* 40, 109–117.
- McEachern, M.G., McClean, P., 2002. Organic purchasing motivations and attitudes: are they ethical? *Int. J. Consum. Stud.* 26 (2), 85–92.
- Meixner, O., Haas, R., Perevoshchikova, Y., Canavari, M., 2014. Consumer attitudes, knowledge, and behavior in the Russian market for organic food. *Int. J. Food Syst. Dyn.* 5 (2), 110–120.
- Meyer-Höfer, M.V., Nitzko, S., Spiller, A., 2015. Is there an expectation gap? Consumers' expectations towards organic: an exploratory survey in mature and emerging European organic food markets. *Brit. Food J.* 117 (5), 1527–1546.
- Nasir, V.A., Karakaya, F., 2014. Underlying motivations of organic food purchase intentions. *Agribusiness* 30 (3), 290–308.
- Ngobo, P.V., 2011. What drives household choice of organic products in grocery stores? *J. Retail.* 87 (1), 90–100.
- Onyango, B.M., Hallman, W.K., Bellows, A.C., 2007. Purchasing organic food in US food systems. *Brit. Food J.* 109 (5), 399–411.
- Padel, S., Foster, C., 2005. Exploring the gap between attitude and behaviour: understanding why consumers buy or do not buy organic food. *Brit. Food J.* 107 (8), 606–625.
- Pieniak, Z., Aertsens, J., Verbeke, W., 2010. Subjective and objective knowledge as determinants of organic vegetables consumption. *Food Qual. Prefer.* 21, 581–588.
- Pimentel, D., Hepperly, P., Hanson, J., Douds, D., Seidel, R., 2005. Environmental, energetic, and economic comparisons of organic and conventional farming systems. *BioScience* 55 (7), 573–582.
- Pino, G., Alessandro, M.P., Guido, G., 2012. Determinants of regular and occasional consumers' intentions to buy organic food. *J. Consum. Aff.* 46 (1), 157–167.
- Reed, M., 2001. Fight the future. How the contemporary campaigns of the UK organic movement have arisen from their composting past. *Sociol. Rural.* 41 (1), 31–45.
- Reisch, L., Eberle, U., Lorek, S., 2013. Sustainable food consumption: an overview of contemporary issues and policies. *Sustain. Sci. Prac. Policy* 9 (2), 7–25.
- Risku-Norj, H., Muukka, E., 2013. Food and sustainability: local and organic food in Finnish food policy and in institutional kitchens. *Acta Agric. Agric. Scand. B* 63 (1), 8–18.
- Rodríguez, E., Lacaze, V., Lupín, B., 2012. Contingent Valuation of Consumers' Willingness-to-pay for organic Food in Argentina. Universidad Nacional de Mar del Plata/Faculty of Economics and Social Sciences, Mar del Plata, Argentina.
- Saba, A., Messina, F., 2003. Attitudes towards organic foods and risk/benefit perception associated with pesticides. *Food Qual. Prefer.* 14, 637–645.
- Sadati, S.A., Sadati, S.A., Fami, H., Del, P.T.T., 2010. Survey consumer attitude toward barriers of organic products (OP) in Iran: a case study in Gorgan City. *World. Appl. Sci. J.* 8 (11), 1298–1303.
- Sangkumchaliang, P., Huang, W.C., 2012. Consumers' perceptions and attitudes of organic food products in northern Thailand. *Int. Food Agric. Manag. Rev.* 15 (1), 87–102.
- Seyfang, G., 2004. Local organic Food: the Social Implications of Sustainable Consumption. Retrieved from: [http://www.cserge.ac.uk/sites/default/files/edm\\_2004\\_09.pdf](http://www.cserge.ac.uk/sites/default/files/edm_2004_09.pdf).
- Shafie, F.A., Rennie, D., 2012. Consumer perceptions towards organic food. *Procedia* 49, 360–367.
- Smith, T.A., Huang, C.L., Lin, B., 2009. Does price or income affect organic choice? Analysis of U.S. fresh produce users. *J. Agric. Agric. Appl. Econ.* 41 (3), 731–744.
- Stobbelaar, D.J., Casimir, G., Borghuis, J., Marks, I., Meijer, L., Zebeda, S., 2007. Adolescents' attitudes towards organic food: a survey of 15- to 16-year old school children. *Int. J. Consum. Stud.* 31, 349–356.
- Stolz, H., Stolze, M., Hamm, U., Janssen, M., Ruto, E., 2011. Consumer attitudes towards organic versus conventional food with specific quality attributes. *NJAS – Wagen. J. Life Sci.* 58 (3–4), 67–72.
- Tarkiainen, A., Sundqvist, S., 2005. Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *Brit. Food J.* 107 (11), 808–822.
- Tarkiainen, A., Sundqvist, S., 2009. Product involvement in organic food consumption: does ideology meet practice? *Psychol. Mark.* 26 (9), 844–863.
- Teng, C., Wang, Y., 2015. Decisional factors driving organic food consumption. *Brit. Food J.* 117 (3), 1066–1081.
- Tsakiridou, E., Boutsouki, C., Zotos, Y., Mattas, K., 2008. Attitudes and behaviour towards organic products: an exploratory study. *Int. J. Retail Distrib. Manage.* 36 (2), 158–175.
- Tseng, W., Chang, C., 2015. A study of consumers' organic products buying behavior in Taiwan – ecologically conscious consumer behavior as a segmentation variable. *Int. Proc. Manage. Econom.* 84, 43–48.
- Ureña, F., Bernabéu, R., Olmeda, M., 2008. Women, men and organic food: differences in their attitudes and willingness to pay; a Spanish case study. *Int. J. Consum. Stud.* 32 (1), 18–26.
- Van Loo, E., Caputo, V.C., Nayga, R.M., Meullenet, J.M., Crandall, P.G., Ricke, S.C., 2010. Effect of organic poultry purchase frequency on consumer attitudes toward organic poultry meat. *J. Food Sci.* 75 (7), S384–S397.
- Vieira, L.M., De Barcellos, M.D., Hoppe, A., da Silva, S.B., 2013. An analysis of value in an organic food supply chain. *Brit. Food J.* 115 (10), 1454–1472.
- Vindigni, G., Janssen, M.A., Wander, J., 2002. Organic food consumption. A multi-theoretical framework of consumer decision-making. *Brit. Food J.* 104 (8), 624–642.
- Wier, M., Hansen, L.G., Andersen, L.M., Millock, K., 2003. Consumer preferences for organic foods. In: *Organic Agriculture: Sustainability, Markets and Policies*. CABI Publishing, pp. 257–271.
- Wier, M., O'Doherty Jensen, K., Mørch Andersen, L., Millock, K., 2008. The character of demand in mature organic food markets: great Britain and Denmark compared. *Food Pol.* 33 (5), 406–421.
- Willer, H., Kilcher, L., 2012. *The World of Organic Agriculture. Statistics and Emerging Trends 2012*. IFOAM, Bonn, and FiBL, Frick.
- Wilkins, J., 2005. Eating right here: moving from consumer to food citizen. *Agric. Agric. Hum. Val.* 22, 269–273.
- World Health Organization, 2015. Food Safety. Retrieved from at: <http://www.who.int/mediacentre/factsheets/fs399/en/>.
- Xie, B., Wang, L., Yang, H., Wang, Y., Zhang, M., 2015. Consumer perceptions and attitudes of organic food products in Eastern China. *Brit. Food J.* 117 (3), 1105–1121.
- Yadav, R., Pathak, G.S., 2016. Intention to purchase organic food among young consumers: evidence from a developing nation. *Appetite* 96, 122–128.
- Yin, S., Wu, L., Du, L., Chen, M., 2010. Consumers' purchase intention of organic food in China. *J. Sci. Food Agric.* 90 (8), 1361–1367.
- Yip, L., Janssen, M., 2015. How do consumers perceive organic food from different geographic origins? Evidence from Hong Kong and Shanghai. *J. Agric. Agric. Rural. Dev. Trop.* 116 (1), 71–84.
- Yiridoe, E.K., Bonti-Ankomah, S., Martin, R.C., 2005. Comparison of consumer perceptions and preference toward organic versus conventionally produced foods: a review and update of the literature. *Renew. Agric. Food Syst.* 20 (4), 193–205.
- Zagata, L., 2012. Consumers' beliefs and behavioural intentions towards organic food. Evidence from the Czech Republic. *Appetite* 59 (1), 81–89.
- Żakowska-Biemans, S., 2001. Polish consumer food choices and beliefs about organic food. *Brit. Food J.* 113 (1), 122–137.
- Zanoli, R., Naspetti, S., 2002. Consumer motivations in the purchase of organic food: a means-end approach. *Brit. Food J.* 104 (8), 643–653.