



## Consumer Behaviour Toward Modern Food Products and Trends

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**Abstract:** People practicing food buying and consumption activities in everyday of their life's, therefore this study aims to highlight the main factors that could affect consumer attitudes towards novel food products and consumption trends. The study handled three main food consumption trends that are: sustainable food consumption, organic food consumption and genetically modified food consumption. In order to achieve the study objective, a desk research was conducted, and a through literature survey was carried out on the main factors that affect consumer attitudes toward novel food products and consumption patterns. Literature resources were collected by screening various databases as EBSCO, Scopus, Science Direct, Taylor and Francis and other search tools. The main results indicate that the consumers attitudes towards novel food products are affected by different variables as consumer values and beliefs toward the environment and the farming technology in addition to the level of knowledge they have regarding food farming and producing technics. Also, it is found that trust, moral and ethical issues could influence the level of consumer acceptance of genetically modified foods.

**Keywords:** consumer attitudes; GMOs; genetically modified products; organic food; novel food trends.

**JEL classification:** M31, M39

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## Odnos potrošnikov do sodobnih prehrambnih izdelkov in trendov

**Povzetek:** Ljudje v vsakodnevem življenju izvajajo dejavnosti nakupa in uživanja hrane, zato želimo v tej študiji osvetliti glavne dejavnike, ki bi lahko vplivali na odnos potrošnikov do novih živilskih izdelkov in trendov porabe. Študija je obravnavala tri glavne trende porabe hrane, in sicer: trajnostna poraba hrane, uživanje organske hrane in gensko spremenjena poraba hrane. Za doseg cilja študije smo opravili namizno raziskavo in s pomočjo kritičnega pregleda in analize literature opravili raziskavo glavnih dejavnikov, ki vplivajo na odnos potrošnikov do novih prehranskih izdelkov in vzorcev potrošnje. Viri so bili zbrani z ogledom baz podatkov EBSCO, Scopus, Science Direct, Taylor in Francis, z uporabo iskalnih orodij. Glavni rezultati kažejo, da na odnos potrošnikov do novih živilskih izdelkov vplivajo različne spremenljivke, kot so potrošniške vrednote in prepričanja do okolja in kmetijske tehnologije, poleg stopnje znanja, ki jo imajo v zvezi s

pridelovanjem hrane in tehniko proizvodnje. Ugotovljeno je bilo tudi, da lahko zaupanje, moralna in etična vprašanja vplivajo na raven sprejemanja gensko spremenjenih živil s strani potrošnikov.

*Ključne besede:* stališča potrošnikov; GSO; gensko spremenjeni izdelki; organska hrana; novi prehranski trendi.

*JEL klasifikacija:* M31, M39

## 1. Introduction

Food consumption is part of any human ordinary life, but still choosing the appropriate food to consume is an uneasy decision to take because it depends on different factors and considerations such as practical considerations, family disputes, emotional factors, political reflections and moral debates, in addition to people's values, and what they consider as 'good or bad' for themselves, their families and society (Ditlevsen et al., 2019).

Currently, food products marketers and researchers are more interested in finding the best practices of satisfying the varying consumers' needs in this sector, this increased interest can be attributed to three main factors: innovation in product development, innovation in marketing strategy and increased concern for fitness and the healthiness of food (Kumar and Ray, 2018). Especially that the issue of unsafe food is experiencing increased public awareness, and consumers are demanding better food safety, higher quality, and sustainability (Chu, 2018). Therefore, the rise of new lifestyles and new ethics underpinning consumer choices emphasized the need to expand the knowledge about consumer in order to analyse their needs, attitudes, expectations and behaviour (Annunziata and Scarpato, 2014). Despite the different factors that could affect consumer buying behaviour, consumers attitudes, which are functions of behaviourally based beliefs (Lefebvre et al., 2019), has been usually considered as having the largest direct and indirect influence on buying behaviour and intention to buy (Verneau et al., 2014).

In food sector, consumer satisfaction, which is the ultimate goal of any marketing strategy, depends on the social and institutional context in which the product is purchased and consumed than on the product characteristics. Thus, consumer choices are no longer completely driven by the maximization of the utility function, but also includes social, ethical, and environmental factors. Consequently, two main behavioural trends emerged: the growth of food safety concerns and the increasing interest for high quality safe food products (Cecchini et al., 2018). Moreover, in situations where choices are debated, individuals are obliged to explain their choices with reference to underlying norms and make the justification appears relevant to all involved parties (Ditlevsen et al., 2019). Hence, food consumption is not all about satisfaction of basic needs only anymore, it starts to embody other necessities that related to the production processes sustainability from a social, environmental, cultural, and ethical point of views (Cecchini et al., 2018).

Nowadays, the intervention of genetic technologies in our food system make taking the right food choice a hard task, especially that consumers view innovative food technologies and their resulting foods with doubt and evaluate these products according to their knowledge of the technology itself and their individual past experience of consuming them. However, some product attributes can encourage consumers to adopt buying new novel food products such as better taste, higher convenience, health-enhancing properties and the closeness to natural processes. Furthermore, frequent exposure to different types of novel food can also contribute to making new practices imaginable and new food more familiar to consumers, which in turn positively affects consumers' attitudes. On the other hand, questioning the existence of harmful by products or any potential health risk associated with the consumption of novel food, will prevent consumers interest in consuming such products (Ditlevsen et al., 2019).

## 2. Study aim and methodology

This review study aims to highlight the main factors that affect the consumers attitudes and perceptions towards novel food products especially the genetically modified food products and organic food products in addition to modern sustainable food consumption trend. On order to achieve the study aims, a desk research will be conducted by reviewing different previous studies that collected by using various databases as Scopus, Web of Science, Science Direct, EBSCO, Google Scholar, Taylor and Francis, and other search tools. For achieving needed literature sources

keywords as consumer attitudes, GMOs, marketing strategy, customer satisfaction, organic food, food technologies, and customer perception were used.

### **3. Literature overview**

#### **3.1 Sustainable food consumption behaviour**

As a result of rapid society changes and the spread of innovative technologies into food farming and processing, consumers became more required to keep in touch with innovations in their food choices (Verneau et al., 2014). In the contemporary Western societies, sustainable food consumption is becoming a significant aspect of sustainable development. The global food system plays a substantial role in affecting the level of climate changing greenhouse gas emissions with all of its supply chain that ranging from production processing, distribution, retailing, home food preparation and waste (Annunziata and Scarpato, 2014; Reisch et al., 2013). This awareness of this effect is increasing especially in advanced countries where consumers show a greater sensitivity to issues as public health, quality of life, protection of natural resources and biodiversity that directly affecting their food choices decisions (Annunziata and Scarpato, 2014).

Sustainable food can be defined as any food that is "safe, healthy, and nutritious for consumers; can meet the needs of the less well off at a global scale; provides a viable livelihood for farmers, processors, and retailers whose employees enjoy a safe and hygienic working environment; respects the biophysical and environmental limits in its production and processing while reducing energy consumption and improving the wider environment; respects the highest standards of animal health and welfare compatible with the production of affordable food for all sectors of society; and supports rural economies and the diversity of rural culture, in particular by emphasizing local products that minimize food miles" (Annunziata and Scarpato, 2014).

Consumers attitudes do not automatically translated into intentions and behaviour, due to the effect and intervention of many situational, socio-economic and structural factors that can shift their effect and producing a confused behaviour, or even preventing consumers with favourable environmental attitudes from engaging in pro-environmental behaviours (Cerri et al., 2018). Therefore, it will be useful to focusing on rational influences on attitudes, mainly consumers beliefs about the risks and benefits that accompany their behaviours (Sydney E. Scott et al., 2018).

In the case of sustainable food, consumer attitudes influenced by three main factors, the first factor is personal values which reflects the consumers lifestyle and personal value in food choices, such as their interest in the environmental and social impact of food or their habits (Annunziata and Scarpato, 2014). The second factor is perceived barriers that refers to variables such as price, product availability and time pressure which can bound consumers in their sustainable food choices (Annunziata and Scarpato, 2014; Cerri et al., 2018). The third factor is consumer confidence in information and its sources, where it is very hard for consumers to evaluate it variables personally especially when it is related to some credence attributes as ethical, environmental and social attributes of food. Therefore, consumers will face a problem in translating their attitudes into behavioural intentions when they are not confident about logos, labels or claimed product availability or when they lack needed information (Annunziata and Scarpato, 2014).

However, as a result of attitude-behaviour gaps, predicting behavioural intentions regarding environmental consumerism still different from forecasting actual behaviour (Luchs et al., 2015), but there still an evidence that the number of consumers who are shifting their consumption patterns toward consuming more sustainable products are increasing (Cerri et al., 2018).

#### **3.2 Organic food consumption**

The development of organic agribusiness has given consumers more products from which they can choose (Lee, 2016), especially in developed countries (Barański et al., 2017) where consumers have strong preferences toward consuming natural and organic food products (Sydney E. Scott et al., 2018). Demand on organic food is mostly driven by consumer perceptions that organic farming practices in comparison to conventional farming practices are more sustainable, brings environmental sustainability, biodiversity, animal welfare, and food quality and safety benefits (Barański et al., 2017). On the other hand, expansions in modern organic food production process and practices also have been largely

affected by the ideal of sustainability and environmental concerns. However, for organic consumers, the non-sensory attributes of food goods are more important than sensory attributes, especially personal health benefits and environmental concerns (Ditlevsen et al., 2019), in addition, consumer value set and his pursuit of life equilibrium are all plays an important role in affecting consumers' food choice decisions (Ditlevsen et al., 2019; Larson, 2018).

Consumers assume that organic food is beneficial for their health (Mazzacano D'Amato and Falzon, 2015) because they perceive them as free of pesticides, hormones, and antibiotics (Lee, 2016), taste better, and save the environment. This positive attitude has significantly affected their buying intention of organic food products. However, there is a positive relationship between consumers positive attitude toward buying organic foods and their levels of education and income (Chu, 2018).

Consumers attitudes toward organic foods and their consumption patterns are formulated due to significant factors, such as environmental friendliness, care for animal health, and personal wellbeing as well as other external factors as subjective norms and marketing communications. In addition to other internal factors that mainly concern environmental consciousness (Chu, 2018), health realization, and price perception (Chu, 2018; Mazzacano D'Amato and Falzon, 2015).

Intention to purchase organic foods is affected by environmental consciousness which relates to individuals' emotive viewpoint of the environment, such as disliking of others' who are not caring for the environment (Chu, 2018). But still environmental concerns are not the major driving force behind buying and consuming organic food. The major driving factor seems to be health realization that is defined as "readiness to undertake health actions" (Mazzacano D'Amato and Falzon, 2015). Therefore, consumers consider buying organic products as an investment in their health, since consumers perceptions that organic foods are having higher nutritional value and are produced naturally without using any harmful chemicals, results in positive attitudes toward organic foods. Besides, organic farming practices are seeming to be safer for their health. Another factor that affect consumer attitude is subjective norms that is the outcome of the perceived social pressure of others as people whose opinions are important to consumers (Chu, 2018).

### **3.3 GMO food consumption**

In last few decades, industrialized countries invested in the agricultural sector and it was able to increase crop productivity in comparison to less developed countries because of improvements in plant breeding with the use of genetically modified seeds (Reisch et al., 2013). genetically modified crops or foods (GMOs) are products that are produced by using genetic engineering technologies that manipulated the DNA, RNA, or proteins to effect a change in an organism's genome or epigenome (Scott et al., 2018, 463).

Scientists belief that GM foods products are safe to eat and they have no negative side effects on consumers health, but still that consumers remain less convinced about the healthiness of this genetically modified food (Kolodinsky and Lusk, 2018; Scott et al., 2018). Also, for some consumers, genetically modified food is a moralized issue for which people base their disapproval or rejection on moral principles and faiths about the process of genetic engineering (Scott et al., 2018). However, Consumer perceptions about the risks and benefits of buying and consuming GM foods will highly affect their attitudes toward it. Consumers perceptions of risk and benefits are grounded on different basics such as attitude towards science, knowledge, trust, education and values, among others (Costa-Font and Gil, 2012).

Consumers who support GM foods consumption and believe that it is harmless for humans and consider it to be beneficial to the society will hold a positive attitude toward buying and consuming GM food products. On contrary, those consumers who believe that GM foods will have negative effects on the environmental, humans, animals, and plants, will hold a negative attitude and not intent to buy or consume such products. In addition, people who thinks social referents are favourable toward GM foods will perceive social pressure to purchase (Lefebvre et al., 2019).

Other factors as information processing, regulations, and trust also playing an important role in forming consumers attitudes toward GM food. Some research proposes that providing consumers with factual information will increases their acceptance and it is also important to use different credible information channels as consumer organizations, environmental groups and scientists to deliver the needed information especially if consumers feel that they don't know enough about gene technology and they may need to count on other institutions to manage risks. If those

institutions are trusted, the technology is not considered risky. Also, other research suggest that consumers will trust the GM food and be more confident about its safety when they expected a larger net benefit and there be more strict regulations. In addition, there is still other factors that could affecting consumer attitudes toward GM food either in a positive or negative direction as individual values, demographic attributes, moral and ethical considerations and socio-economic attributes (Costa-Font and Gil, 2012; Scott et al., 2018).

Individuals can be categorized according to their attitudes toward GM food into three main groups, the first group is the pessimistic group or anti-GM food group, the second group is risk-tolerant or information searchers group; and finally, the optimistic group or GM-accepters (Costa-Font and Gil, 2012).

#### 4. Conclusion

In conclusion, this study shows different directions of consumers attitudes toward modern food consumption patterns especially for sustainable food consumption, consumption of organic foods and GM foods. In the case of sustainable food consumption there are three main factors that could affect consumer attitudes which are personal values, perceived barriers, and consumer confidence in information. However, even that consumers may show a positive attitude toward food products characterized by sustainability attributes, there are still many factors that limit their ability to transform their attitudes into real purchasing behaviour. However, the expansion of sustainability and environmentally trends, consumption patterns toward organic foods also expands where the food non-sensory attributes as personal health and pursuit of life equilibrium become more important for consumers when taking their decisions. The study shows that the main factors that affect consumers attitudes toward organic foods are environmental friendliness, care for animal health, and personal wellbeing, subjective norms, marketing communications, environmental consciousness, health realization, and price perception.

Also, regarding consumers attitudes toward GM food consumption, the study shows that people will more accept genetic engineering science if they can better understand the technology and its benefits and risks, and if they feel that they are protected and consuming such a product is safe for their health, in addition other factors as demographic attitudes, moral and ethical issues show some effect on consumers attitudes toward GM food.

*Note:* Some parts of the paper have been presented at the 3<sup>rd</sup> International Scientific Conference - EMAN 2019.

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