

## Does the nationality impact on the awareness toward the consumption of organic foods in developing countries? : insights from Türkiye and Algeria

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### Abstract

This study aims to investigate the impact of respondents' nationality on their use of organic foods. This type of product is illustrated using natural milk and olive oil. The approach used in this study was an online survey conducted between January and November 2022 with 81 respondents from two developing countries (Türkiye and Algeria). The results were then examined using SPSS software V26 in order to perform the Chi-square test.

The findings show that the willingness to use organic food in the future in order to consume organic food is independent of respondents' age. It means that in this scenario, both Turkish and Algerians are willing to consume it ( $p\text{-value} = 0.496$ ).

**Keywords:** *Consumer behaviour-Green marketing-Organics food- Chi-square test- Gender-Türkiye-Algeria.*

### Introduction

The most important reason for buying organic foods appears to be "health" (Gul Aygen, 2012). Organic foods are defined as those grown without the use of chemical pesticides (Singh, 2017). When the world's population was low, almost all agriculture was organic or nearly natural. However, these ancient traditions, passed down from generation to generation, did not yield enough food to fulfil the demands of the world's fast growing population. This led to the "green revolution," in which farmers used technological interventions to maximize outputs to fulfil the increased demand for food for the increasing population (Dholakia & Shukul, 2012).

Furthermore, previous research has found that the most important characteristics of organic foods are health (minimal artificial chemical residues in the product and high nutritional value), environment (preference for a product produced and processed in an environmentally friendly manner), and high quality, such as taste (Pearson, 2002). Apart from addressing immediate environmental problems, organic food use is also motivated by customers' desire to maintain healthy eating habits that improve their quality of life (Ditlevsen et al, 2019).

The impact of nationality on the consumption of organic foods is an important area of study in consumer behaviour, particularly as organic food consumption grows worldwide. In this context, the present paper examines the awareness toward the consumption of organic foods among women in particular, through two developing countries which are Türkiye and Algeria.

### **Literature review**

The term "organic" was first used in Northbourne's (1940) study on organic farms titled "Look to the Land." Consumers play an important role in addressing the sustainability challenges of food systems (Hedin et al, 2019; Vermeir et al, 2020). According to Eurobarometer (2020) and Mintel (2021), consumers expect producers and manufacturers to improve food systems sustainability.

## Impacts of Nationality on Organic Food Consumption

Several research underlined the effect of nationality on the consumption of organic foods (Rana, & Paul, 2017; Willer & Lernoud, 2023 ; Yadav & Pathak, 2016 ; Aertsens et al., 2009; Czudec; 2022 ; Boukhedimi et al, 2023 ; Brata et al, 2022 ; Lamonaca et al, 2022).

### 1. Cultural Differences and Food Values

Different nationalities have varying food cultures, values, and health perceptions. For instance, countries like Germany or Denmark have a long tradition of environmental and organic awareness, whereas in others, organic food is less culturally embedded. In other words, European consumers generally show stronger preferences for organic foods compared to consumers in many developing countries.

### 2. Awareness and Education Levels

In many Western countries, there's greater awareness of food safety, environmental concerns, and sustainability, influencing higher organic food demand. Thus, developing nations may face barriers such as lower awareness or trust in organic labels.

### 3. Economic Factors

National economic conditions influence affordability. In wealthier countries, consumers are more likely to purchase premium-priced organic products. In the U.S., higher income groups purchase organic more frequently than lower-income groups.

### 4. Government Regulation and Availability

National policies and the presence of certification systems affect trust in organic labelling and availability. For instance, EU countries follow strict organic labelling policies, increasing consumer confidence.

### 5. Trust in Organic Certification

Studies show that consumers in some countries may distrust "organic" labels due to lack of regulation or misinformation, limiting consumption.

### 6. Religious and Ethical Considerations

In some cultures, ethical or religious views intersect with organic values (e.g., Halal-organic in Muslim-majority countries), influencing purchase behaviour.

The consumption of organic food has grown globally, significant differences exist across nationalities. National culture, economic conditions, and trust in food systems heavily influence consumer attitudes and behaviours regarding organic products. Nationality often acts as a proxy for several sociocultural and institutional factors.

## Cultural and Social Influences

Cultural norms shape dietary preferences, risk perceptions, and environmental awareness, all of which impact organic food consumption. In Western Europe (e.g., Germany, France), organic food is often associated with environmental ethics, sustainability, and healthy lifestyles. In contrast, countries like Algeria and others in North Africa are still developing organic markets, with limited cultural integration of organic products (Benmehaia & Brabez, 2018). In this sense, German consumers tend to prioritize ecological concerns, while Algerian consumers may prioritize food safety and affordability.

## Economic Development and Purchasing Power

Nationality often reflects economic capacity: Consumers in high-income countries are more willing and able to pay a price premium for organic products (Willer & Lernoud, 2023). While In developing nations, the

higher cost of organic food is a major barrier (Yadav & Pathak, 2016), especially when conventional food security is still a concern.

### **Regulatory Framework and Consumer Trust**

Trust in certification labels varies by country. The EU has a robust and well-known organic certification system, which builds consumer confidence. In Algeria, the regulatory system for organic agriculture is still emerging, leading to lower consumer awareness and trust in the label "organic" (Benmehaia, 2020).

### **Awareness and Education**

Nationality is linked to different levels of public education and awareness campaigns. Studies show that French and German consumers are more exposed to environmental campaigns and school programs promoting organic food (Aertsens et al., 2009). In Algeria, awareness is increasing but remains relatively low due to limited marketing, media focus, and consumer education.

In short, comparisons between countries like Algeria and Germany illustrate that organic food markets thrive where cultural, institutional, and economic supports align. In contrast, developing nations face challenges but also offer opportunities for future market growth.

### **Previous studies**

In this regard, numerous research on the intake of organic foods have been conducted. Siahaan & Thiodore (2022) conducted a study on 400 Indonesians to analyze the impact of consumer behaviour to purchase organic foods in Jakarta (Indonesia) from June 12th to July 3rd, 2017, using the Structural Equation Model (SEM) and descriptive analysis of data gathered. As a result, a "high" association has been discovered between attitudes and perceived behavioural factors and the intention to purchase organic goods. However, the aim was unaffected by subjective norms. Using intention as a mediator variable, it has revealed a very strong relationship between organic food purchase decisions.

Thus, Gundala and Singh (2021) investigated the characteristics influencing customer purchasing behaviour for organic goods in the Midwest (United States). Based on the responses of 770 consumers, using ANOVA, multiple linear regression, factor analysis, independent t-tests, and hierarchical multiple regression analysis, it has been determined that health awareness, consumer knowledge, perceived or subjective norms, and perception of price influence consumers' attitudes toward buying organic foods, availability, and other demographic factors (i.e. age, education, and income) have an impact on consumers' buying behaviour.

Another study titled "Overview of Organic Consumption in Brazil" examined organic consumption patterns among a sample of 1000 people in Brazil in 2021 (Organis GmbH, 2022), and found that roughly 36% of respondents noted recent consumption of organic food during the last 30 days, while another 10% claimed consumption within the last 6 months. Furthermore, several participants stressed the higher cost of organic products, citing perceived benefits such as the absence of pesticides in manufacturing, superior quality, and improved farming procedures.

Thus, Lamonaca et al. (2022) published findings from a research of 672 Italian consumers' perceptions of organic food qualities. The findings show that customers see organic food as safer than healthiness and environmental sustainability. Furthermore, the provision of specific information on food labels leads to the perception of organic food as healthier, safer, and more environmentally sustainable. As a result, the socio-demographic profile of customers is important: males and females see organic food differently, and younger consumers are more inclined to purchase and eat organic products.

Brata et al. (2022) investigated the elements that influence customers' perceptions about organic food consumption, as well as how frequency changed before and after the COVID-19 epidemic in Romania. A questionnaire was distributed to 190 organic food customers in Bihor Province. As a result, persons who used organic products more frequently prior to the pandemic either maintained or increased their usage, whereas more indifferent consumers maintained or reduced the amount of organic items in their diet.

Furthermore, Czudec (2022) conducted a survey of 850 Polish customers to determine the elements that increase organic food consumers' interest in the local origin of their food. The findings suggested that consumers' emphasis on the relevance of the local origin of organic food is causally linked to their awareness of the needs of other people; specifically, this is illustrated by taking into account the necessity of caring for the natural environment in their purchase decisions.

Beyond that, Boukhedimi et al. (2023) investigated the impact of demographic characteristics on organic food consumption in 14 countries, including gender, age, occupation, educational level, and nationality of respondents. As a result, the findings revealed that the demographic variables examined were independent of organic food consumption.

Along with a research conducted by Deliberador (2024) on 240 Brazilian customers. The data show that environmental concern, price consciousness, and health consciousness are all key factors in organic food purchase intention, while impulsive shopping value is not. The intention to purchase organic food reduced household food waste, demonstrating that this association is not a reliable predictor.

## 2. Methods

This paper addressed previously recognized research difficulties with a combination of qualitative and quantitative methodologies. The qualitative method was utilized to emphasize prior studies, which were primarily focused on organic foods. Several papers from Google Scholar, Science Direct, and Research Gate were reviewed. In this way, particular keywords were chosen to define the goal of this study. However, the quantitative technique is used to investigate previously selected hypotheses through the use of statistical tests and procedures such as descriptive statistics and the Chi-square test.

### 2.1. Sampling

This study's sample population consists of 81 Turkish and Algerian organic food customers. As a result, it should be noted that the study sample is representative according to the central limit theorem (CLT), as discussed by (Chang et al, 2006; Polya, 1920; Johnson, 2004; Tomothy, 2005; Berenson et al, 2012; Naval, 2013; El Sherif, 2021; Nair et al, 2022; Boukhedimi, 2025; Sriram, 2023), who outlined that as long as you have a reasonably large sample size (e.g.,  $n = 30$ ), the sampling size of the study will be normally distributed.

### 2.2. Data collection

Questionnaire has been adopted as a data collection method, where the surveyed were asked with questions related to organic foods' consumption. The online survey's period was conducted during 2022, and the sample was randomly chosen. Then, the data collected were entered and processed through SPSS software V26 in order to enable the examination of study hypotheses.

## 3. Result and discussion

### 3.1. Reliability test

The interpretation of alpha varies statistically from 0.0 to 1.0 (Howe & Straauss, 1992; Solomon et al, 2006). The value is accepted when going from 0.6 to 0.7 (George. & Mallery, 2003). The reliability of our questionnaire is acceptable (0.774).

### 3.2. Sociodemographic statistics

The survey has 81 responses. Women accounted for 77.8% of the study sample, while men made up 22.2%. Overall, it should be noted that in economic study, the terms gender or men and women are appropriate to replace the term sex, as the latter is unique to biological and physical characteristics. On the other hand, when counted by age group, the majority of respondents are from generation "Y" (88.9%), followed by 8.6% from generation "X" and only 2.5% from the new generation (Z). Furthermore, 80.2% of responders are both undergraduates and graduates, with the remaining 19.8% being postgraduates. In addition, 55.6% of our sample is Turkish, while 44.4% are Algerian.

**Table 1. Demographic Characteristics of Sample**

Items	Frequency	Percentage
<b>Gender</b>	<b>81</b>	<b>100 %</b>
Men	18	22.2 %
Women	63	77.8 %
<b>Age</b>	<b>81</b>	<b>100 %</b>
Generation X	07	8.6 %
Generation Y	71	88.9 %
Generation Z	02	2.5 %
<b>Educational level</b>	<b>81</b>	<b>100 %</b>
Undergraduate / graduate	65	80.2 %
Post-graduate	16	19.8 %
<b>Nationality</b>	<b>81</b>	<b>100 %</b>
Turkish	45	55.6 %
Algerian	36	44.4 %

Source: Survey data

### 3.3. Attitude of women toward the consumption of organic foods

#### 3.3.1. Chi square test:

The Chi-square test is used to make the test of independence between the dependent variable (**Willingness to consume organic foods**) and the independent variable (**Nationality**). According to (El sheriff, 2021 ; Boukhedimi, 2025), the hypotheses of Chi-square test are formed below:

- **H<sub>0</sub>: Independency isn't significant if p-value > 0.05**

- **H<sub>1</sub>: Independency is significant if p-value < 0.05**

Based on the result of the cross-tabulation illustrated in Table (2), most of the respondents accepted to consume organic meals. Further, 88.89% of men and 93.65% of women used organic foods in their alimentary process. Moreover, the result of the Chi square test shows that there is no significant difference between men and women in Turkey and Algeria in terms of consumption of organic foods ( $0.43 > 0.05$ ). In the other words, both of them are green consumers. Consequently, the table below demonstrates the previous findings, (44.44 %; n=36) and women (55.56 %; n=45).



**Table.2.** Cross-tabulation of the willingness to consume organic foods by gender

	Algerian	Turkish	Total
Yes	34	44	78
No	02	01	03
Total	36	45	81

**Source:** Survey data

Overall, this study reveals that both Turkish and Algerian consumers are aware of the consumption of organic foods. As a result, the first hypothesis is accepted, and the second one is categorically rejected.

#### 4. Conclusion

This paper contributes to the existing literature on consumer behaviour toward the consumption of organic foods. The purpose of this study is to determine the effect of nationality on the willingness to consume organic foods by focusing on the perception of respondents in two developing countries (Turkiye and Algeria). This study makes an important theoretical contribution to the previous studies.

As a result, it has been discovered that there is no significant difference in organic food consumption between Turkish and Algerian participants. As a result, the study has certain limitations but also yielded crucial findings. First and foremost, the data collected is limited due to time and expense limits in questionnaire dissemination; consequently, it should be more extensive. However, the findings might be generalized to encompass the entire survey population. Additionally, increasing the number of sample studies as well as the geographical area (other countries) is advocated.

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