

Effect of gender on the awareness to consume organic food in the future: evidence from Türkiye and Algeria

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Abstract

This study has an aim to check the impact of gender of respondents on the awareness to use organic food in the future. This type of products are illustrated on natural milk and natural oil generated from olive. The method explored in this research is an online survey between January-November 2022 among 81 respondents from Türkiye and Algeria. Then, the results were analyzed through SPSS software V26 in order to use the of independent samples t-test. The results indicate that the independency between the willingness to use the organics food in the future in order to consume organic food and the age of respondents is ensured. It means that both men and women are agreeing to consume it in this case (p-value = 0.523).

Key Words: Consumer behavior-Green marketing-Organics food-Independent samples t-test- Gender-Türkiye-Algeria.

Introduction

Globally, there has been a strong interest in organic food consumption caused by increasing consumer concerns about wellness, eco-friendly practices, and the safety of food products (Diagourtas et al. 2023; Leonidou et al. 2022). Thus, the most relevant reason for organic food purchases seems to be “health” (Gul Aygen, 2012). Further, foods that are cultivated without the application of chemical pesticides can be called organic foods (Singh, 2017). When the world’s population was small, almost all agriculture was primarily organic and near-natural. However, these traditional practices, passed from one generation to the next, did not produce enough food to meet the rapidly increasing global population’s demands.

This led to the "green revolution," in which farmers used technological interventions to maximize outputs to meet the growing need for food for the increasing population (Dholakia & Shukul, 2012). Additionally, previous research has identified that the most important attributes of organic foods centre around health (i.e. minimal artificial chemical residues in the product and high nutritional value), environment (i.e. preference for a product that has been produced and processed in an environmentally friendly manner) and high quality such as taste (Pearson, 2002). Apart from addressing immediate environmental concerns, the consumption of organic products is also driven by consumers’ pursuit of healthy eating habits that improve their quality of life (Ditlevsen et al, 2019).

The term “organic” was first used in a study carried out by Northbourne (1940), about organic farm entitled “Look to the Land”. Consumers play a significant role in addressing the sustainability challenges of food systems (Hedin et al, 2019; Vermeir et al, 2020). In other words, consumers tend to hold producers and manufacturers accountable for making food systems more sustainable (Eurobarometer, 2020; Mintel, 2021).

1.1.2 Green marketing

Over the years, the notion of green marketing has been developed as a vital alter-native for society’s sustainable growth in the 21st century, taking into consideration the increasingly strained interplay between human beings and the environment (Vijai & Anitha, 2020; Yang; Chai, 2022). Advertising is the most popular way to promote awareness of environmental products and create demand for them (Carlson et al, 1993).

Additionally, green advertising which has been growing exponentially since the late 1990s, is proposed as the driving force behind increasing worldwide public awareness of environmental and ecological issues and as well as leveraging demand for green products (Futerra, 2008, Cox, 2008; Leonidou et al, 2011)

Green Marketing therefore is about the incitation to use safe products which aren't harmful for the environment and well-being of humans in order to achieve sustainable development (Boukhedimi et al, 2023). In this way, the literature contains various definitions of green marketing. The American Marketing Association (AMA) was the first one to present obviously the ecological marketing in the earliest 1970s as the study of positive and negative aspects of marketing activities on pollution, energy depletion, and non-energy resources depletion (Henion, Kinnear, 1976). Green marketing, also called environmental marketing and responsible marketing, is the integration of value-creating change into the natural environment as well as consumers and society (Polonsky, 2011). Furthermore, Charter & Polonsky (1999) have defined this concept as the marketing or promotion of a product based on its environmental performance or an improvement thereof. In addition to that, Green marketing was identified as the movement which is directed towards organizations production of products responsible environmentally (Kotler & Armstrong, 2004).

In this regard, the current study examines the awareness toward the consumption of organic foods among, gender of respondents in Türkiye and Algeria, the research statement could be presented as follow:

Does gender influence individuals' awareness of the consumption of organic foods in Türkiye and Algeria?

1.2 Research hypotheses

1. Both men and women are aware of the consumption of organic foods in Türkiye and Algeria;
2. There is a significant difference regarding the use of organic foods in Türkiye and Algeria based on the gender.

1.3 Literature review

Many studies on the consumption of organic foods were subject of discussion (Gundala & Singh, 2021; Siahaan & Thiodore, 2022; Brata et al, 2022, Lamonaca et al, 2022; Boukhedimi et al, 2023; Deliberador, 2024; Boukhedimi, & Ataş, 2024; Akli et al, 2024).

Gundala and Singh, (2021) examined the factors influencing customer purchasing behavior for organic goods in the Midwest (United States). Based on 770 consumer responses, ANOVA, multiple linear regression, factor analysis, independent t-test, and hierarchical multiple regression analysis were used to determine that health awareness, consumer knowledge, perceived or subjective norms, and perception of price influence consumers' attitudes toward purchasing organic foods, as well as availability and other demographic parameters (i.e. age, education, and income).

Furthermore, Siahaan and Thiodore (2022) investigated the effect of customer behavior on the purchase of organic foods among 400 Indonesians. The study was conducted between June 12th and July 3rd, 2017, and employed a Structural Equation Model (SEM) and descriptive analysis of data obtained. As a result, it has been discovered that there is a "high" association between attitudes and perceived behavior and the desire to buy organic foods. In any case, subjective norms did not alter the intention. As a result, using intention as a mediator variable, it discovered a very strong relationship between organic food purchasing decisions.

Another research entitled “Overview of Organic Consumption in Brazil” assessed of organic consumption patterns among a sample of 1000 individuals in Brazil in 2021, which, (Organis GmbH, 2022) highlights that approximately 36% of respondents mentioned recent consumption of organic food within the past 30 days, while another 10% noted its consumption within the last 6 months. Furthermore, numerous participants emphasized the heightened cost of organic products, arguing that this is due to perceived advantages such as the non-use of pesticides in production, superior quality, and enhanced cultivation practices.

Moreover, Lamonaca et al. (2022) provided findings from a survey 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 appearance of specific information on food labels leads to the perception that organic food is 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.

Additionally, Czudec's (2022) study sought to assess the elements that increase organic food customers' interest in the origin of their food among 850 Polish consumers. The survey results also revealed that customers' emphasis on the value of the local origin of organic food is causally linked to their awareness of the needs of others; specifically, this is demonstrated by taking into account the importance 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 data demonstrated that the demographic characteristics examined were independent of organic food intake.

Akli et al (2024) performed an online survey to investigate the behavior of consumers of agro-ecological products in Algeria, and the results revealed that more than a third of respondents (37.5%) consume agro-ecological products out of a total of 315 participants.

The aim of the study of Boukhedimi, & Ataş (2024) is to examine the effect of gender on people's propensity to consume organic goods, with a focus on women. This work adds significant theoretical value to prior studies in the healthcare sector, which has grown in recent years in order to secure customer well-being by promoting the use of safe food, known as organic foods. Using the Chi-square test and two-sample independent t-test to determine if Turkish and Algerian women are aware of the consumption of organic meals. The study included 81 participants, 63 of them were women; it was established that there is no significant gender difference in the acceptance of organic foods.

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

2. Methods

This paper employs qualitative and quantitative approaches to address the research problems that were identified. Several articles from Google Scholar, Science Direct and Research Gate have been used to explore the previous studies, which mainly focus on organic foods. In this scenario, specific keywords were assigned to highlight the purpose of this study. However, the quantitative method is deployed to verify hypotheses defined earlier, by the running of statistical tests and methods, such as descriptive statistics, and the independent-samples t-test.

2.1. Sampling

The study population of the current study consists of the Turkish and Algerian consumers in order to examine the impact of their educational degree on the consumption of organic foods, among 81 participants. Thus, it should be noted that the study sample is representative according to central limit theorem (CLT) as it was highlighted by (Chang et al, 2006; Polya, 1920; Johnson, 2004; Tomothy, 2005; Berenson et al, 2012 ; Naval, 2013; Kwak & Kim, 2017; Allende-Alonso et al, 2019; Jenkins & Quintana-Ascencio, 2020; El Sherif, 2021; Nair et al, 2022; Boukhedimi et al, 2023; Sriram, 2023; Zhang et al, 2023; Fukuda, 2024), who outlined that as long as we have a reasonably large sample size (e.g, n= 30), the sampling size of the study will be normally distributed.

2.2. Data collection

An online questionnaire has been implemented as a data collection method, and 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 in Türkiye and Algeria . Thus, 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 the Cronbach alpha differs 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 adequate (0.774).

3.2. Sociodemographic statistics

The survey has included 81 participants. On the count of gender, women were 77.8%, and men represented 22.2 % of the full sample. Overall, it should be mentioned that in economic research, It is appropriate to replace the term sex with the term gender, which is specifically related to biological and physical attributes.. From the other side, considering the statistics by age category, the largest percentage of respondents are from generation "Y" (88.9%), followed by 8.6 % from generation "X", and 2.5 % from generation (Z). As well, 80.2 % of respondents are undergrads or have graduated, while the rest (19.8 %) are postgraduates. In addition to that, 55.6 % of our sample is Turkish and 44.4 % is Algerian. Additionally, the table below indicates that there is a small desperations based on the responses collected (SD were near to zero).

Table1. Descriptive statistics for the gender of the study sample.

Frequency (n)	Mean (\bar{x})	Standard deviation (σ)
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Man	18	1.37	0.61
Woman	63	1.4	0.25

Source: Survey data

3.3. Test of Normality

Due to few frequencies of men in the current survey (n=18), it was important to check Kolmogorov-Smirnov test, and the finding showed that the dependent variable followed the normal distribution, and Kolmogorov-Smirnov test is significant (Sig=0.163). Furthermore, Shapiro-Wilk test was performed to conclude if the responses of women are normally distributed or not (n=63). Although that the dependent variable didn't follow the normal distribution (Sig=0.001), we can ignore that according to the central limit theorem, if the number of respondents is equal or superior to 30.

3.3. independent-samples t-test

Referring to the study findings, it can be stated that the t-test of two conducted on independent sample reveals that educational level does not impact on the intention to consume organic foods, as the first hypothesis stated. Further, the variances of two samples are homogenous (LEVENE test' sig: 0.823 > 0.05), and the result of the t test isn't significant (sig t: 0.523 > 0.05).

Table 2. Hypotheses results

Hypotheses	Result
H1	Accepted
H2	Rejected

Source: Survey data

4. Conclusion

This paper attempted to evaluate the effect of the gender on the awareness to purchase organic foods in Türkiye and Algeria. The present research provides an important theoretical conclusion to the previous studies and suggests that there isn't a significant difference between men and women concerning this issue.

The study has some limits as well as significant findings identified. Due to time and cost constraints, the data collected should be larger. However, the indicated findings could be generalized and include all the survey population, according to the central limit theorem. Additionally, another limitation is that the respondents showed concentration above women (77.8%). Therefore, increasing the number of sample study as well as the area (other countries) is truly advisable.

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