Consumer consciousness of organic products and demographics characteristics: Are they related?

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Consumer consciousness, organic products, demographic characteristics

Abstract
Purpose of the research: Determining the relationship between consumer’s consciousness of organic products (environmental and health concern, organic knowledge, and consumer’s attitude) based on their demographics (age, gender, education, and income). Design/methodology: The Statistical Package for Social Science (SPSS) version 18 was used to analyze the data. The following statistical procedures were used: Cronbach’s Alpha and correlation coefficients to assure the reliability and validity of the scales. Descriptive analyses, Multiple linear regression analysis, T-test, one way analysis of variance (ANOVA) and finally, Post–Hoc test to conduct comparisons to test the significance between Age, Education, and Income, and independent variables. Results/Findings: the main objective and hypothesis were accepted except environmental and health concern and organic food knowledge based on gender, organic food knowledge among on age, organic food knowledge, consumer’s attitude based on education, environmental and health concern, and consumer’s attitude based on income. Conclusions: this thesis had contributed to the previous research in the field of organic products, initially, the current study sought to study the relationship between consumer’s consciousness toward organic products and demographics, accordingly, questions were derived and hypothesis were also drawn from overall objectives by answering the research question and confirming the hypothesis, the results of this study could be served as foundation for further research about organic products in Egypt.

1) the introduction
Consumers’ purchasing behavior is becoming more socially conscious; thus, conscious consumers must have knowledge and attitudes toward the various companies’ actions, as well as the belief that their purchases and needs will make a difference (Brochado, Teigo, and Oliveira, 2016).

Environmental consciousness consumers are people who make purchasing decisions that are greener than that of their peers (Peattie, 2001). Socially conscious consumers share attitudes toward social affairs and community involvement, which they believe, would have a positive, or at least, less negative impact on the environment. White, Habib and Hardisty, (2019) identified five types of behaviors that an environmentally conscious consumer might choose. These behaviors are reducing the consumption of traditional goods; purchasing friendly environmental products instead of traditional ones; consuming environmentally efficient goods; participating in recycling, collecting, or separating waste; and organizing or participating in environmentally conscious complaints or protests. The recent study will follow (Jiménez Sánchez and Lafuente, 2010) which indicates different dimensions and measurement of environmental consciousness using four dimensions, i.e., affective dimensions (general beliefs and values); dispositional dimension (personal attitudes); active dimension (pro-environmental behavior); and finally, cognitive dimension (information/knowledge). Therefore, the main aim of this research is to determine the relationship between consumer’s consciousness (environmental and health concerns, organic knowledge, and consumer’s attitude) and their demographics (age, gender, education, and income). Therefore, this study will provide answers to the following core research question; is there a significant difference among consumers’ consciousness (environmental and health concerns, organic knowledge, and consumer’s attitude) based on their demographics (age, gender, education, and income). From a theoretical perspective, this study fills a gap in the literature by studying the relationship between consumer consciousness and demographics. Accordingly, the research problem could be articulated as the
lack of consumer consciousness toward organic products and how different demographics affect their consciousness accordingly, this research provides theoretical and practical implications.

2) Literature review

2.1 Consumer’s Consciousness

According to Villa Castaño et al., (2016), "consumer consciousness is defined as a consumer who considers the public consequences of his/her private consumption and attempts to use the purchasing power to bring about social change". Laroche, Bergeron and Barbaro-Forleo, (2001) suggest that environmentally conscious consumers are either natural people or legal entities who consider ecological impacts in their purchase decisions. "Consciousness" refers to the experience itself (Velmans, 2009).

2.2 Dimensions of Consumer Consciousness

A study (Tllkidou, Aoamson, & Sarmanidt, 2002) outlined a theoretical framework for Ecological Consciousness (EC) and Ecologically Conscious Consumer Behavior (ECCB) measuring consciousness with three dimensions: cognitive dimension, consumer’s knowledge, and environmental concern; affective dimension, pro-environmental and recycling attitudes; and behavioral dimension: pro-environmental purchase behavior, pro-environmental post-purchase, and recycling behavior. In addition, (Sadia Suleman Khan Gulab Khan, and Aliya Ayub, 2021) did research on the variables that influence the ecological awareness of customers in Malaysia and Romania. According to the findings of the research, in Romania, ecological awareness, man-nature orientation, control domains, and customer readiness to pay a higher price have a substantial impact on consumer consciousness. In Malaysia, however, the structural equation model revealed that all variables, including ecological behavior, consumer ecological knowledge, man-nature orientation, spheres of control, consumer willingness to pay a higher price, consumer religious beliefs, and national culture, are associated with consumers' ecological consciousness. Hameed and Waris (2018) underline the favorable effect of eco-labelling on environmentally aware customer behavior. The findings investigated the entire mediation impact of green trust on the association between eco-labels and environmentally aware customer behavior. However, there was no mediation effect of environmental worry between eco labels and environmentally aware customer behavior, nor was there any influence of environmental concern on eco-conscious consumer behavior. Lin and Niu (2018) focus on Taiwanese consumers and conclude that environmental knowledge, awareness, and social norms have a beneficial influence on their environmental attitudes, as do environmental knowledge and social norms on their feelings of well-being.

In addition, Rusyani, Lavuri, and Gunardi (2021) analyze the variables that motivate Indian customers to choose eco-sustainable products, in addition to the interrelationships between environmental knowledge, environmental concern, green attitude, and perceived behavior control. According to the findings, environmental concerns and green attitudes are significantly associated and strongly influence eco-friendly buying behaviors. In addition, environmental knowledge and environmental concern are the main predictors of eco-friendly product purchasing behavior. In addition, Chari and Reddy (2019) investigate the impact of environmental consciousness and environmental knowledge on the purchase intent of young customers for green goods. The results indicate that consumers are aware of eco-friendly items and have a favorable attitude toward them. Musa et al., (2021) examine the relationships between the determinants of environmentally conscious consumer behavior (environmental knowledge, environmental concern, an individual's social responsibility, and environmentally conscious behavior) and their effects on environmental friendliness in Saudi Arabia. The results show that eco-aware consumer behaviour affects consumer environmental knowledge, environmental concern, individual social responsibility, and environmentally conscious consumers, all of which are mostly related to the demand for eco-friendly products. Nguyen et al. (2019) concluded that consumers' concerns about the environment, health, food safety, and their awareness of organic food had a significant influence on their attitude toward the purchase of organic beef. Consequently, the most recent study (Jiménez Sánchez and Lafuente, 2010) will be discussed, which identifies and measures environmental consciousness along four dimensions: affective dimensions (general beliefs/values);
dispositional dimensions (personal attitudes); active dimensions (pro-environmental behavior); and cognitive dimensions (information/knowledge).

2.3 Relationship between consumer's consciousness and demographics

Numerous studies have demonstrated the effect of demographic characteristics on organic food consumption. The level of income, education, gender, marital status, age group, and social standing of consumers had a big impact on how they felt about buying organic food and their buying intention (Chen, 2012). Chaturvedi, Rashid, and Rahman, (2022), discovered that adults aged 36 to 45 with a good attitude toward organic food are more likely to consume it. Additionally, income and education are key demographic factors that positively influence the purchasing behavior of customers. In addition to occupation and married status, occupation and marital status have a significant influence on consumer knowledge, health consciousness, and attitudes toward organic food. Nonetheless, ater & Serafimova (2019) conducted research in environmental studies that indicated the inequalities in gender roles related to women's stronger care for the environment and willingness-to-pay more for green items. Chen (2014) explored the significance of attitudes, demographics, and segmentation in urban China's prospective customers' inclinations to buy organic food. The data indicated that gender, age, and level of education had no significant effect on purchasing intentions. However, wealth, attitudes, and pre-buy intentions showed modest to moderate relationships with organic food purchase intentions. gender impacted the association between attitudes and buying intentions. According to Tsakiridou et al. (2008), research is conducted to investigate the attitudes and behaviors of Greek customers towards organic goods. Higher education, wealth (at all levels), and age of customers (over 51) were shown to impact views toward organics, whereas gender did not seem to influence attitudes toward organic food. In this research, demographic parameters such as gender, age, income, and education will be addressed.

2.3.1 Gender and consumer’s consciousness

Gender is one of the most fundamental demographic factors influencing the buying of organic products. Gender is a significant factor in consumers' perceptions of organic food products (Aertsens et al., 2009). Previous research found that married women were more enthusiastic and knowledgeable about organic products than married men (Guney and Giraldo, 2019). Nevertheless, Rodriguez Bermdezetal., (2020) reported that despite women's higher positive perceptions regarding the buying and consumption of organic food than men, they were less willing to pay for organic items. Accordingly, several research studies (Urea, Bernabéu, and Olmeda, 2007) supported the conclusion that women choose organic products of greater quality than men. In contrast to Canadian research that found bachelor's degree-holding bachelor's household men and those over the age of 51 were more inclined to pay a premium price, we found the opposite to be true (Haghiri and McNamara, 2007). Dagher, Itani, and Kassar (2015) found that both men and women who care more about the environment might help organic marketers.

2.3.2 Age and consumer's consciousness (environmental and health concern, organic food knowledge and consumer’s attitude)

Age is another demographic characteristic that influences the buying of organic products. Previous research revealed a correlation between age and the consumption of organic food items. Gundala and Singh (2002) found that elderly respondents were less inclined to purchase organic foods than younger ones. However, (olovi and Miti, 2021) found that in the United Kingdom, organic customers tend to be older than the national norm. In addition, Aertsens et al. (2009) indicated that the most frequent customers of organic vegetables in the United Kingdom are between the ages of 45 and 54.

In a Swedish study, Magnusson et al. (2003) determined that there were no significant variations across age groups regarding the willingness to purchase organic food. Chen (2012) discovered that organic food consumers in Thailand tend to be older (above 51) and have more favourable attitudes towards organic food than younger age groups. Moreover, Chen, Lobo, and Rajendran (2014) reported that younger customers, those under 45 years of age, had a greater tendency and attitude to buy organic goods than older consumers, those over 45 years old.
2.3.3 Education and consumer’s consciousness (environmental and health concern, organic food knowledge and consumer’s attitude)

Another demographic factor that influences consumer consciousness and considered a potential influence on the choice of organic food to buy is education. Education has been reported as a significant factor affecting consumers’ attitudes towards organic food products (Baydas, Yalman and Bayat, 2021). However, people with higher education were more likely to express positive attitudes towards organic products and require more information on the production process of organics (Tsakiridou et al., 2008).

Other researchers found a positive relation between education and organic food consumption (Cunningham, 2002). Besides, upper-class, and well-educated consumers have high demands for nutrition and freshness in organic products (Ariyawardana, 2009). Rahman and Hague (2011) found that consumers who have a higher level of education about organic products are willing to pay a higher price. Research in Pakistan suggests that people with higher education have a positive attitude towards organic products and are more likely to buy them more often.

2.3.4 Income and consumer’s consciousness

Another demographic variable that influences the purchase of organic food is income. Higher-income families are more likely to have favourable views about buying more organic products than lower-income households (Gundala and Singh, 2021). Likewise, Gumber and Rana, (2019) reported that customers with incomes below $50,000 were more inclined to buy organic food. The demand for organic food seems to be proportional to income (Ünal, Deveci, and Yldz, 2019). Furthermore, a high level of wealth and education are associated with food safety and environmental issues (Mohamed, G, and Shelaby 2012). Consequently, the percentage of customers who buy organic items improves as their income increases. According to Govinda samy et al. (2018), individuals with higher incomes are more willing to pay a premium for a certified organic product. According to Krystallis et al. (2005), most of the organic food customers in Greece are high-income earners with professional backgrounds. These results contradict the conclusion of previous Greek research (Fotopoulos and Krystallis, 2002) that a high household income is not necessary for the purchase of organic food. In Australia, however, (Lockie et al., 2002) discovered that low-income customers are not always less interested in organic food.

To conclude on the relationship between the dimensions of consumer’s consciousness, i.e., environmental and health concern, consumer’s attitude, and organic knowledge, on the one hand, and the main demographics, i.e., age, gender, education, and income, on the other, this study hypothesized that:

H1: There is a significant difference among consumer’s consciousness (environmental and health concern, organic knowledge, and consumer’s attitude) based on their demographics (age, gender, and income)

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**Figure (1)** Proposed framework of the study
3) Research methodology

3.1 Sample and data Collection

The current study is a conclusive study that seeks to use descriptive measures to determine the relationship between the consumer’s consciousness and their demographics. Therefore, the target population in this research was comprised of all consumers of both genders whose age is above 20 and who exist in the four social clubs (Heliopolis club, Gezira club, Wadi Degla club, and Egyptian Shooting Club) located in Heliopolis, Zamalek, New Cairo, and Dokki respectively. Sample size and scope; The study focused on the Greater Cairo region (Cairo and Giza). A total of 400 questionnaires were distributed. The researcher distributed 400 questionnaires; six incomplete questionnaires were eliminated. Therefore, only 394 questionnaires were completed, and, thus, valid. All the respondents were members of the social clubs. The four social clubs cater to the middle and upper-middle classes of Cairo. Those social clubs were chosen as (a) they were the most elite social clubs in Greater Cairo; (b) organic shops existed in these clubs, therefore most members might be aware of organic products, (c) most members are concerned about the environment and health; and finally (d) all categories of demographics existed in those social clubs. The method used for the data collection depends on the probability sampling technique. This technique is adapted since each element of the population has a fixed probabilistic chance of being selected (Yang et al., 2014). Therefore, this research employs simple random sampling technique simple random sampling is the best way of getting some basic information quickly and efficiently and that each element in the sample has a known and equal probability of being chosen (Malhotra, 2007).

3.2 Measures

Drawing upon the previous literature, validated scales were used to measure the proposed research concepts as follows. All the questions are close-ended questions which allows the respondents to choose the existed alternatives. A total number of 43 questions were formulated based on theoretical concepts. The questions aimed at measuring the theoretical concept and designed as 5-point Likert scale were 1 stand for strongly disagree and 5 stands for strongly agree. The questionnaire is divided into three sections with scaled questions; The first section is related to overall information on organic products. Second section related to the concept of different variables including organic food knowledge, health and environmental concerns and consumer’s attitude. Finally, the third section was designed on the light of demographic factors which include age, gender, and education.

Organic food knowledge was measured using eleven items adopted from (Kwan Yi, 2009), Consumers attitudes scale was adopted from (Al-Swidi et al., 2014). it is consisted of eight items and finally Health and environmental concern was adopted from (Shamsollah, Nahid and Wei Chong, 2013) and (P. Voona, Sing Ngui and Agrawal, 2011) include 20 items.

4) Findings/results

The researcher used the following analysis techniques as they best fit the nature of the study in terms of objectives, research questions, and Hypothesis. The Statistical Package for Social Science (SPSS) version 18 was used to analyze the data. The following statistical procedures were used: Cronbach’s Alpha and correlation coefficients to assure the reliability and validity of the scales. Descriptive analyses were used to analyze the demographics variables (Gender, Age, Education, and Income). Multiple linear regression analysis used to test the effect of the three independent variables and dependent variable. T-test to measure the relationship between independent variable and gender factor. One way analysis of variance (ANOVA) was used to measure the significant of the difference between independent variables and income, age, and education. Post–Hoc test to conduct comparisons testing the significance between Age, Education, and Income, and independent variables.
4.1 Gender

T-Test will be used to test if there is a significant difference among consumer’s consciousness (environmental and health concern, organic, and consumer’s attitude) based on gender (table1).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Gender</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental concern</td>
<td>Health</td>
<td>Male</td>
<td>3.9509</td>
<td>0.38685</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>3.9132</td>
<td>0.39222</td>
</tr>
<tr>
<td>Organic knowledge</td>
<td>Male</td>
<td>3.2197</td>
<td>0.35958</td>
<td>0.02588</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>3.2387</td>
<td>0.40493</td>
<td>0.02930</td>
</tr>
<tr>
<td>Consumer’s attitude</td>
<td>Male</td>
<td>3.4494</td>
<td>0.67228</td>
<td>0.04852</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>3.5920</td>
<td>0.65068</td>
<td>0.04672</td>
</tr>
</tbody>
</table>

Table (1) Results of the T-test analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>T-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t</td>
<td>df</td>
</tr>
<tr>
<td>Environmental concern</td>
<td>0.940</td>
<td>374</td>
</tr>
<tr>
<td>Organic food knowledge</td>
<td>-0.488</td>
<td>382</td>
</tr>
<tr>
<td>Consumer’s Attitude</td>
<td>-2.118</td>
<td>384</td>
</tr>
</tbody>
</table>

Table (2) Results of T-Test for equality of means

From table (1&2), can be concluded that: There is no significant difference among environmental and health concerns based on gender with 95% confidence, as the sig. = 0.348 is greater than 0.05. Also, it is shown from the sig. column that there is no significant difference among organic food knowledge based on gender, as the sig. is 0.626 is greater than 0.05. And finally, consumers’ attitudes have a significant difference based on gender as the sig. is 0.035 less than 0.05. According to demographic analysis and hypothesis results, gender was determined to be slightly equal, therefore male and females were determined to have a positive attitude toward organic products. Therefore, according to the previous analysis which was composed of slightly equal Gender; as females represented 50.1% and males represent 49.9%, both females and males will perceive a positive attitude toward organic products without being knowledgeable or concerned about their health.

4.2 Age, Income, and Education

To measure the relationship between consumer’s consciousness (concern, knowledge, and attitude) based on their demographics (Age, Education and Income), Anova Test. The one-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences of the mean of specific continuous variable between two or more independent groups, therefore, Anova test will be used to measure the next three factors (Age, Income and 4.2.1 age

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental And health concern</td>
<td>1.437</td>
<td>3</td>
<td>0.479</td>
<td>3.220</td>
<td>0.023</td>
</tr>
</tbody>
</table>
From table (3), can be concluded that:

As shown from the sig. Column it can conclude that there is a significant difference among environmental and health concerns based on age, as the sig. = 0.023 is less than 0.05. Moreover, there is a significant difference among consumers' attitudes based on age, as the sig. = 0.020 is less than 0.05. In contrast to the organic food knowledge which reflected there is no significant difference among them based on age as the sig. = 0.131 is greater than 0.05 with 95% confidence. Therefore, according to the previous analysis of age, which determined that around 137 (33.8%) respondents from age 31-40 and around 53 (13.5%) from age 41-50 were respondents. Therefore, this proves that this percentage of respondents from 41-50 might increase, when their concern for their health and the environment increases and when they change their perspective and attitude toward organic products.

4.2.2 Income

Table (4) Anova test of Income

From the table (4), can be conclude that:

It is clear from the sig. column that there is no significant difference among environmental and health concern based on income, as the sig. = 0.189 is greater than 0.05. There is a significant difference among organic food knowledge based on income, as the sig. = 0.011 is less than 0.05. In contrast, consumer’s attitude as there is no significant difference among based on income, as the sig. = 0.076 is greater than 0.05. Therefore, according to the previous analysis of income, only 20 (5.1%) of the respondents their income between 2001-3000; and around 33.2% of the respondents their income more than 5000. Therefore, to increase consumers’ willingness to buy and pay for buying organic products, consumers must gain more knowledge on organic products and must concern more about their health and environment.

4.2.3 Education

Testing if there is a significant difference among consumer’s consciousness (environmental and health concern, organic knowledge, and consumer’s attitude) based on education.
The study found from the sig. column with 95% confidence that there is a significant difference among environmental and health concerns based on education, as the sig. = 0.027 is less than the p-value (0.05). It is shown from the sig. column that there is no significant difference among organic food knowledge based on education, as the sig. = 0.054 is greater than 0.05. It is shown from the sig. column that there is no significant difference among consumer’s attitude based on education, as the sig. = 0.434 is greater than 0.05. Moreover, according to the previous analysis the researcher observed that only 3.8% of the respondents were undergraduate, and around 52.2% of the respondents were employed. Therefore, to make undergraduate students become conscious of organic products, must attract their attention and concern towards their health and the environment.

**5) Discussions and conclusions**

This research aims at studying the relationship between consumer’s consciousness (environmental and health concern, organic knowledge, and consumer’s attitude) and their demographics (age, gender, education and income). Therefore, the hypothesis was accepted except for environmental and health concerns and organic food knowledge based on gender, organic food knowledge based on age, organic food knowledge, consumer’s attitude based on education, environmental and health concerns, and consumer’s attitude based on income. Therefore, these results were in line with some of the previous studies which revealed that organic food attitudes were influenced by gender, age, level of income, level of education and the presence of children in the household (Wier and Calverley, 2002). Furthermore, it had been suggested that women and young consumers had a positive attitude towards purchasing organic products (van Doorn and Verhoef, 2011).

Furthermore, Elmeniawy, (1998) revealed that there was a relationship between consumer consciousness and demographical factors reflected in gender, age, education, and occupation. Tsakiridou, et al., (2008) showed that demographics seem to affect attitudes towards organics. Additionally, women were more concerned about health, nourishment, and the environment and more likely to demand healthier information (Lockie, et al. 2004). Therefore, and that, Radman (2005) found that a higher proportion of women than men hold positive attitudes towards organic food. Another study done by (Olmeda et al., 2008) who acknowledged that although women had more favorable attitudes towards the purchase and consumption of organic food than men, they were less willing to pay a premium for it.

**6) Limitations and directions for future research**

**6.1 Limitations**

The limitations of any study are those characteristics that define the boundaries of the inquiry as determined by the practical exclusionary and inclusionary decisions that are made throughout the development of the study (Wanjohi, 2012). Accordingly, the various study limitations may be linked to the sample unit; this study is limited to greater Cairo only due to the cost factors, time available. Obstruction...
rules and regulations that prevent the researcher from distributing the questionnaire to other places other than social clubs. The researcher faces a problem in getting enough previous academic studies determining the direct relationship between consumer consciousness and demographics regarding organic products. Finally, consistent with the problem statement and the gap stated. There are a few studies that have so far been conducted to link the relationship between consumer consciousness. The researcher linked this relationship through predictors of consumer consciousness and demographic characteristics.

6.2 Directions for future research

Further examination of the relationship between consumer consciousness toward organic products and their demographics will help in getting better empirical study and results. Moreover, other sampling methods could be reaching a large number of respondents. Also, future research could investigate different factors of consumer consciousness other than concern, knowledge, and attitude, which will provide deeper insight and results.

7) References


