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Marketing of Organic Food and Analysis of Consumer Attitude and Behavior Towards Organic Food *

Organik Gıdaların Pazarlanması ve Organik Gıdalara Karşı Tüketici Tutum ve Davranışları Analizi

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ÖZ

Bu çalışma organik gıda ürünlerine karşı tüketici tutum ve davranışlarına tesir edecek etkenleri ortaya koymak ve tüketicinin satın alma kararı alması ile bu etkenlerin ne ölçüde ilişkili olduğunu analiz etmek amacı ile yapılmıştır. Araştırmada yargısal örnekleme yöntemi izlenmiş ve İstanbul'da hizmet veren 20 kurum ve kuruluşta AB gelir gurubuna sahip kişilere toplam 343 anket uygulanmıştır. Lojistik regresyon analizi sonuçlarına göre demografik değişkenlerden ailede çocuk olup olmamasının 0,10'luk anlamlılık düzeyinde, ailede 6 yaşından küçük çocuk olup olmamasının 0,5 anlamlılık düzeyinde ve hane halkı gelirinin 5000 -7000 TL arasında olması değişkeninin 0,10 anlamlılık düzeyinde organik gıda satın alma davranışı ile ilişkili olduğu belirlenmiştir. Dışsal etkenlerden firma stratejileri ile ilgili oluşturulan hipotezlerin sonuçlarına göre ise ürünün içsel ve dışsal özelikleri ile marka ile ilgili tutumun satın alma davranışı üzerinde etkililiği 0.05'lik anlamlılık düzeyinde anlamlı bulunmuştur. Bu analizlerin sonuçlarına göre hem satın alma hem de düzenli satın alma davranışı ile ilişkisi anlamlı bulunan faktörler ailede 6 yaşından küçük çocuk bulunması, ürünün içsel ve dışsal özellikleri, kollektivist değerlere sahip olma özelliği ve çevreyle ilgili konulara duyarlılıktır. Çalışmanın iç pazardaki tüketici profilinin ve tüketimle ilişkili içsel ve dışsal etkilerin tespit edilmesini sağlayarak sektörün büyümesine ve ilerlemesine katkı sağlayacağı düşünülmektedir.

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ABSTRACT

This study aims identifying the factors that may influence the consumers' attitude and behaviour towards the consumption of organic produce. Judgemental sampling technique was followed in the research. 343 questionnaires were answered by people with EU classes of income working in 20 different institutions in İstanbul. According to the results of the logistic regression analysis, among the demographic variables, whether there are children in the family or not has a significance level of 0.10, whether there are children under the age of 6 in the family has a significance level of 0.5, and the variable of household income being between 5000-7000 TL has a significance level of 0.10. It has been determined that it is related to purchasing behavior. According to the results of the hypotheses created regarding company strategies among external factors, the effectiveness of the product's internal and external features and brand-related attitude on purchasing behavior was found to be significant at the 0.05 significance level. According to the results of these analyses, the factors that have a significant relationship with both purchasing and regular purchasing behavior are the presence of children under the age of 6 in the family, the internal and external characteristics of the product, the feature of having collectivist values and sensitivity to environmental issues. It is believed that this study will contribute to the development of the sector and to the fulfillment of the goal of sustainable development by determining the internal and external factors that are related to the consumption of organic produce in the domestic market.

1. Introduction

When the concept of organic (ecological, biological) is mentioned, food comes to mind first (Tozan et al., 2011). Organic foods are foods produced using environmentally friendly agricultural methods that do not involve synthetic inputs such as chemical fertilizers, pesticides, hormones and genetic engineering (Koç, 2009). Organic foods are

* This study is derived from Hasan Selçuk Eti's PhD thesis. The survey application of this study was carried out before 2019.

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distinguished from non-organic foods in terms of the methods used in their production and processing rather than observable or testable characteristics (Lohr, 2010). Fruits and vegetables within the context of organic products grow more slowly than other products. The water capacity is also much lower than other products. For this reason, some people perceive organic foods as tastier. Quality and taste are accordingly more important than the low price of other non-organic products. On average, organic foods contain higher levels of vitamin C and essential minerals such as calcium and magnesium, as is the case with cancer-fighting antioxidants. While early organic food production primarily involved small farms and local distribution of fresh produce, the contemporary organic food system consists of small and large food producers, local and global distribution networks and a wide variety of products including fruit, vegetables, meat, dairy, dairy farms and processed foods (Winter and Davis, 2006). Today, consumers are increasingly turning to organic foods to support healthy lifestyles and reduce environmental impacts. This growing demand has accelerated the growth of the organic food industry and led to the expansion of the organic food market.

With increasing concerns about the environment and health, a new group of consumers called "organic consumers" or "green consumers" has emerged (Karabaş and Gürler, 2012). The organic food market has experienced rapid growth in recent years. Consumers are displaying more interest in organic food for healthy lifestyles. In addition, food safety concerns and environmental issues have also increased the demand for organic food. This growth presents a huge opportunity for organic food producers and marketers. The concept of organic agriculture was introduced to our country through foreign companies. This has played an active role in determining the products to be grown with organic agriculture according to the demand of the foreign market. However, this situation has started to change in recent years. Because Turkish people have become increasingly more aware of organic agriculture and healthy nutrition. This has led to the necessity of shaping ecological agriculture according to the demand of the domestic market. In the organic agriculture sector, it is not possible to produce the products beforehand and then market them. This is because the demanded varieties are grown as much as they are demanded and under various conditions. In summary, the amount of production in this sector is determined by buyer demand (Sarıkaya, 2007). According to 2010 data, the most imported organic food in Turkey are cotton, soybeans, wheat and walnuts. Simultaneously, the countries from which such goods are imported are Germany and the Netherlands, followed by European Union countries such as Sweden and Cyprus (Anonymous, 2011). The first export of organic products from our country was made from Izmir in 1985. Following that year, the products exported as organic food were dried apricots, raisins and dried figs. In the first years of organic production, only 8 products were produced within this scope. However, by 2008, this product range had increased to 246. Again, 415.380 tons of products were obtained through 9.834 producers and 141.652 hectares of land (Koç, 2009). The number of countries to which exports are made within the organic agriculture sector in our country is 33. The EU countries have the largest share among these countries. In particular, the main buyers of our products are the UK, Germany, Austria, Switzerland, France, the Netherlands and Denmark. We also have buyers outside these countries. Far East countries, USA, Canada and Northern European countries are also exporting countries (Koç, 2009). The German organic market structure is very different from that of other European countries. While supermarket chains dominate the sale of organic foods in the UK and Switzerland, there is a distinct and important market for organic foods in Germany (Baden et al. 2009). The globally growing organic agriculture sector is recognized as one of the important investment values of the future. In fact, it is estimated that the world trade volume of organic agriculture will increase to $100 billion (Ege Life, 2006).

The increasing consumption of organic food, especially in developed countries, has led to the mobilization of this sector and the investment of producers in this sector. However, the fact that there is a certain transition period in organic production has shown that this investment should be long-term and therefore marketing strategies should be well determined. Within this context, during the marketing process of organic foods it is important to investigate what the consumer trends are, in which direction the trends are tending as well as to research the demographic information of the consumers. When entering the market, it is very important for companies to research and fulfill some of the documents (NOP, JAS, certification, etc.) required for customs duty, quotas, import license practices, procedures for importing or exporting food, production inputs used, subsidies, organic foods to be freely traded abroad. In this context, this study aims to determine the effects of extrinsic and intrinsic factors, which are also included in the consumer purchase model and determined based on the results of research on green consumer behavior and organic food consumption, on the purchasing behavior of current and potential organic food consumers in Turkey.

2. Literature Review

In this study, extrinsic and intrinsic factors affecting the purchasing behavior of organic food consumers are examined. These factors are discussed in detail in the following subheadings.

2.1. Extrinsic Factors Affecting Organic Food Purchasing Behavior

Extrinsic factors that affect organic food purchasing behavior can be viewed from two perspectives: socio-demographic characteristics and marketing activities of companies.

2.1.1. Socio-Demographic Characteristics

Consumers' socio-demographic characteristics can

influence their decisions to purchase organic products. Studies on the socio-demographic profile of organic product consumers have observed that women who purchase organic products tend to exhibit more frequent and larger quantity purchasing behavior. Younger consumers, due to their generally higher environmental awareness, have been found to be more willing to buy organic products. However, it is believed that their willingness does not translate into demand due to their lower purchasing power. Additionally, having children in the family is argued to be a positive factor for organic purchasing. However, the age of the children is also considered an important factor. While disposable income may affect the quantity of organic products purchased, it generally does not impact the willingness to buy. Despite organic products being higher-priced, a higher household income is not considered a higher tendency towards organic product preference. Despite varying findings from different studies, organic food consumers are often defined as women with small children, high education levels, and high incomes (Krystallis and Chryssohoidis, 2005).

2.1.2. Marketing Activities

Perceived quality of the product is related to its consistent performance in terms of freshness, taste, smell, and other characteristics, and how it satisfies consumer expectations. Product quality is linked to how the intrinsic and extrinsic properties of the product are perceived. Intrinsic properties are related to the physical aspects of the product that cannot be changed without altering the product itself. Extrinsic properties, on the other hand, are other features that provide information about the product but are not part of the physical product. The product's brand, price, origin, and production method are examples of extrinsic characteristics (Dimara et al., 2003). Studies have shown that the most important factors consumers consider when choosing food products are related to the perceived properties of the food product. However, it is also noted that non-sensory product features, such as no use of additives or preservatives, absence of agricultural chemicals or chemical residues, nutritional value of the product, and production method, are becoming increasingly important (Magnusson et al., 2003).

Many studies have identified price and availability as factors that negatively affect organic food purchasing behavior. Due to low availability, consumers exhibit an unwilling attitude towards consuming organic products not only in terms of price but also in terms of effort and time required to purchase them. Other reasons include the perception that organic products do not offer a distinct value compared to conventional products, concerns about the extent of being "guaranteed" organic products, and misconceptions about organic production and products due to insufficient promotion activities (Krystallis and Chryssohoidis, 2005).

According to the results of a study conducted by Fotopoulos and Krystallis (2002) on Greek consumers, those who do not consume organic products tend to be generally indifferent and distrustful towards advertising messages. These consumers are more inclined to pay attention to in-store promotional activities. Additionally, they are highly price-sensitive and respond positively to promotional activities such as periodic price discounts (Fotopoulos and Krystallis, 2002).

2.2. Intrinsic Factors Affecting Organic Food Purchasing Behavior

One of the intrinsic factors that affect organic food purchasing behavior is product involvement. Product involvement indicates to what extent a person personally associates themselves with a particular product or product category. This can vary depending on the person's needs, values, and interests. Consumers with high product involvement tend to shop more frequently and in larger quantities than consumers with low product involvement. They also tend to be more interested in researching product information and comparing product features, as well as being more sensitive to brand preferences and perceiving differences between brands (Ling-yee, 1997).

Another intrinsic factor is "innovativeness." The results of a study conducted by Fotopoulos and Krystallis (2002) on Greek consumers show that those who do not consume organic products tend to be quite "traditional" in their kitchen and restaurant choices and do not exhibit innovative behavior (Fotopoulos and Krystallis, 2002).

Krystallis and Chryssohoidis (2005) refer to many international studies on the profile of organic food consumers and the reasons why consumers choose to buy or not buy organic food products. They reveal that the most important reasons for consumers' organic food preferences are environmental and health awareness, concerns about food safety and quality, exploratory food purchasing behavior, and product characteristics such as nutritional value, taste, and freshness (Krystallis and Chryssohoidis, 2005).

In terms of values, according to the results of Fraj and Martinez's (2006) study, individuals who are more sensitive to ecological issues exhibit more environmentally friendly behavior. Another value that influences environmentally friendly purchasing behavior is collectivism. Ling-yee (1977) tested the hypothesis that collectivism as a value would increase environmental purchasing behavior and obtained findings that supported the hypothesis.

Consumers are known to have a great interest in the relationship between food products and health and to shape their lifestyles accordingly. The healthy nature of the product is considered an important criterion in purchasing and is perceived as a quality indicator for many consumers. Although scientific findings on whether organic products are healthier than conventional products are contradictory, it is noted that consumers perceive organic-labeled products as healthier than conventional products. In this context, consumers' health awareness and shopping and eating habits can affect their decision to purchase organic products (Magnusson et al., 2003).

3. Methodology

3.1. Sample

In the light of the information provided in the theoretical part of this study, the main population in this study was determined as people who consume organic food or who have the potential to consume organic food in terms of their demographic characteristics. The conclusion that these people have high levels of education and income, are highly educated, skilled, and live in urban areas is widely cited in studies on both the green consumer profile and organic food consumers. In order to reach samples with the characteristics of the main population, the judgmental sampling method was followed and 14 companies - out of the companies and universities serving in Istanbul - and 6 universities - out of the total number of 21 universities at the time of the study- were selected and a total of 460 questionnaires were distributed to these 20 institutions and organizations and 343 of the questionnaires were returned in answered form. In this case, the rate of return was determined as 75%. The survey application of this study was carried out before 2019. On the other hand, empty data are not taken into account in the analyzes carried out within the scope of logistic regression. Participants who provide complete data required for that analysis are included in each analysis. For this reason, different sample sizes for different analyzes can be seen in the findings section of the study.

3.2. Scales

The questionnaire prepared for this research consists of four sections. The first section includes questions aimed at determining the respondents' awareness and knowledge levels, perceptions, attitudes and behaviors towards organic food products, their organic food purchasing habits, and the sources they obtain information from. The questions in this section were adapted from the scale used in Fotopoulos and Krystallis's (2002) study. Additionally, the second question used to measure participants' knowledge levels related to organic farming was adapted from the study by Laroche et al. (2001).

The second section of the questionnaire includes questions aimed at identifying the respondents' shopping habits and media consumption. These questions were prepared using the findings mentioned in the theoretical part of the study, and the questions from Fotopoulos and Krystallis's (2002) study were adapted.

In the third section of the questionnaire, there are items measuring the core variables of the research. In this section, variables such as product properties, price, origin, availability, attitude towards advertising and brand, relevance to food products, innovativeness in food consumption, environmental awareness and insensitivity, collectivism, shopping and nutritional habits, and health awareness are measured. The items in this section have been adapted from similar studies in the literature (Fotopoulos and Krystallis, 2002; Ling-Yee, 1997; Maloney et al., 1975; Schneider and Rodgers, 1996). Finally, the fourth section of the survey includes sociodemographic questions.

3.3. Research Model and Hypotheses

This study aims to determine the effects of extrinsic and intrinsic factors, which are also included in the consumer purchase model and determined based on the results of research on green consumer behavior and organic food consumption, on the purchasing behavior of current and potential organic food consumers in Turkey. The extrinsic factors affecting organic food purchasing behavior are socio-demographic characteristics and marketing activities of companies. Intrinsic factors affecting organic food purchasing behavior were identified as product interest level, having collectivist values, eating habits, health awareness, sensitivity to environmental issues, environmental knowledge level, innovativeness and lifestyle. By considering these factors, the model in Figure 1 was created.

The following hypotheses were developed in the light of the information in the study model in Figure 1:

H1: Sociodemographic characteristics affect purchasing organic food.

H1a: Gender affects purchasing organic food.

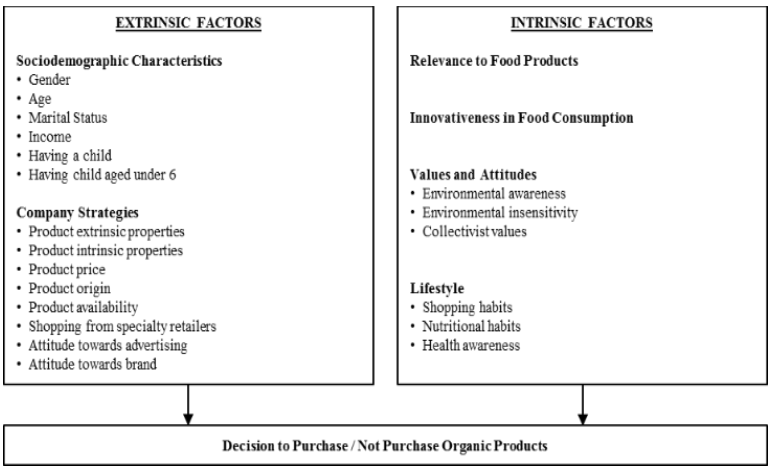
H1b: Age affects purchasing organic food.

H1c: Marital status affects purchasing organic food.

H1d: Income affects purchasing organic food.

H1e: Having a child in the family affects purchasing organic food.

Figure 1. Model of the Study



H1f: Having children under the age of 6 in the family affects purchasing organic food.

H2: Company strategies affect purchasing organic food.

H2a: External properties of the product affect purchasing organic food.

H2b: Intrinsic properties of the product affect purchasing

organic food.

H2c: Product price affects purchasing organic food.

H2d: Product origin affects purchasing organic food.

H2e: Product availability affects purchasing organic food.

H2f: Shopping habit from specialty retailers affects purchasing organic food.

H2g: Attitude towards advertising affects purchasing organic food.

H2h: Attitude towards brand affects purchasing organic food.

H3: Relevance to food products affects purchasing organic food.

H4: Innovativeness in food consumption affects purchasing organic food.

H5: Values and attitudes affect purchasing organic food.

H5a: Environmental awareness affects purchasing organic food.

H5b: Environmental insensitivity affects purchasing organic food.

H5c: Collectivist values affect purchasing organic food.

H6: Lifestyle affects purchasing organic food.

H6a: Shopping habits affect purchasing organic food.

H6b: Nutritional habits affect purchasing organic food.

H6c: Health awareness affects purchasing organic food.

3.4. Analysis Method

Logistic regression analysis was used to test the hypotheses stated above. Logistic regression is used to predict whether a certain characteristic or outcome exists by looking at the value in a set of predictor variables. In contrast to the linear regression model, it is used when the dependent variable consists of two different parts. Logistic regression coefficients are used to estimate the proportion of each independent variable in the model that is related to the presence or absence of a characteristic or outcome. Binomial ("Binomial or binary") logistic regression is used when the independent variables are of any type and the dependent variable is dichotomous. Multinomial logistic regression is used when the dependent variable contains more than two classes. When multiple classes of the dependent variable are sequential, sequential logistic regression is used instead of multiple logistic regression. Logistic regression does not use continuous variables as dependent. Logistic regression can be used to estimate the dependent variable on the basis of continuous and/or categorical independent variables, in order to determine the percentage of variance explained by independent variables, and to rank the relative importance of independent variables. In logistic regression, the dependent logit, thus the natural log of the odds of the dependent occurring or not, is transformed into a variable and afterwards the maximum likelihood estimation is applied. In this way, logistic regression estimates the probability of a given event occurring (Tabachnick and Fidel 1996).

4. Findings

4.1. Logistic Regression Analysis

Binomial logistic regression is performed on 165 subjects. The dependent variable is "purchasing organic food". Since the dependent variable is categorical, logistic regression is used. Binomial logistic regression is a method suitable for dichotomous variables (Tabachnick and Fidel 1996). The variable of organic food purchase is dichotomous as purchase and non-purchase. These variables take the value of 1 for purchasers and 0 for non-purchasers in the analysis. The independent variables in the analysis consist of both categorical and real variables. The frequencies and categories of categorical variables are shown in Table 1.

The analysis includes three different categorical variables including income groups, marital status and gender. The income group variable consists of 5 different groups: 1000 TL and less, 1001 - 3000 TL, 3001 - 5000 TL, 5001 - 7000 TL and more than 7000 TL. The fact that the incomes of the participants appear to be low is due to the fact that the research data was collected in 2014. Marital status consists of two categories, these being married and single, and gender consists of two categories these being male and female.

In logistic regression analysis, the Omnibus test is performed to test whether the variables are included in the model. The Chi-Square goodness-of-fit test tests the null hypotheses. In the step that tests the model, if the significance level is less than 0.05, the variable or variables are proven to be included in the model (Tabachnick and Fidel 1996). As observed in Table 2, the significance level is less than 0.05, proving that the defined variables are included in the model.

Table 1. Coding of Categorical Variables

		Frequency	Parameter coding			
		(1)	(2)	(3)	(4)	(1)
Income	1000 and less	4	1,000	,000	,000	,000
	1001-3000	42	,000	1,000	,000	,000
	3001-5000	58	,000	,000	1,000	,000
	5001-7000	18	,000	,000	,000	1,000
	Over 7000	43	,000	,000	,000	,000
Marital Status	Married	112	1,000			
	Single	53	,000			
Gender	Female	107	1,000			
	Male	58	,000			

Table 2. Omnibus Tests Applied to Model Coefficients

	Chi-square	Df	Sig.
Step 1 Step	122,666	25	,000
Block	122,666	25	,000
Model	122,666	25	,000

The level of variability explained in the model obtained as a result of the Binomial logistic analysis is explained by The Cox-Snell R2 and Nagelkerke R2 statistics (Table 3). The Cox-Snell R2 and Nagelkerke R2 attempt to provide logistic similarity for R2 in OLS (Ordinary Least Square) regression. The Nagelkerke measure is consistent with the Cox-Snell R2 measure. Therefore, like R2 in OLS, they vary between 0 and 1 (Tabachnick and Fidel 1996).

Table 2. Cox-Snell R2 and Nagelkerke R2 Statistics

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	64,534(a)	,525	,773

R2 , which is the coefficient of determination in a linear regression model, is a measure of how much (%) of the change in the dependent variable is explained by the change in the independent variables. High R2 values (maximum value of 1) indicate that a high proportion of variability is explained by the model. For regression models with categorical dependent variables, it is not possible to calculate the R2 statistic with all the features of linear regression models. Therefore, approximate values are used instead. Cox and Snell's R2 and Nagelkerke's R2 statistics are also used to estimate the coefficient of determination. The Cox and Snell's R2 value for the ideal model is less than 1. Nagelkerke's R2 statistic is a modified version of Cox and Snell's R2 statistic. Its value varies between 0 and 1 (Tabachnick and Fidel 1996).

In this analysis, Cox and Snell's R2 value of 0.525 and Nagelkerke's R2 value of 0.773 show that the model explains a large proportion of the variability.

The compatibility of the estimated values obtained from the analysis with the actual values is tested with the Hosmer and Lemeshow Test (Table 4). The Hosmer and Lemeshow Goodness-of-Fit Test calculates a chi-square value using observed and expected frequencies (Tabachnick and Fidel 1996).

Table 3. Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	6,600	8	,580

As it can be observed in Table 4, the p-value=0.580 is calculated from the chi-square distribution with 8 degrees of freedom (df), indicating that the logistic model is well matched. In other words, if the Hosmer and Lemeshow Goodness-of-Fit test statistic is .05 or less, the null hypothesis consisting the statement "there is no difference between the true value and the predicted value of the dependent variable" is rejected. If it is greater than 0.05, the null hypothesis is accepted. This model shows that the estimated values are in acceptable agreement with the data. Here, the hypothesis is accepted with a value of p= 0.580. Thus, it is accepted that there is no difference between the actual value and the predicted values of the model. In other words, the model has the ability to predict close to the actual value.

Table 5 shows the prediction level of the model. The 2x2 classification chart in the table evaluates the correct and incorrect predictions for the whole model with the independent variables as well as the constant value. The columns represent the two predicted values of the dependent variable and the rows represent the two true values of the dependent variable. In the ideal model all values are on the diagonal and the overall accuracy is 100%. If the logistic model is constant, the variance is also constant, the percentage accuracy is approximately the same for both rows (Tabachnick and Fidel 1996).

The overall accuracy percentage here is 92.1%. The model predicts 92.1% correctly. This analysis shows that the model obtained as a result of this analysis has a significantly strong predictive ability.

Table 4. Classification Chart

Observed		Expected		
		Purchasing		Accuracy %
		0	1	0
Step 1	Purchasing ,00	36	6	85,7
	1	7	116	94,3
Whole Accuracy %				92,1

Table 5. Variables in the Equation

Hypothesis		Step 1(a)	B	S.E.	Wald	Df	Sig.	Exp(B)	Result
	H_{1a}	Gndr(1)	,798	,893	,800	1	,371	2,221	Rejected
	H_{1b}	Age	,063	,058	1,202	1	,273	1,065	Rejected
Extrinsic Factors	H_{1c}	Marstat(1)	-1.279	,896	2,038	1	,153	,278	Rejected
(Socio-	H_{1d}	Income grp			4,865		,301		Rejected
demographic	H_{1d1}	Income grp	17,419	17906,125	,000	1	,999	36715309,	Rejected
Characteristics)	H_{1d2}	Income grp(2)	-,346	1,082	,102	1	,749	,707	Rejected
	H_{1d3}	Income grp(3)	-1.830	,975	3,525	1	**,060**	,160	**Accepted (p<0,10)**
	H_{1d4}	Income grp(4)	26,806	6374,907	,000	1	,997	43813045	Rejected

	H_{1e}	Children	1,678	,866	3,756	1	**,053**	5,357	**Accepted (p<0,10)**
	H_{1f}	Chldage06.	-2.429	1,219	3,974	1	**,046**	,088	**Accepted (p<0,05)**
Extrinsic Factors (Company Strategies)	H_{2a}	Product extrinsic prop.	1,339	,327	16,740	1	**,000**	3,815	**Accepted (p<0,05)**
	H_{2b}	Product intrinsic prop.	-,517	,190	7,375	1	**,007**	,596	**Accepted (p<0,05)**
	H_{2c}	Product price	-,137	,144	,908	1	,341	,872	Rejected
	H_{2d}	Product origin	,025	,241	,010	1	,919	1,025	Rejected
	H_{2e}	Availability	-,017	,232	,005	1	,942	,983	Rejected
	H_{2f}	Specialty Retail	-,047	,280	,028	1	,867	,954	Rejected
	H_{2g}	Adv attitude	,167	,206	,656	1	,418	1,181	Rejected
	H_{2h}	Brand attitude	-,786	,354	4,934	1	**,026**	,456	**Accepted (p<0,05)**
Intrinsic Factors	H_3	Product relevance level	,057	,135	,179	1	,672	1,059	Rejected
	H_4	Innovativeness	,329	,184	3,181	1	**,075**	1,389	**Accepted (p<0,10)**
	H_{5a}	Env. awareness	,566	,245	5,352	1	**,021**	1,762	**Accepted (p<0,05)**
	H_{5b}	Env. insensitivity	-1.225	,460	7,110	1	**,008**	,294	**Accepted (p<0,05)**
	H_{5c}	Collectivist	-,863	,247	12,235	1	**,000**	,422	**Accepted (p<0,05)**
	H_{6a}	Shopping Habits	-,076	,292	,067	1	,796	,927	Rejected
	H_{6b}	Nutritional Habits	-,244	,132	3,444	1	**,063**	,783	**Accepted (p<0,10)**
	H_{6c}	Health awareness	,016	,204	,007	1	,936	1,017	Rejected
		Constant	9,579	8,199	1,365	1	,243	14454,770	
	H_{5c}	Collectivist	-,863	,247	12,235	1	**,000**	,422	**Accepted (p<0,05)**
	H_{6a}	Shopping Habits	-,076	,292	,067	1	,796	,927	Rejected
	H_{6b}	Nutritional Habits	-,244	,132	3,444	1	**,063**	,783	**Accepted (p<0,10)**
	H_{6c}	Health awareness	,016	,204	,007	1	,936	1,017	Rejected
		Constant	9,579	8,199	1,365	1	,243	14454,770	

After proving the significance and explanatory power of the model, each variable is tested to understand the contribution and explanatory power of each variable included in the model. The findings obtained as a result of the tests are discussed below.

4.2. Results of the Hypothesis

As seen in Table 6, the significance level and the Wald statistic test the significance of each of the dummy and real independent variables in the model. The binomial Logistic coefficient ratio is B while its standard deviation is S.E. If the Wald statistic is significant (i.e. the significance level is less than 0.05 or 0.10), the parameter in the model is significant (Tabachnick and Fidel 1996). For the independent variables, those in bold in Table 6 appear to be significant. Accordingly, the relationship between the variables of 3rd category of income group, having children in the family, innovativeness and nutritional habits display significance at the 0.10 level while the relationship between the variables of having young children in the family, extrinsic and intrinsic properties of the product, attitudes towards the brand, environmental awareness, environmental insensitivity and collectivist values and purchasing organic food behavior display significance at the 0.05 level. Hypotheses that yielded significant results ($p<0.05$ and $p<0.10$) were accepted, while other hypotheses were rejected.

After analyzing the relationship between intrinsic and extrinsic factors and organic food purchasing, the relationship between these factors and regular purchasing was also analyzed and the following results were obtained.

a If weight is in effect, see classification table for the total number of cases.

Table 7 indicates that in the analysis of the relationship between the defined independent variables and regular purchasing behavior, the data of 162 subjects were included in the analysis and there were no missing values for these 162 subjects.

Table 6. Data Processing Summary Chart

Unweighted Cases(a)		N	Percent
Selected Cases	Included in Analysis	162	100,0
	Missing Cases	0	,0
	Total	162	100,0
Unselected Cases		0	,0
Total		162	100,0

Table 7. Omnibus Tests Applied to Model Coefficients

	Chi-square	Df	Sig.
Step 1 Step	103,237	25	,000
Block	103,237	25	,000
Model	103,237	25	,000

Omnibus tests, which test whether variables are included in the model in logistic analysis, are evaluated according to the results of the Chi-Square *goodness-of-fit* test, which is used to test null hypotheses. As observed in Table 8, the significance level is less than 0.05, proving that the defined variables are included in the model.

As a result of the analysis in Table 9, Cox and Snell's R^2 value is 0.471, which is less than 1, and Nagelkerke's R^2 value is 0.710, which indicates that the model explains a

large proportion of the variability.

Table 9. Cox-Snell R2 and Nagelkerke R2 Statistics

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	73,257(a)	,471	,710

Table 10. Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	1,165	8	,997

In Table 10, the p-value=0.997 is calculated from the chi-square distribution with 8 degrees of freedom, indicating a good fit of the logistic model. In other words, the null hypothesis stated as "there is no difference between the actual value and the estimated value of the dependent variable" is accepted here with a value of p= 0.997 at a 0.05 significance level. Therefore, it is accepted that there is no difference between the actual value and the predicted values of the model. In other words, the model has the ability to predict close to the actual value.

Table 11 shows the prediction level of the model. The overall accuracy percentage here is 90,7%. This shows that the model has a strong prediction accuracy of 90.7%. After proving the significance and explanatory power of the model, each variable is tested to understand the contribution and explanatory power of each variable included in the model. As shown in Table 12, the significance level and the Wald statistic test the significance of each of the dummy and real independent variables in the model. The binomial Logistic coefficient ratio is B while its standard deviation is S.E. If the Wald statistic is significant (i.e. the significance level is less than 0.05 or 0.10), the parameter in the model is significant. For the independent variables, the bolded items in the chart appear to be significant. Accordingly, the Ho hypothesis is rejected for age, marital status, having young children, extrinsic and intrinsic features of the product, level of product interest, having collectivist values, environmental awareness and lifestyle-related convenience food consumption, which are variables found significant at 0.05 level of significance in the analysis, the hypothesis is accepted for the others.

Table 11. Classification Chart

Observed			Expected		
			Regular Purchasing		Accuracy %
			,00	1,00	,00
Step 1	DSATALM	,00	119	5	96,0
		1,00	10	28	73,7
	Overall Percentage				90,7

a The cut value is ,500

Table 12. Variables in the equation

Step 1(a)	B	S.E.	Wald	Df	Sig.	Exp(B)
Gndr(1)	1,033	,859	1,444	1	229	2,809
Age	,125	,051	6,080	1	**014**	1,134
Marstat(1)	-3.155	1,088	8,416	1	**004**	,043
INCMGRP			2,356		671	
Incmgrp(1)	-20.289	17829,282	,000	1	999	,000
Incmgrp(2)	1,149	,981	1,372	1	242	3,154
Incmgrp(3)	,380	1,058	,129	1	720	1,462
Incmgrp(4)	-,336	1,563	,046	1	830	,715
Childrn	-,435	,711	,375	1	540	,647
Childage06	3,073	1,104	7,755	1	**005**	21,610
Product extrinsic prop.	,644	,217	8,802	1	**003**	1,905
Product intrinsic prop.	-,260	,128	4,130	1	**042**	,771
Product price	-,083	,101	,675	1	411	,920
Product origin	-,132	,248	,282	1	595	,876
Availability	-,162	,216	,562	1	454	,850
Specialty Retail	-,052	,209	,062	1	803	,949
Adv attitude	-,270	,165	2,668	1	102	,763
Brand attitude	,281	,342	,675	1	411	1,325
Product relevance level	,686	,190	13,065	1	**000**	1,986
Innovativeness	,039	,204	,036	1	850	1,039
Env. awareness	-1.516	,431	12,354	1	**000**	,220
Env. insensitivity	-,073	,186	,154	1	695	,930
Collectivist value	-,457	,186	6,042	1	**014**	,633
Shopping Habits	,653	,321	4,140	1	**042**	1,921
Nutritional Habits	-,085	,114	,561	1	454	,918
Health awareness	-,005	,219	,000	1	983	,995
Constant	-,796	4,928	,026	1	872	,451

When the factors associated with organic food purchasing behavior are compared with the factors associated with regular purchasing behavior, the facts whether there are young children (under 6 years old) present in the family, intrinsic and extrinsic properties of the product, having collectivist values and environmental awareness can be mentioned as the factors associated with both purchasing purchasing and regular purchasing behavior.

5. Conclusion

This research aims to determine the effects of extrinsic and intrinsic factors, which are also included in the consumer purchase model and determined based on the results of research on green consumer behavior and organic food consumption, on the purchasing behavior of current and potential organic food consumers in Turkey. The hypotheses developed within the scope of the study were tested using logistic regression analysis. According to the results of the analysis within the demographic variables, the following significance levels are associated with organic food purchasing behavior; presence of children in the family at a significance level of 0.10, presence of children under the age of 6 in the family at a significance level of 0.5, and a household income between 5000 and 7000 TL at a significance level of 0.10. According to the results of the hypotheses related to the corporate strategies among the extrinsic factors, the effectiveness of the intrinsic and extrinsic characteristics of the product and the attitude towards the brand on the purchase behavior has been observed to be significant at a significance level of 0.05.

In addition to the physical characteristics of the product such as taste, color, smell, consistency and appearance, consumers also attribute importance to extrinsic product characteristics such as the nutritional value of the product, the way it is produced and whether it is an environmentally friendly product. In terms of intrinsic factors, presence or non-presence of collectivist values, insensitivity to environmental issues, sensitivity to environmental issues and level of knowledge are significant at the 0.05 level, while having healthy eating habits and innovativeness are significant at the 0.10 level.

Subsequently, the relationship between intrinsic and extrinsic factors and regular purchasing was analyzed and according to the results of this analysis, it was concluded that the relationship between the factors of age, marital status, whether there are children under the age of 6 in the family or not, intrinsic and extrinsic characteristics of the product, level of product interest, having collectivist values, environmental awareness and consumption of convenience food due to lifestyle with the organic food purchasing behavior is significant at a 0.05 significance level. This shows that demographic characteristics and intrinsic factors are more effective than corporate strategies in organic food purchasing behavior.

According to the results of these analyses, the factors found to have a significant relationship with both purchase and regular purchase behavior are the presence of children under the age of 6 in the family, intrinsic and extrinsic features of the product, having collectivist values and sensitivity to environmental issues.

The basic principles of green marketing such as social responsibility, holistic approach in management and sustainability principles are the main elements and principles adopted in the production and marketing of organic food products. Organic agriculture's goal of conserving biodiversity and soil fertility ensures that "future generations will be able to meet their own needs" as defined in the definition of sustainable development. In addition, the fact that all stages in the production and marketing of organic agricultural products are strictly inspected and controlled by various certification companies and that all elements that may be harmful to human health and the environment, such as the use of chemical and synthetic inputs, are prohibited within these processes shows that a holistic management approach is adopted in the marketing of organic products. In addition, objectives such as supporting small farmers and targeting regional development overlap with the principle of social responsibility in green marketing.

In order to ensure that Turkish consumers consume more of these high quality and healthy products, it is necessary to adopt the right green marketing strategies and to avoid the wrong marketing practices, which are called "green marketing myopia" and are defined in the theoretical part of the thesis. Accordingly, one of the most important steps in determining the right strategies is to take into account the fact that, except for a very small market niche, a very large portion of consumers will not are not willing to compromise on the basic characteristics of a product such as price, quality and availability in order to buy green or environmentally friendly products.

For example, the results obtained in the application part of this study reveal that the most important factors that play a role in consumers' preference for organic products are health and safety. This result coincides with the findings of similar studies in the literature. The chemicals, hormones and drugs used in the production of food products have reached alarming levels for many consumers. Health and safety issues play an important role in the selection of products, especially for consumers who are more sensitive to the effects of such harmful substances, such as pregnant women, children and the elderly. When determining the positioning strategies of the companies that distribute these products in the domestic market, a positioning based on health and safety values will enable the targeting of a large segment of the market with high health awareness.

In the theoretical part where green marketing strategies are explained, it is underlined that in order to increase the market success of green products, these should have a better product performance compared to conventional competing products in the market. In the case of organic food products, better product performance will be an important competitive

advantage related to food health and safety, as well as flavor and aroma.

In the practical part of the study, the fact that the relationship between the intrinsic and extrinsic characteristics of the product and organic food product purchase behavior was found to be significant, reveals that consumers attach importance not only to the physical characteristics of the product such as taste and aroma, but also to extrinsic characteristics such as the way the product is produced and being an environmentally friendly product. It is of great importance to communicate to the consumers that the production method of organic products is a production method that aims to increase natural productivity and minimize the damage to the environment and human beings.

Apart from product characteristics, another extrinsic factor found to be associated with organic consumption is the brand-related attitude developed in line with corporate strategies. It is observed that brand awareness related to organic food products is extremely low. Increasing brand awareness and introducing organic food products to the market as branded products, especially in fresh products such as vegetables and fruits, will positively affect consumer perceptions of product quality and reliability. However, considering that organic food producers are generally small farmers, it should also be taken into account that promotional activities to create brands or increase the awareness of existing brands may be too costly for small producers, and it would be effective to implement integrative growth strategies such as a horizontal integration strategy or to reduce risk and create a synergistic effect by establishing joint ventures.

The findings on demographic factors in the study support the information in the theoretical part about the green consumer profile and the definitions of organic food consumers. Accordingly, the target consumer group for organic food products is female consumers between the ages of 30 and 44, married, with young children, with a high level of education and a career. Organic food marketers need to consider the needs and desires of this target group in formulating and determining marketing strategies.

Intrinsic factors associated with organic food purchasing behavior are collectivist values, sensitivity to environmental issues, dietary habits, lifestyle-related convenience food consumption and product interest level.

Messages for consumers with environmentalist and collectivist values should inform the consumers that their choice to buy organic food will benefit their health as well as the protection of soil fertility and biodiversity, support small farmers and contribute to regional development. It is considered that organizing trips to organic farms for these consumers and organizing both touristic and informative farm visits in order to provide consumers with the lifestyle experience supported by organic consumption will be an effective public relations activity.

Another possibility to reach consumers with collectivist values is to cooperate with non-governmental organizations and universities engaged in environmental activities, mainly to raise awareness about the benefits of organic food consumption in terms of society, environment and sustainability, to announce the results of scientific studies on this subject to the public and subsequently to support the activities of various non-governmental organizations with sponsorships.

Another factor observed to have a significant relationship with organic food consumption is having healthy eating habits. In order to target consumers with a high awareness of healthy nutrition, organic food producers should increase their product range to meet their nutritional needs during the day, focusing on foods that can be consumed during main meals and snacks, and try to increase the number of sales points where they can reach consumers through sales to cafeterias and canteens of workplaces and schools.

Eating out and consumption of ready-to-eat foods, one of the food-related lifestyle factors, were also found to be associated with organic food consumption. For this reason, increasing product diversity in processed food products, opening classic restaurants and quick snack restaurants where food cooked using organic products and ingredients is served, especially in the business centers of big cities, is one of the factors that will affect the increase in organic food consumption and the spread of organic food. The interior and exterior designs, materials used, products and services produced in these restaurants should be presented in accordance with green marketing principles, and a business approach that considers values such as environmental harmony and social benefit should be reflected to the consumer.

Another endogenous factor found to have a significant relationship with regular purchasing is the level of product interest. Consumers with a high level of product interest in food products are a group of consumers who spend a long time shopping for food products, who take into account the information on the production method, ingredients, nutritional value of the food products they intend to buy, and the information on product packaging and product sales points. In order to reach these consumers with a high level of product interest, information about the production process of organic food products, the features of being produced without the use of synthetic chemicals and hormones, and features such as health, taste and nutritional value should be included both on product packages and at product sales points in shopping malls.

In addition, taking into account the fact that the current and potential consumer group is generally working and has limited time for shopping ass well as the widespread use of the internet among these people, it is important to focus on marketing activities over the internet and to ensure that regular orders are received from members through memberships to the websites to be established and to inform about new product varieties or organic agriculture over the internet.

Another important result of the study is that consumers do not have enough information regarding organic food. Consumers are confused about the difference between "organic" and "natural" and often think that by choosing "natural" products they are making a good enough choice for healthy and quality products. For this reason, intermediary companies that produce organic food products or distribute them in the domestic market should explain the differences between organic food, natural food and conventional food to consumers by effectively using newspapers and the internet, which are the most used communication channels by the segment identified as the target audience according to the findings of the study.

As a result, increasing the consumption of organic food in the domestic market is of great importance for the Turkish consumer to have the chance to consume healthier products with less chemicals, to protect soil fertility and sustainability in production, and economically, for Turkey to maintain its success in the organic food sector in the foreign market. It is considered that the study will contribute to the development of the sector by determining the consumer profile in the domestic market and the intrinsic and extrinsic factors related to consumption and will be beneficial for future studies on this subject. Additionally, it is considered that targeting a wider audience instead of targeting a niche market segment defined as "green consumer" by green marketing strategies will make significant contributions to increasing the market success of green products such as organic food products and thus help to realize the principle of sustainability and sustainable development goals.

5.1. Limitations

One of the limitations of this study is that the sample population was limited to urban consumers with high education and income levels. Therefore, the results cannot be generalized to other socio-economic status groups in Turkey. Additionally, the study was conducted only in Istanbul, which limits the generalizability of the findings. Another limitation is that the majority of the sample group did not have information about the difference between natural food and organic food, which may have affected their responses to the survey questions. Finally, this study did not include a comparative analysis of consumer behavior in other countries where organic food consumption is widespread, which may have limited the identification of other socio-cultural factors that may affect organic food consumption and green marketing.

5.2. Future Research Direction

In this study on strategies to increase the use of organic food products in Turkey, the main population was defined as the urban population with high education level and income due to its compliance with the consumer profile of organic product purchasers. Therefore, it is not possible to comment on whether the study results are valid for people from different socio-economic status groups. In future studies with the aim of determining the marketing strategies to increase organic food consumption, investigating the green consumption tendencies and attitudes and behaviors of other socio-economic levels that were excluded in this study, may reveal important findings that will shed light on the spread of organic food consumption in a wider market segment. The study was carried out only on middle and senior level managers and lecturers of institutions and organizations selected from the institutions and organizations within the provincial borders of Istanbul. Therefore, it is not possible to interpret the results for Turkey in general and to make generalizations to represent other cities in Turkey by using the study findings. In future studies, it is thought that selecting the sample population to represent Turkey in general will make significant contributions to the field.

Another issue that is recommended to be taken into consideration in future studies is related to the organization of the survey questions: In the results of the questionnaire application, it was concluded that the majority of the sample group, which is considered to represent the main mass, did not have information about the difference between natural food and organic food. In future studies, adding a question to the survey questions to measure the knowledge regarding the difference between natural food and organic food, and then adding a short definition explaining the differences between the two types of food, will ensure that the answers given by the participants can be evaluated more accurately in accordance with the purpose.

Additionally in future studies, expanding the scope of the study and including research that comparatively analyzes consumer behavior in other countries where organic food consumption is widespread with the behavior of Turkish consumers and the factors affecting consumption will allow the identification of other socio-cultural factors that may be effective in the field of organic food consumption and green marketing.

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