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E-FOOD TRADE EFFECTS ON PURCHASING APPROACH REGARDING CUSTOMER BEHAVIOR

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Abstract: Our world is changing too fast. The distances have been shortened and communication has been increased by the invention and widespread use of the internet. Our habits started to change in many aspects of our lives by the development of digitalization. Especially during the pandemic Covid-19 that has started at the end of 2019, it's observed that mobility of people have been decreased and however, they began to have difficulties in meeting the needs. There has been a great demand for companies that sell over the internet. In particular, the tendencies of people to purchase food items which are their vital need over the internet have increased to a great extent. Looking at the e-commerce market on a sectorial basis during the pandemic, the biggest increase was seen in e-food trade with a growth of approximately 400%. Within that period, it is predicted that our purchasing habits will change rapidly and virtual markets will become much more important in our lives. The delivery of food products to the consumer has always been a big problem. The risk of deterioration of the products in a short time and the physical destruction of the products during their transportation has increased the importance of food logistics. The logistics channels are needed to be developed in order to increase e-food trade. For this reason, contemporary logistics channels have started to be used by integrating developed logistics applications to the traditional logistics channels. It will be much faster and cost-efficient to deliver the products to the consumer with the new logistics channels in the near future. Yield penalty due to transportation will decrease, and since the number of stock brokers is reduced, the consumer will be able to reach the product they demand at a more affordable price from the producer that they have chosen. In the future, physical stores will be replaced by logistics-supported virtual markets. The agriculture and food sector should also start working in order to accommodate quickly to the new trade order.

Keywords: Online purchasing, E-trade, Consumer, Contemporary logistics

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1. Introduction

In the modern world, agriculture and food trade is changing rapidly and e-commerce usage rates of consumers are increasing. E-Food trade also has an important share in the food market. Especially, due to increase of widespread use of the internet, the consumers' desire for reaching needed food products with a fair price and faster grows. In accordance with the impact of technological innovations, the development of the impact of product packaging facilities and logistics companies in product distribution accelerates the delivery of products produced in the field to the consumer. Price advantages arise in selling of a product by effective use of logistics, since the transportation network between the producers through the consumer is shortened.

Wen (2007), the most important effect of electronic commerce is that it provides direct communication between the manufacturer and the customer by creating a disintermediation. In this way, the intermediates are eliminated, transaction costs are reduced and the farmers are able to achieve high profit rates at low prices. It has been stated that by virtue of information technologies, a market which is based on effective and competitive prices has emerged in terms of electronic commerce. By this way, the food products can reach the consumer much faster. For this reason, the rate of deterioration resulting from product storage conditions is reduced. Thus, a positive contribution is made to the countries' economy by decreasing the casualty rate.

Leroux et al. (2001) Three main factors that have an impact on business-to-business (B2B) electronic commerce are stated as the structure of the agricultural industry; the complexity of the product and the role of face-to-face consumer communication in trade. The research which states that consolidation is an important situation in the agricultural industry, stated that this may have a negative impact on electronic commerce.

In addition to all these, the consumer also has a more affordable price for the product. Also, the rate of being unrecorded work in the food economy reaches a minimum level with the development of e-food trade. This situation increases the tax collection rate; as well as contributes to the effective implementation of agricultural policies.

It is aimed to improve the necessary conditions for our

country to play a more active role on a global scale in the changing and developing e-food trade nowadays, and to pave the way for the food products which are produced in our country to open up to the world markets more effectively with the spread of e-food trade. By virtue of the future outlook perspective that will be revealed by the results of this study, public or private agricultural executives in our country will have the opportunity to act early in shaping agricultural policies. It will be possible for larger domestic companies to emerge in the global market.

Canavan et al. (2007) investigating the marketing of specialty food products over the internet in Ireland, the most common use of the internet was; information, communication and shopping; It was stated that internet use for purchasing food is not common. Specialty foods are defined as unique food products that are produced in small quantities and are not subject to mass production, and they can be attractive in terms of sales over the internet. After the widely using e-retailing Kızılaslan and Gönültaş (2011) emphasized that there are new developments, that with the introduction of the internet into this field, new supply chains are formed, the transportation sector has developed and access to agricultural information has become easier. While the increasing and spreading information affects the expectations in the market, new approaches should be put forward to meet these expectations. Researchers emphasized that; electronic commerce applications in the field of agriculture will develop in Türkiye by means of elimination in taxation, governmental infrastructure and other obstacles.

Logistics management is one of the most important factors of e-food trade. In our constantly developing world, it is necessary to plan the flow of goods, services, information and capital simultaneously in business life. These plans can be made by using complex information, communication and control systems simultaneously by the force of logistics.

2. Materials and Methods

Research data collected online from consumer groups (by considering gender, age, occupation, etc.) who have purchasing potential for e-trade products within the municipality of Istanbul. A form consisting of 15 questions that includes gender, age, marital status, occupation, education level, number of household members, household monthly income, e-food shopping status information, reasons for choosing e-commerce, product information bought online through e-commerce, online shopping payment types, online shopping cost information, and another form consisting of 26 questions as Consumer Survey were applied to consumers which are included in the study and recorded. The study was carried out between November 2019 and December 2020.

According to the statistical analysis used in the study; after the surveys and data which were used in the research were collected and checked, the analysis phase has been carried out. Statistical package program was used for data analysis. In the first stage of the analysis, the reliability analysis of the scale was carried out. Cronbach's Alpha technique, which is an internal consistency coefficient technique, was used in order to calculate the reliability of the scale.

The summary statistics of the qualitative variables were given as frequency and percentage, and besides the analysis of whether the quantitative variables fit the normal distribution was made with the "Shapiro-Wilk Test".

Summary statistics of quantitative variables are given as mean (±) standard deviation for those have normal distribution, and median and min – max values for those don't have normal distribution. In the analysis of the significance of quantitative variables according to qualitative variables, the analysis between two groups that were not normally distributed was made with the "Mann-Whitney U Test", and the analysis between more than two groups was made with the "Kruskall-Wallis Test" (Önder, 2018).

In order to find out which group was significant after the significance detected in multiple groups, one of the subgroup tests, the "Homogeneous Subset Differences Test (HSD Test)", was applied (Genç and Soysal, 2018). "Spearman's Rho Rank Difference Correlation Coefficient" was used in the analysis of two numerical variables that were detected as inconsistent to normal distribution. In the interpretation of the correlation coefficient, "very weak correlation if <0.2", "weak relationship if between 0.2-0.4", "moderate relationship if between 0.4-0.6", "if between 0.6-0.8, high-grade relationship" criteria, if "0.8> very high-grade relationship" criteria were used. The significance level was taken as $P<0.05$; $P<0.01$ and bidirectional hypothesized.

3. Results and Discussion

In recent years, online food trade (e-food trade) has gained importance and its prevalence has increased considerably. Especially the great developments in the technological infrastructure over time and the increase in the use of computers in Türkiye have brought the popularity of online food shopping applications to the agenda. Supports and actions to be taken in order to boost the e-food trade will create a potential that will further expand the use of the internet in the field of food.

The majority (68.6%) of the consumers participating in the research are men. There are various studies in the literature similar to our findings. It was stated that 53.4% of the consumers were male and 46.6% were female in the field study in which the factors determining consumer behavior in online shopping in our country and the applicability of the theory of planned behavior were examined (Turan, 2011). In another study, Akçi and Annaç (2015) examined approaches to e-commerce perceptions of consumers and found that 53.1% of the

participants were male and 46.9% were female. In a study examining the attitudes of consumers shopping online in the province of Tokat, it was stated that male participants were 73% (Sayılı and Büyükköroğlu, 2012).

It was determined that the majority of the consumers that had participated in the research were under the age of 40 (54.9%). Ayden and Demir (2011) stated that most of the participants were young in their study, in which they examined how consumer preferences and behaviors are shaped in e-commerce. In another study in the literature, Saygılı and Büyükköroğlu (2012) analyzed the factors affecting the attitudes of consumers shopping online and stated that the majority of consumers (67%) were under the age of 40.

It is seen that there are other studies in the literature that are similar to the findings of the study (Aksoy, 2006; Turan, 2011; Akçi and Annaç; 2015, Tatlı and Korkut, 2015). The marital status of the consumers participating in the research was questioned and it was found that the rate of married people were 66.9%. When the literature is examined, Farinnia (2011) stated that in her study which had examined online shopping attitudes of consumers; married consumers were more than single consumers.

Majority (76.7%) of the consumers participating in the research had bachelor's degree and master's degree education levels. When the studies in the literature are examined, Candan and Kurtuluş (2003) stated in their study that 65% of internet shoppers were those with bachelor's degree education and 35% were those with master's degree education. Akçi and Annaç (2015) in their study in which they examined the attitudes of consumers living in the eastern region of eastern Türkiye about e-commerce, stated that 93% of the participants had bachelor's degree and master's degree education levels. In the light of the findings, it can be said that consumers with a high level of education make online purchases because they are in the computer age and due to the average age of these consumers, they grow together with technology.

Regarding the number of household members, more than half (54.7%) of the respondents in the research have 4 or more family members. In a study examining the food purchase attitudes of consumers through e-commerce, it was stated that the majority of consumers (78%) had 3 or more family members (Sayılı and Büyükköroğlu, 2012).

Approximately half (51.1%) of the consumers have 7500 TL or more household monthly income. In a study searching how behaviors of the consumers are shaped in e-commerce, it is stated that most of the participants have middle and high income levels (Ayden and Demir, 2011).

It has been determined that 36.2% of the consumers that has participated in the research shop online once or twice a month; the vast majority (55.6%) do not shop for food online, while the remaining consumers shop for food once a week to once or twice a year. If they had the opportunity to do all their food shopping online, 33.3% of the participants stated that they would do it. It was stated that more than half of the participants (50.4%) preferred traditional e-commerce sites in the preferred e-commerce shopping models. As the second model, it was determined that 36.4% of the participants preferred shopping through the official websites of the company. Participants did shopping mostly for clothing (41%), secondly for travel tickets (12.7%), and thirdly for electronic products (10.6%) and 87.9% of consumers paid 750 TL or less for online shopping. Almost all of the consumers (96.4%) stated that they take customer comments during online shopping. Tatlı and Korkut (2015) examined the e-commerce usage of consumers in their study and found that less than half of the participants (45%) do not use online shopping; the vast majority of consumers (94%) do online shopping monthly and annually; the most purchased products from the internet are respectively clothing, technological products, books, magazines and other tools. In another study that has surveyed online shopping, the products purchased by the majority of the participants were electronic goods, car accessories and cassette-cd, on the other hand, it was stated that the rate of those who done online shopping for food was low (12%) as mentioned in this study. In another study examining the rate of online shoppers, it was stated that the majority of consumers (54%) did not prefer to online shopping (Turan, 2011). In another e-commerce study conducted in Bursa, it was stated that more than half of the participants did online shopping at least once and they wanted to do other food shopping online also (Özkan, 2012). In a study conducted by TÜSİAD, it was determined that the majority of consumers (62%) bought clothing and sports equipment (Kantarcı et al., 2017). When all this literature review is examined, it is seen that these studies that has been carried out, support the findings.

It has been indicated that the majority of the consumers that has participated in the research have adopted the online payment method with a credit card for their internet commerce; and secondly, the cash on delivery method. In a study conducted in Iran by Farinnia (2011), he stated that the most used method in e-commerce is the cash on delivery option.

The importance given to e-commerce by the consumers participating in the research was determined as the reliability / awareness of the e-commerce site, the price of the product and the delivery time of the product, respectively. Papathanassiou et al. (2003) in a field study in Greece, they determined that the most important issues for consumers in online food shopping are products' delivery on time, product quality and product warranty disclaimer

It has been determined that according to the reasons why the consumers prefer online shopping, the product mostly preferred (54.4%) when the it is found at a discount or low priced, and secondly (24.9%), it is preferred when they do not have time to buy it from

stores. Uzel and Aydoğdu (2010) in their study in which they examined the reasons for preferring e-commerce, stated that there are reasons such as the convenience provided to people who are short of time, the convenience of online shopping and the opportunity for shopping at any time of the day.

It was determined that the majority of the consumers (68.6%) who participated in the research would like to order natural and organic products over the internet if they had the opportunity to order, and the reasons for preferring online shopping for organic products were determined as natural village products, local products, pulses and cereals, respectively.

The reliability of the consumer questionnaire applied to the consumers participating in the research was obtained as (96.3%) and explanatory factor analyzes were carried out in this direction. As a conclusion of the explanatory factor analysis, it was determined that the scale was divided into three factors and the rate of explanation of the scale by these factors was 74.6%.

Scale factor levels were named based on the meanings of the items. Within this context, the first factor level was named “Customer Expectations”, the second factor level was named “Web Site Features” and the third factor level was named “Customer Satisfaction”. The averages of the factor levels were examined and it was determined that the consumers agreed with the factor levels.

After the factor levels of the consumers that has participated in the research were created, their statistical relevance was examined and there were statistical differences between "Customer Satisfaction" according to age groups, "Customer Expectations and Website Features" according to occupational groups, "Customer Satisfaction" according to the number of people in the household, and there were statistical differences between factor levels. It was found that there were moderate correlations.

In this section, the findings regarding the sub-problems created according to the problem status of the research conducted by including 417 consumers who meet the inclusion criteria in the study were evaluated on 185 consumers who stated that they shopped online for food.

Reliability, which is one of the most important features that measurement tools should have, is an indicator of the stability of measurement values obtained in repeated measurements under the same conditions with a measurement tool (Öncü, 1994). The reliability of the scales is examined in different ways. The alpha coefficient method developed by Cronbach (1951) is a technique that is frequently used to estimate the internal consistency of especially likert-rated scales. The reliability analysis of the data obtained by the application of the Consumer Questionnaire used in the research to 185 consumers was examined and given in Table 1.

The reliability analysis of the consumer survey, which included 26 statements, was made on the data and it was found to be 0.963 (Table 1) and showed that the scale was quite reliable.

Table 1. Findings on the reliability of the consumer survey

Cronbach's Alpha	Item
0.963	26

Exploratory Factor Analysis (EFA) is a multivariate analysis technique that allows the interpretation of a large number of variables that are thought to be related with a smaller number of variables or variables that cannot be directly observed (Şencan, 2005; Çolakoğlu and Büyükekşi, 2014).

Before the EFA phase, the convenience of the data for factor analysis was tested with the Kaiser-Mayer-Olkin (KMO) and Bartlett Tests. The KMO value is defined as moderate between 0.5 and 07, good between 0.7 and 0.8, very good between 0.8 and 0.9, and excellent above 0.9 (Çolakoğlu and Büyükekşi, 2014). The findings regarding the convenience of the consumer questionnaire for factor analysis are given in Table 2.

Table 2. KMO and Bartlett test results of the consumer survey

KMO		0.960
Bartlett's Test	Chi-square	7828.339
	SD	190
	P value	<0.001

In this study, the KMO value was obtained as 0.960 (Table 2). In other words, it was determined that the sample size of the study was sufficient. With the Bartlett test which performed as to measure the normal distribution level, the result was 7828.339 and it was found to be statistically significant at the P=0.000<0.01 level. Therefore, it was decided that the data set used in the study was suitable for EFA and the analysis phase was started.

In this framework, Principal Components Analysis (PCA) was conducted in the first stage to determine the factor structure of the scale. Due to convenience of the scale for a three-factor structure, the Varimax rotation technique was used as the rotation technique. Accordingly, after removing the items 1, 2, 8, 21, 22, and 23 with an item load value below 30 (Kalaycı, 2006), the process was repeated on the remaining 20 items, and the results are given in Table 3.

As a result of EFA, 3 factors were obtained explaining 74.602% of the total variance with factor loads above 30 and eigenvalues above 1. The resulting factors were named as “customer expectations”, “website features” and “customer satisfaction”. The factor loads of the items constituting these dimensions are given in Table 3.

The analysis findings of the data obtained by the application of the Consumer Questionnaire used in the research to 185 consumers are given in this section. The intervals were used in the evaluations made according to the arithmetic averages (Balcı, 2001).

When the average and standard deviations of the

answers given to the sub-factors of the consumer survey according to the gender of the consumers participating in the study were examined; the average of men's responses to the "Customer Expectations" sub-factor is determined as 4.22±0.91, the average of their responses to the "Website Features" sub-factor is determined as 3.82±0.97; the average of their responses to the sub-factor "Customer Satisfaction" is determined as 3.60±1.10; the average of women's responses to the "Customer Expectations" sub-factor is determined as 4.20±0.98, the average of their responses to the "Website Features" sub-factor is determined as 3.76±0.92, the average of their responses to the "Customer Satisfaction" sub-factor is determined as 3.77±1.11 (Table 4).

When the average and standard deviations of the answers that are given to the sub-factors of the consumer survey by the age groups of the consumers who participated in the study are examined; the average of the responses of consumers who are 40 years old and under to the "Customer Expectations" sub-factor is determined as 4.17±1.01; the average of their responses to the "Website Features" sub-factor is determined as 3.79±0.96; the average of their responses to the "Customer Satisfaction" sub-factor is determined as 3.77±0.14; the average of the responses of consumers who are over the age of 40 to the "Customer Expectations" sub-factor is determined as 4.26±0.84; the average of their responses to the "Website Features" sub-factor is determined as 3.82±0.95; the average of their responses to the "Customer Satisfaction" sub-factor is determined as 3.51±1.04.

Table 3. The sub-dimensions of the consumer survey obtained as a result of the EFA

	customer expectations	website features	customer satisfaction
Q13- If the order processing error of the company is too much, such as missing or wrong product, it affects my shopping decision.	0.827		
Q5- The fact that the product that is not practically in stock, seems to be being prepared and afterwards cancellation of my order negatively affects my attitude towards the company.	0.808		
Q9- Mistakes that made in the image of the product while defining on the shopping site will negatively affect my shopping satisfaction.	0.780		
Q4- Proper operation of the return procedure increases my e-shopping frequency and amount.	0.773		
Q11- I expect the product to be picked up from my home by a free courier during the course of product return.	0.762		
Q3- I would like to be able to monitor the status of my order online.	0.759		
Q12- If the product is sent wrong; I expect the mistake to be compensated with opportunities such as gift certificates, discount coupons and free shipping.	0.740		
Q6- The fact that the product is delivered on the date and time which I determined, increases my online shopping frequency.	0.704		
Q10- I prefer shopping sites that have flexible rules for product returns and exchanges.	0.693		
Q16- The site I shop online has superior knowledge of the goods and services it offers.		0.803	
Q17- This site, which offers online shopping service, strives to achieve excellence.		0.786	
Q18-. The wide range of products and services offered by the online retailer fulfil my needs.		0.731	
Q20- The design of shopping sites usually looks nice.		0.725	
Q15- The product and service I buy online is of the promised quality and at the right price.		0.723	
Q19-. My preferred shopping sites not only sell me products and services, but also entertain me.		0.718	
Q14-Generally, I am satisfied with the prices of the site I shop from.		0.689	
Q25- I enjoy recommending shopping sites and products to others.			0.810
Q24- I think that the best way to get information about the products/services of shopping sites is by using product reviews, surveys, or chat rooms.			0.729
Q26- If I am satisfied with the shopping site service, I try to respond with feedback.			0.728

Table 4. The mean and standard deviations of the responses of the consumers to the sub-factor levels of the consumer survey according to their demographic data

	Customer Expectations	Website Features	Customer Satisfaction
Gender	$\bar{X} \pm SD$	$\bar{X} \pm SD$	$\bar{X} \pm SD$
Male	4.22±0.91	3.82±0.97	3.60±1.10
Female	4.20±0.98	3.76±0.92	3.77±1.11
Age			
40 years of age and under	4.17±1.01	3.79±0.96	3.77±0.14
Over 40 years of age	4.26±0.84	3.82±0.95	3.51±1.04
Occupation			
Government official	4.41±0.73	4.00±0.80	3.73±1.02
Worker	3.93±1.12	3.54±1.12	3.43±1.21
Not working	4.37±0.76	3.89±0.74	4.01±0.93
Educational Status			
High School – Associate's Degree	4.13±1.04	3.87±1.03	3.83±1.16
University (Bachelor's Degree)	4.09±1.07	3.70±1.05	3.55±1.16
Postgraduate	4.44±0.52	3.93±0.72	3.73±0.95
Household number of persons			
4 ve above	4.38±0.69	3.96±0.76	3.84±0.93
3 ve below	4.03±1.12	3.63±1.11	3.44±1.23
Household Monthly Income Level			
7500 TL ve below	4.15±1.07	3.74±1.04	3.62±1.21
7500 TL above	4.26±0.82	3.85±0.88	3.68±1.01

Table 5. Comparison of consumers' responses to consumer survey sub-factor levels according to demographic data

	Customer Expectations	Website Features	Customer Satisfaction
Gender	$\bar{X} \pm SD$	$\bar{X} \pm SD$	$\bar{X} \pm SD$
Male	4.50 (1.00-5.00)	4.00 (1.00-5.00)	3.67 (1.00-5.00)
Female	4.40 (1.00-5.00)	3.86 (1.00-5.00)	4.00 (1.00-5.00)
P value	P^a=0.991	P^a=0.548	P^a=0.235
Age			
Age of 40 and under	4.50 (1.00-5.00)	3.86 (1.00-5.00)	4.00 (1.00-5.00)
Over 40 years of age	4.40 (1.00-5.00)	4.00 (1.00-5.00)	3.67 (1.00-5.00)
P value	P^a=0.857	P^a=0.594	P^a=0.045*
Occupation			
Government official	4.50 (1.00-5.00)(Y)	4.00 (1.00-5.00)(Y)	4.00 (1.00-5.00)
Worker	4.20 (1.00-5.00)(X)	3.71 (1.00-5.00)(X)	3.67 (1.00-5.00)
Not working	4.50 (2.10-5.00)(XY)	3.86 (1.57-5.00)(XY)	4.33 (2.00-5.00)
P value	P^b=0.011*	P^b=0.020*	P^b=0.077
Education level			
High School – Associate's Degree	4.20 (1.00-5.00)	3.86 (1.00-5.00)	3.67 (1.00-5.00)
University (Bachelor's Degree)	4.50 (1.00-5.00)	3.86 (1.00-5.00)	3.67 (1.00-5.00)
Post-Graduate	4.45 (2.40-5.00)	4.00 (1.71-5.00)	3.83 (1.00-5.00)
P value	P^b=0.481	P^b=0.462	P^b=0.429
Household Number of Persons			
3 and below	4.40 (1.00-5.00)	4.00 (1.00-5.00)	3.67 (1.00-5.00)
4 and above	4.50 (1.00-5.00)	4.00 (1.00-5.00)	4.00 (1.00-5.00)
P value	P^a=0.064	P^a=0.195	P^a=0.049*
Household Monthly Income Level			
7500 TL and below	4.50 (1.00-5.00)	3.86 (1.00-5.00)	3.67 (1.00-5.00)
7500 TL above	4.40 (1.00-5.00)	4.00 (1.00-5.00)	3.67 (1.00-5.00)
P value	P^a=0.753	P^a=0.595	P^a=0.929

*P<0.05, **P<0.01. . [a]the difference between the two groups was evaluated with the Mann Whitney U test, [b]the difference between more than two groups was evaluated with the Kruskal Wallis test, Within-group comparisons were evaluated with the Homogeneous Subset Differences (HSD) Test for non-normally distributed data, X,Y= There is no difference between variables with the same letter.

According to the demographic data of the consumers who participated in the research, it was analyzed with the "Shapiro-Wilk Test" whether the sub-factors of the consumer survey were distributed normally or not, and it was determined that all sub-factors were not normally distributed (P<0.05) according to the demographic data.

With reference to the results of the normal distribution; data has been analyzed whether if there is a difference between the groups that are not normally distributed for two groups (gender, age group, number of households, household monthly income level) with the "Mann Whitney U Test"; has been analyzed with the "Kruskal Wallis Test" for those with more than two groups (occupation, education level); whether if there is a difference between the groups that are not normally distributed, data has been analyzed with the 'Homogenous Subset Differences Test (HSD Test)' and all the results are given in Table 5.

The comparison of the sub-factors of the Consumer questionnaire according to the gender of the consumers participating in the study was examined and it was determined that there was no statistically significant difference (P>0.05) between all sub-factors by gender (Table 5).

Determining that there was a statistically significant difference (P<0.05) between the "Customer Satisfaction" sub-factors according to age groups, and there was no statistically significant difference (P>0.05) between all other sub-factors (Table 5). When the medians of the groups that differ are examined, it can be said that the medians of the consumers aged 40 and below are higher than the medians of the consumers over the age of 40.

It was determined that there was a statistically significant difference (P<0.05), between the "Customer Expectations and Website Features" sub-factors, and there was no statistically significant difference (P>0.05) between the "Customer Satisfaction" sub-factors (P>0.05). When the sub-factors of "Customer Expectations and Website Features" are examined, it can be said that the difference between the two sub-factors according to occupational groups arises from the difference between worker consumers and civil servant consumers. There was no statistically significant difference (P>0.05) among all sub-factors according to educational status.

There was a statistically significant difference between the "Customer Satisfaction" sub-factor according to the number of people in the household (P<0.05), but there was no statistically significant difference (P>0.05) between all other sub-factors. When the medians of the groups that difference are examined, it can be said that the medians of consumers with a household number of 3 and below are less than the medians of consumers with a household number of 4 and above. There was no statistically significant difference (P>0.05) among all sub-factors according to household monthly income level.

The normality of the sub-factors of the consumer survey was examined and it was determined that the sub-factors of the consumer survey were not normally distributed (P<0.05). Therefore, whether there is a relationship between the groups that are not normally distributed was examined with the "Spearman's Rho Rank Correlation Coefficient" and the results are given in Table 6.

When the relationship between the sub-factors of the consumer survey of the consumers who participated in the study is examined, it is seen that there is respectively %56.1 and %50.1 degree positive moderate relationship between the "Customer Expectations" sub-factor and the "Website Features and Customer Satisfaction" sub-factors and was found to be significant.

There was a positive moderate correlation of 58.7% between the sub-factors of the consumer survey which are "Website Features" sub-factor and the "Customer Satisfaction" sub-factor, and it was found to be statistically significant (P<0.01).

Table 6. The relationship status of consumers among the sub-factors of the consumer survey

			Customer Expectations	Website Features	Customer Satisfaction
Spearman's rho	Customer Expectations	r	1.000	0.561	0.501
		P value		P_c=0.000**	P_c=0.000**
	Website Features	r			0.587
		P value			P_c=0.000**

*P<0.05, **P<0.01, the relationship between the two groups was evaluated with Spearman's Rho Rank correlation coefficient.

4. Conclusion

Today, a new world order is being reshaped with the understanding that "the only thing that doesn't change is change itself". It is predicted that much of what we know in the tradition will change step by step in the near future. Foremost among them is the preferences in the purchasing method. Meanwhile, it is assumed that the logistics methods, which are the most important factor in the delivery of products to the consumer, will develop by changing. The delivery of agricultural products to the market is done through traditional channels in the world. The intermediary institutions such as traders, cooperatives and markets at the head of these channels, provide the commercial link between the producer and the consumer. Since there is more than one channel in the current supply chain, the products coming from the manufacturer reach the consumer with a price increase of approximately 4 times higher. Considering the

production costs in this trade pattern, producers earn a lot fewer and the consumers reach the product by paying the ultimate price.

The logistics system has a vital importance in the delivery of agricultural products to the final consumer. Correspondingly with the development of logistics opportunities, it is under consideration that international trade will increase even more in the future. The countries which foresee this situation strengthen their logistics structures in order to transport the products they produce to other markets by using land, sea and air transportation. It is foreseen that logistics costs will be reduced in the near future with the R&D studies on the development of logistics, innovative applications, and the realization of ideas about the future of the logistics industry. Thereby when the logistics costs, which have a direct effect on the product price, are reduced, the consumer will be able to reach the product at a cheaper price.

According to the data in the survey conducted on the consumer, it is seen that the tendency to use e-food commerce is very high, especially due to the difficulty of reaching local and natural products. By means of e-food trade, an important link is established with the producers so that consumers can reach reliable products from the source. In this way, consumers have the opportunity to reach the quality products that they wanted, regional flavors and geographically indicated products, naturally grown products faster and safer. Small and medium-sized producers will have the chance to deliver the products they produce from their fields or production facilities to the consumers in a wide area. By virtue of e-food trade, the consumer will find the advantage of reaching the product at a more affordable price, as the intermediary institutions will be reduced through the trade established directly between the producer and the consumer.

According to the data in the survey conducted on the consumer, it is seen that the tendency to use e-food commerce is very high, especially due to the difficulty of accessing local and natural products. Thanks to the e-food trade, an important link is established with the producers so that consumers can reach reliable products from the source. In this way, consumers have the opportunity to reach the products they want, regional flavors, products with geographical indications, products grown naturally, faster and safer. By establishing close interaction with the producer and consumer e-food trade, there is an opportunity to make a longer-term trade by developing subscriber and/or member systems. Small and medium-sized producers will have the chance to reach the consumer in a very wide area for the products they produce from their fields or production facilities. With the e-food trade and the trade established directly between the producer and the consumer, the consumer will find the advantage of reaching the product at a more affordable price, as the intermediary institutions will decrease.

In the survey conducted with the producers, it is seen that 92% of the producers want to enter the e-food trade. Although manufacturers understand that future trading methods will change, they have realized that e-food commerce will occupy a very important place in their sales channels. Although state authorities have started studies on this issue, it seems that this is not enough. Although the Digital Agricultural Market project initiated by the Ministry of Agriculture is very important for the producers, the desired level of success has not been achieved due to the lack of technical infrastructure, lack of on-site packaging and packaging, and not integrating logistics channels into the system. It is seen that the market will develop very rapidly and in a much more inclusive way with the investments to be made by private companies in the e-food trade in the near future and with pioneering solutions.

The average age of the farmer engaged in agriculture is increasing day by day and this increase turns into a troublesome process for the future of agriculture. The average age of people engaged in agriculture needs to be rejuvenated. Agricultural policy practitioners are working on incentive packages for young farmers in this regard. However, since these are single-channel redirects, success has not been achieved. However, with the more active use of e-food trade, the income of the producers will increase and reverse migration to the villages will increase. Producers with increased income will increase the number of family workers for more production, and expand their production areas by renting neighboring or idle fields if necessary. These model applications will set an example for many people, and a certain part of the population that has accumulated in the city with the expectation of high income from the product they produce will be able to return to their land and start producing.

The spread of e-food trade is of great importance, especially for small-medium producers to compete with monopolistic markets. The legal arrangements made to prevent large producers from reaching the trade volume that will determine the market have not been very successful. Therefore, in order to protect small producers, the channels of reaching the market should be kept open at all times. With e-food trade, producers and farmers will be in contact with consumers without intermediaries. Keeping these channels open with investments by local governments, private companies and public institutions will produce positive results for all stakeholders. Agricultural policy practitioners need to make economic, legal and structural arrangements in order to expand this unity. E-food commerce can reach the desired level as a result of the data analysis and synchronized studies required for the creation of more effective agricultural policies. The development of e-Food trade will be the construction of the future for all agriculture and agriculture-related sectors. In this way, our country will have a stronger agricultural structure, and a process will emerge in which producers, intermediaries and consumers will gain optimum profit.

Author Contributions

The percentage of the author(s) contributions is present below. All authors reviewed and approved final version of the manuscript.

	R.E.	M.Ö.A.
C	50	50
D	50	50
S	50	50
DCP	50	50
DAI	50	50
L	50	50
W	50	50
CR	50	50
SR	50	50
PM	50	50
FA	50	50

C=Concept, D= design, S= supervision, DCP= data collection and/or processing, DAI= data analysis and/or interpretation, L= literature search, W= writing, CR= critical review, SR= submission and revision, PM= project management, FA= funding acquisition.

Conflict of Interest

The authors declared that there is no conflict of interest.

Ethical Consideration

This study was conducted with the approval of the Tekirdağ Namık Kemal University Ethics Committee of the Graduate School of Sciences (September 12, 2019/072), the questionnaires were conducted on a voluntary basis.

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