# Market segmentation based on consumers' multi-channel behaviours on e-retail purchases

## Tüketicilerin e-perakendecilere yönelik davranışları temelli pazar bölümlendirmesi

Adnan Kara[1] iD

Hatice Arslan[2] iD

[1] Assoc. Prof., Bayburt University, Department of International Trade and Business Administration, Bayburt, Turkey, adnankara@bayburt.edu.tr

ORCID: 0000-0002-9045-0392

[2] MBA Student, Bayburt University, Bayburt, Turkey, htcarslnhtc@gmail.com

ORCID: 0009-0007-2929-5796

**Corresponding Author:**

Adnan Kara,

Bayburt University, Bayburt, Turkey

adnankara@bayburt.edu.tr

## Abstract

Consumers use online retailing to purchase and collect information about products. The main purpose of this research is to identify the characteristics of online consumers, focusing especially on low-involvement products according to their multi-channel behaviour. The study population consists of individuals residing in Erzurum, Turkey, and the sample was selected using the convenience sampling method. The data from a sample of 300 participants were collected through online surveys. The link to the survey forms was sent to the participants via e-mail and telephone. The collected data was analyzed with factor analysis - principles components, reliability analysis - Cronbach Alpha, clustering analysis - Two Steps, and correlation analysis - Pearson. Cluster analysis based on consumers' online shopping preferences identified four different consumer groups in detail, focusing on the purchasing channels of online stores and the media touch points of mobile devices and personal computers. The cluster analysis also includes the psychographic and demographic characteristics of the participants. The results of this study can contribute to retailers better shaping their strategies and marketing efforts by providing greater insight into consumers' behaviour in online shopping. It also aims to contribute to the academic literature by emphasizing the importance of low-involvement products in online purchasing processes.

**Keywords:** Market Segmentation, Psychographic Segmentation, Demographic Segmentation, Multi-channel Behaviours

**Jel Codes:** M31, L81

## Öz

Bu araştırmanın temel amacı, online alışveriş yapan tüketicilerin özelliklerini tespit etmektir, özellikle bu tüketicilerin satın alma kanallarını kullanma alışkanlıkları ve iletişim tercihlerine göre düşük ilgilenimli ürünler üzerine yoğunlaşmaktadır. Çalışmanın evreni, Türkiye'nin Erzurum ilinde ikamet eden bireylerden oluşmaktadır ve örneklem, kolayda örnekleme yöntemi kullanılarak seçilmiştir. Toplam 300 kişilik bir katılımcı örnekleminin verileri, online anketler aracılığıyla toplanmıştır. Anketler, katılımcılara mail ve telefon mesajları yoluyla iletilmiş ve toplanan veriler SPSS 22.0 programı kullanılarak kapsamlı bir şekilde analiz edilmiştir. Veri analizi süreci içinde, Faktör Analizi-Principles Components, Güvenirlik Analizi-Cronbach Alpha, Kümeleme Analizi-Two Step ve Korelasyon Analizi gibi çeşitli istatistiksel teknikler kullanılmıştır. Tüketicilerin online alışveriş tercihlerine göre yapılan küme analizi, online mağazaların satın alma kanalları ve mobil cihazlar ile kişisel bilgisayarların medya temas noktalarına odaklanarak dört farklı tüketici grubunu ayrıntılı bir şekilde tanımlamıştır. Bu küme analizi, katılımcıların psikografik ve demografik özelliklerini de içermektedir. Bu çalışmanın sonuçları, online alışveriş alanında tüketicilerin davranışlarına daha fazla anlayış sunarak, işletmelerin stratejilerini ve pazarlama çabalarını daha iyi şekillendirmelerine yardımcı olabilir. Ayrıca, düşük ilgilenimli ürünlerin online satın alım süreçlerindeki önemini vurgulayarak, akademik literatüre katkıda bulunmayı amaçlamaktadır.

**Anahtar Kelimeler:** Pazar Bölümlendirme, Psikografik Bölümlendirme, Demografik Bölümlendirme, Dağıtım Kanalı

**JEL Kodları:** M31, L81

## Introduction

Worldwide, mobile internet has radically affected consumer behaviour, and e-retailing is becoming the focus of traditional and organized retailers. Consumer behaviour in e-retailing may differ from in-store retailing. Online channels are evolving into the media of information gathering and points of purchasing for consumers. In addition, the product evaluations of e-retailers are more convenient and easy to access than those of in-store retailers. These developments affect consumers' shopping styles, product evaluations and store perceptions. Consumers can buy more products easily and quickly from online stores than from physical stores. It ensures the growth of the e-retailer market.

The Internet is a relatively new medium for retail customers. Thanks to the widespread use of smartphones, people can make instant product evaluations and price comparisons, control stock-keeping units and purchase from wherever they are. They can even access videos of product usage experiences very quickly. Physical stores can now provide product information through their website or social media platforms such as Facebook and Twitter, in addition to traditional communication channels. Thus, the company establishes a direct relationship with customers by developing social media, online stores and mobile devices.

This study aims to investigate the purchasing and communication channels used by e-retailer customers. For this purpose, market segmentation of e-retail customers was carried out using psychographic and demographic variables. The research is conducted on low-involvement product categories, including cheap and frequently purchased products. As a result of the research, it is planned to obtain consumers' purchasing and gathering information about low-involvement products in online channels, which are also examined. With this research, the following sub-objectives are tried to be achieved.

- Segmenting the market according to the purchases of consumers from e-retailers,
- To determine how often consumers shop from e-retailers,
- Consumers preferences of low- involvement product in online,
- Which media channels are used by customers who buy grocery products online?
- Where do consumers get information while shopping?

The scope of the research is market segmentation according to the psychographic and demographic characteristics of consumers who use websites, mobile applications, and social media. Research data was collected using a survey form. Ethical principles were observed in the collection and interpretation of research data. The research aims to understand the customer characteristics in each market segment by analyzing the survey data. There are similar market segmentation studies (Madi, 2016; Vyncke, 2022; Alabay, 2011; Cengiz & Şekerkaya, 2010; Nakano & Fumiyo & Kondo, 2018; Sari & Setiaboedi,2015; Wagner & Schramm. & Steinmann, 2013). In addition, it aims to contribute to the literature by determining customer characteristics specifically for the low-involvement product category.

This research's first assumption is theoretical and assumes that psychological and demographic factors will be effective when marketers conduct market segmentation studies. The other assumption is that consumers will sincerely and accurately complete the online survey form.

The most important limitation of the research is related to the narrow application area of the online survey form. Within the scope of the research, data was collected from individuals residing in Erzurum, and a convenience sampling method was applied.

## Literature review

### Multiple channel usage in e-retailing

Nowadays, consumers use the internet and mobile technologies as communication channels. The fact that consumers are shopping through more than one channel and retailers has prompted them to adopt multi-channel marketing (Müller-Lankenau, Wehmeyer & Klein, 2005). New ways of marketing using multiple channels have positive and negative aspects for both consumers and retailers.

If we consider the positive aspects of multi-channel retailing, it is advantageous that the retailers can reach consumers from a wider market coverage. Retailers' market dominance increases. Employed personnel wages, rent and personnel training costs of these retailers are reduced. Communication with consumers increases, and brand image is improved. Demand for the brand can be revived (Levy & Weitz, 2012). For consumer expectations to be successfully integrated with retailers' marketing efforts, consumer interest in multi-channel retailing has increased and developed today (Schramm-Klein, Wagner, Steinmann, & Morschett, 2011).

The disadvantage is that retailers' activities can be complex as a result of the growth of the business's growth. As a result of this growth, profitability may be adversely affected. Control and coordination become difficult for the retailer.

The positive aspects of multi-channel retailing for consumers are as follows. Consumers can access the products they need thanks to multi-channel use. They do not stick to a specific channel (Heinemann & Schwarzl, 2010). In literature research, it has been seen that consumers shopping with multi-channels feel more profitable themselves. However, the consumer cannot be satisfied if the inter-channel integration is insufficient. In other words, the consumer may want to return or exchange a product purchased online from the store. The consumer may be confused if a product is priced differently online and online. There is a need for compliance between the different multi-channel retailers (Chaffey, 2010). If compliance cannot be achieved, the retailer's first and priority channel will be endangered in the long term. This may shake consumers' trust in the business and cause them to turn to different retailers.

There can be many reasons for choosing a channel for a particular purchase. The buyer and the seller, the product, and the market structure of the product can cause these positive and negative factors. Factors arising from the product are the quantity, size, complexity, portability, and price of the goods. Factors originating from the market structure of the product can be addressed to the market size and innovativeness.

The factors originating from the seller are the products' value, the consumers' widespread opinion about the brand, the general opinion of the brand, the quality of the service provided, and customer relations. The consumer's familiarity with the previous shopping channel and their shopping experience are among the factors that affect the channel selection (Chaffey, 2010).

The shopping experience and the perceived trust can determine the consumer's channel choice. In the next shopping, consumers may prefer the same channel. If a consumer has experienced problems when shopping from an e-retailer, he/she cannot choose the internet channel the next time (Schoenbachler & Gordon, 2002).

Among the main reasons for channel selection in retailing are the website characteristics. Privacy and security measures in the mobile applications of e-retailers' stores are important. Thus, electronic data protection and customers' personal information is ensured (Cheung & Lee, 2006: 483). Credit card and financial information must be protected.

Another factor that positively affects channel selection in retailing is the accuracy, up-to-date and enough information provided by the retailer to the consumer. This is important because it increases people's purchasing intentions. Consumers again prefer a store with sufficient, accurate and up-to-date information (Kim, Ferrin & Rao, 2007).

Personalization or rewards positively affect purchase intention and channel choice. These have a positive effect because they provide economic benefits and make consumers feel special (Cho, 2006). For example, it is a nice gesture for the website to greet customers by name.

If the consumer thinks he is taking a risk and evaluates it negatively, it will negatively affect his purchasing intention. Consumers have a fear of loss. These negativities may be the consumer's possible financial losses, negative thoughts about the product, or all of them together. In order to avoid negative thoughts, the consumer must have confidence in the channel to the originality of brands, the information and prices of the products, the security provided by the retailer, and his after-sales experiences (Schoenbachler & Gordon, 2002: 47).

Consumer's personal experiences during the purchasing process, easy access to products, shopping habits, shopping frequency, time spent on shopping, amount of shopping, personal use or purchasing

as a gift, lifestyle of the consumer, demographic characteristics of the consumer (age, education, income, occupation, household size) are important. Such factors are major in channel selection (Schoenbachler & Gordon, 2002).

Consumer preferences in different product categories also affect the purchasing channel because while consumers prefer high-involvement products, they prefer traditional store channels. When choosing low-involvement products, consumers prefer the internet channel. The consumer will decide easily (Arslan & Bakır, 2010). Consumers use the internet to collect information, buy and do research.

**Environmental factors affecting customers' purchases in e-retailing**

The first reason for showing purchasing behaviour is the needs and expectations of consumers. With globalization, consumers' choices in the market have increased. They go through step by step when purchasing, but these steps are not always the same. The order of these steps may vary according to the need and product. For example, many steps can be skipped when purchasing a low-involvement product. When buying a piece of jewellery or a high-involvement product, consumers' attention and the purchasing process are growing. The cost of the product is high. It is important to achieve psychological and sociological satisfaction after purchasing behaviour.

The consumer's purchasing process steps are as follows: First, there is the need for a product. Afterwards, the alternatives are determined and evaluated, the decision phase begins, and the purchase is made. The emotions shown after purchasing behaviour are also among these stages. (Uçar, 2006).

The steps of needs determination before a purchasing decision are as follows. The first step is to see the need, for example, feeling physically hungry. The next step is to look for options. Reaching the number of popular restaurants is in this step. The third step is to evaluate the options, that is, to learn about the food options.

In the purchasing step, purchasing behaviour occurs. For example, we learn the food options at a restaurant where eat your fill. In the post-purchase step, the product is evaluated. In other words, whether the meal is satisfying or not is checked by the enjoyment. Feedback is given to the restaurant service provider regarding satisfaction with the meal. The final step of the purchasing process includes payment of the account and satisfaction (Odabaşı & Barış, 2002).

E-retailing is becoming more widespread day by day. However, the concerns of consumers using e-retailing are increasing day by day. The main concerns of consumers are that their credit card information may be stolen, trust concerns, e-retailing is not suitable for perishable products, the desire to see and test the products beforehand, high delivery costs and delivery delays (Tekinay, 2000).

Although there are many product options and detailed product information for the electronic shopping consumer, electronic retailers have difficulty differentiating their products (Ward & Lee, 2000). Consumers generally prefer electronic retail sites or mobile apps for low-involvement products. While more information is effective in influencing the purchases of electronic retail customers, it can be mentioned that other people are more for high-involvement products. These are called social factors that affect consumer behaviour: family, reference groups, roles and statuses.

**Market segmentation in e-retailing**

There are many more consumer markets with different demands and expectations, and these consumers are increasing today. No retailer can simultaneously appeal to all markets' needs, so they must choose the market to serve their products. Retailers ensure that a heterogeneous market is divided into homogeneous groups according to common characteristics. Successful retailers should produce products per the customers' needs and expectations. Acute market segmentation is important for all markets (Büyükbalcı, 2016).

According to Kotler, consumers' purchasing intentions, desires and expectations vary in each market segment, and consumers are divided into smaller groups through segmentation by their desires and expectations. The marketer should try all segmentation variables to understand the market structure best and benefit consumers (Kotler & Armstrong, 2017: 213).

Altunışık defined the concept of market segmentation as follows. Market segmentation determines the different attributes of a potential market according to the harmony between a firm's competencies and

consumer needs. When segmentation was properly accomplished, potential consumers were distinguished into market segments, analyzed the most current profiles, and participated in unsaturated markets (Altunışık, Özdemir, Torlak, 2004).

Market segmentation strategy is used for product differentiation in many different industries. The market segmentation strategy, first used for the automobiles of the General Motors brand in 1920 (Taşkın, 2009), has been used by Marriott hotels to create different sub-brands since 1983 (Guıtınon, Paul. & Madden., 1997). Today, large hotel enterprises in the tourism sector frequently prefer market segmentation strategies.

Market segment refers to consumers with similar criteria, similar purchasing intentions and similar needs based on geographical, cultural and demographic factors (Kavak, 2013). There are various studies in the literature to determine the characteristics of retail customers. Gupta and Chintagunta (1994) used demographic variables to divide customers into market segments in their research using panel data analysis. In particular, they reported that household size and income are the determining variables in segmenting demographic variables.

Bhatnagar and Ghose (2004) investigated how often consumers make decisions to purchase online. According to the findings, consumers' time collecting information about the product affects their purchases. In other words, the more consumers search for product information online, the more likely they are to purchase. Konus, Verhoef, and Neslin (2008) segmented multi-channel shoppers according to psychographic and demographic variables. Researchers have segmented the market according to consumers' search and purchase of information. They also found that segment memberships of multi-channel shoppers vary in different product categories.

Thomas and Sullivan (2005) developed a multi-channel market segmentation strategy called MARCOM, which consists of six steps. While segmenting the market, researchers used the company's communication expenditures, consumers' demographic characteristics, and their value to the company based on their purchases as segmentation variables. Uçar (2006) applied market segmentation to consumers according to their lifestyles. According to the results obtained from the data collected by the survey, consumers in the private pension system were divided into clusters according to their characteristics using psychographic variables.

Wang, Yang, Song, and Sia (2014) segmented multi-channel shoppers using survey data during the consumer's product search and purchase phase. Consumers are segmented according to their purchasing patterns, channel preferences and demographic characteristics. As a result of market segmentation, two different market segments were obtained: innovative and traditional. The research draws attention to the differences in the demographic structures and channel preferences of traditional and innovative market segments. De Keyser, Schepers and Konus (2015) segmented the market using channel usage and psychographic variables for purchasing and information-gathering purposes. In the study applied to the customers of a telecom brand, it was determined that innovativeness was not an important variable; contrary to the literature, loyalty was an important variable.

Sands, Ferraro, Campbell and Pallant (2016) segmented consumer markets into consumer electronics, holiday and clothing product categories based on store, internet, mobile and social media channels and demographic structures. Researchers have identified differences in market segments between product categories and purchasing channels. The research determined that while one group of consumers did not see social media and mobile as important in purchasing, another group was influenced by social media. In addition, a store-oriented market segment has been identified among consumers who shop for clothing.

Nakano and Kondo (2018) implemented market segmentation to determine consumers' multi-channel usage. In the research, consumers' purchasing behaviour on online channels was examined. Additionally, media touchpoints are determined as PC, mobile and social media. Consumers are segmented according to psychographic and demographic variables.

Hallikainen, Alamäki and Laukkanen (2019) segmented consumers according to digital touchpoint preferences. They conducted the study to determine the perceived importance level of online channels such as search engines, social media and e-mail. It has been found that demographic factors, internet

usage, and technology readiness significantly differentiated between consumers' segments according to technology usage.

Brand., Schwanen, and Anable (2020) segmented grocery shoppers using psychographic variables. The research divided consumers into segments according to their multi-channel preferences. As a result, the research determined variables such as convenience, perceived benefits, costs and risks, technology impact, time pressure, and compliance with the daily schedule as the main distinguishing features.

Alt, Săplăcan, Benedek and Nagy (2020) segmented life insurance customers based on information search, purchasing channels and personal characteristics. Online or offline channel preferences were used as the main distinction in the research. As a result of the research, four clusters were obtained. The four clusters are online, offline and multi-channel users.

Dovgoruk (2022) identifies German consumers' contact points with mobile channels. The research examined consumers' purchasing channels and search information for clothing and electronic products. It has been determined that consumers use websites for price research and make purchases from mobile applications. Consumers use mobile applications because of their convenience, solution-oriented and usefulness.

**Method**

This research examines consumers' use of multi-channel distribution channels and media contact points in electronic retailing. This study evaluated the time spent at three types of media touchpoints. These are phones, social media and personal computers. Consumers are clustered according to their demographic and psychographic characteristics.

Products in the low-involvement category require frequent buying behaviour. They are products with a low level of involvement, which have a low cost and, therefore, a low risk in purchasing behaviour.

SPSS 22.0 program was used to analyze the data collected through the survey. Then, Reliability Analysis was applied regarding the construct validity and reliability of the measurement model. KMO sample adequacy test and Bartlett's test of sphericity were applied to measure the suitability and adequacy of factor analysis on the data, and factor analysis was used to reduce the items of psychographic scales and determine the factors with high explanatory power in the form of main headings. Participants were divided into clusters by cluster analysis- Two Steps. Bayburt University received research ethics committee permission with document number 30.03.2023-126667.

**Data**

The research was conducted using the convenience sampling method from individuals residing in Erzurum province. A prerequisite for participants' inclusion in the sample was that they had shopped for low-involvement products online. In this way, a questionnaire was applied to 349 participants.

The data collection tool is the online survey form applied within the research framework. The surveys were sent to the participants by the researcher via e-mail and telephone messages—data collected between March 2022 and May 2022. Of the 350 surveys applied within the research framework, 349 were found to be appropriate, and one had to be removed.

**Scales**

The survey form consists of three parts. The first section contains eight statements regarding demographic information. The second part has a seven-point Likert-type scale of 24 statements and three multiple-choice statements. In the last section, purchasing frequencies for low-involvement product categories were asked.

In the research, expressions regarding psychographic market segmentation criteria, communication and purchasing channel preferences were adapted from Nakano and Kondo (2018). The researcher himself created multiple-choice statements.

**Research findings**

**Descriptive analysis findings**

First, descriptive statistics were applied to the data obtained during the collection. By applying frequency and percentage analysis, the demographic findings of the participants were obtained, and the participants' gender, marital status, age, education level, monthly income level, Active Business Life Status, number of individuals in the family, and number of children in the family were examined. Demographic findings regarding the participants are as in Table 1.

**Table 1:** Demographic Characteristics of Participants

| Variable | Value | Frequency | % |
|---|---|---|---|
| Gender | Female | 200 | 57.3 |
| | Male | 149 | 42.7 |
| Marital status | Single | 237 | 67.9 |
| | Married | 112 | 32.1 |
| Monthly Income (TL) | <8500 | 129 | 37 |
| | 8501 <-> 10500 | 58 | 16.6 |
| | 10501 <-> 15000 | 77 | 22.1 |
| | 15001 and above | 85 | 24.4 |
| Education | Middle school | 7 | 2 |
| | High school | 61 | 17.5 |
| | University | 202 | 57.9 |
| | postgraduate | 79 | 22.6 |
| Age | 15 <-> 24 | 117 | 33.5 |
| | 25 <-> 34 | 142 | 40.7 |
| | 35 <->44 | 62 | 17.8 |
| | 45 <-> 54 | 25 | 7.2 |
| | 55 <-> 69 | 3 | 9 |
| Active Business Life Status | None | 120 | 34.4 |
| | There is | 229 | 65.6 |
| Number of members in the family | 0 | 7 | 2 |
| | 1 <-> 3 | 85 | 27.2 |
| | 4 <-> 6 | 208 | 59.5 |
| | 7 <-> 11 | 39 | 11.8 |
| Number of children | 0 | 256 | 73.4 |
| | 1 <-> 2 | 67 | 19.2 |
| | 3 and above | 26 | 7.5 |

As seen in Table 1, 57.32% of the participants are women and 42.7% are men. When the participants' marital status was examined, it was determined that 67.9% were single and 32.1% were married. When the monthly income status of the individuals participating in the survey was examined, it was determined that 37% of them were 8500 TL and below, 16.6% were between 8501 and 10.500, 22.1% were between 10501 and 10500, 24.4% were 15001 and above. When the educational status of the participants was analyzed, it was determined that 2 of them were in Secondary School, 17.5% High School, 57.9 University, and 22.62 Postgraduate. When the ages of the participants are examined, 33.5% between the ages of 15 and 24, 40.7% between the ages of 25 and 34, 17.8% between the ages of 35 and 44, 7.2% between the ages of 45 and 54, It was determined that 9% of them were in the 69 age range. It was determined that the active business life of the participants was 34.4%, and their existence was 65.6%. It was observed that 2% of the family members of the participants were between 0, 27.2% between 1-3, 59.5% between 4 and 6, and 11.8% between 7 and 11. The participants' children were 73.4%, with 0 children, 19.2% with 1-2, and 7.5% with three and above.

**Reliability analysis findings**

As a result of the reliability analysis, the Cronbach Alpha value should approach one, and the values for the six dimensions resulting from the factor analysis are shown in the table. The values explain that the reliability of the scale is ensured.

**Table 2:** Reliability Test

| Dimensions | Reliability (Cronbach Alpha) |
|---|---|
| Loyalty | 0.823 |
| Shopping enjoyment | 0.697 |
| Innovativeness | 0.656 |
| Price sensitivity | 0.700 |
| Motivation to conform | 0.589 |
| Time pressure | 0.681 |

Cronbach alpha values of some factors are below the recommended value of 0.70. However, it is above the acceptable value of 0.50. In addition, the closeness of factor loadings, standard deviations and means indicates measurement unbiasedness, which indicates reliability (Yurdugül, 2006). In addition, a Cronbach alpha test was conducted for all scales together to measure the general internal consistency of the survey. The Cronbach alpha value of all scales is 0.76. This result generally shows that the survey has internal consistency.

**Factor analysis findings**

In factor analysis, KMO: 0.749, Bartlett's Test of Sphericity: Approx.Chi-Square: 1734,032, df: 153, Sig.: 0.000. According to the factor analysis findings in the table above, construct validity and reliability were ensured. The findings of the factor analysis are presented in Table 3. The analysis result consisted of a total of 6 factors.

As shown in Table 3, loyalty was the first factor that emerged in the exploratory factor analysis. As a result of factor analysis, six dimensions emerged as designed at the beginning of the research.

**Table 3:** Exploratory Factor Analysis Results

| Dimension | Factor | Mean | SD | Factor Loading | Factor Explanatory |
|---|---|---|---|---|---|
| Loyalty | The brand of the product is important in purchasing decisions. | 5.48 | 1.46 | 0.819 | 17.8 |
| | I generally buy the same brands. | 5.05 | 1.36 | 0.797 | |
| | I have favorite brands that I buy. | 5.30 | 1.65 | 0.737 | |
| | The brand of the product is effective in my purchasing decisions. | 5.49 | 1.43 | 0.683 | |
| | Where I shop is important to me. | 5.30 | 1.47 | 0.674 | |
| | I usually do my shopping the same way. | 4.95 | 1.47 | 0.513 | |
| Shopping enjoyment | I like shopping for groceries. | 5.2 | 1.43 | 0.780 | 10.5 |
| | I spend a lot of time shopping. | 4.56 | 1.72 | 0.769 | |
| | I like shopping. | 5.44 | 1.47 | 0.751 | |
| Innovativeness | I like to try different and new products. | 5.20 | 1.60 | 0.811 | 10.5 |
| | I am one of the first to try a new product. | 3.89 | 1.75 | 0.810 | |
| | I regularly buy different versions of a product for a change. | 3.77 | 1.81 | 0.586 | |
| Price Sensitivity | It is important to me to have the best price for the product. | 5.38 | 1.5 | 0.861 | 8.9 |
| | I compare the prices of various products before making a choice. | 5.42 | 1.5 | 0.857 | |
| Motivation to conform | Being accepted by others is important to me. | 4.1 | 1.79 | 0.801 | 8.8 |
| | I find it boring when my behaviour is criticized. | 4.20 | 1.76 | 0.782 | |
| Time pressure | I find myself under pressure about time. | 4.57 | 1.65 | 0.853 | 8.8 |
| | I'm always busy. | 4.39 | 1.58 | 0.850 | |

As a result of factor analysis, only one expression under the motivation conform dimension was removed because its factor load was below 0.70. The factor loadings of all other statements are above 0.70.

**Multiple correlation analysis findings**

Psychographic variables of e-retailer customers, such as loyalty, shopping enjoyment, innovativeness, price sensitivity, motivation to conform and time pressure, were examined by multiple correlation analyses. The results of the analysis are included in the table below.

**Table 4:** Multiple Correlation Analysis Results Between Variables

| | Gender | Mean. | S.D. | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|---|---|---|
| **(1) Loyalty** | Female | 5.2375 | 1.12450 | | | | | |
| | Male | 5.3065 | 1.01381 | | | | | |
| **(2) Shopping enjoyment** | Female | 5.2967 | 1.18326 | 0.333** | | | | |
| | Male | 4.7718 | 1.21742 | | | | | |
| **(3) Innovativeness** | Female | 4.1033 | 1.39968 | .375** | .299** | | | |
| | Male | 4.5459 | 1.18373 | | | | | |
| **(4) Price Sensitivity** | Female | 5.3844 | 1.41035 | .194** | .175** | .081 | | |
| | Male | 5.4463 | 1.18854 | | | | | |
| **(5) Motivation to conform** | Female | 4.1425 | 1,56467 | ,141** | ,106* | ,098 | -,004 | |
| | Male | 4.1678 | 1,41971 | | | | | |
| **(6) Time Pressure** | Female | 4.4275 | 1,44966 | ,030 | .074 | .010 | .082 | ,202** |
| | Male | 4.5638 | 1.35727 | | | | | |

*0.05 significance level

**0.000 significance level

When the significance ratios (Sig.2-tailed) in the table above are examined, since (Sig.2-tailed) is less than 0.05, a positive and significant relationship exists between loyalty and shopping enjoyment, innovativeness, price sensitivity and motivation to conform. Since time pressure (Sig.2-tailed) is greater than 0.05, there appears to be no significant relationship between loyalty and time pressure. According to these results, pleasure, innovativeness, price sensitivity and motivation to conform increase as loyalty increases. There is a positive and significant relationship between shopping enjoyment and loyalty, innovativeness and price sensitivity (Sig.2-tailed) since it is less than 0.05. It is seen that there is no significant relationship between shopping enjoyment, motivation to conform, and time pressure. According to these results, loyalty, innovativeness, and price sensitivity increase as shopping enjoyment increases. There is a positive and significant relationship between innovativeness and loyalty, as shopping enjoyment (Sig.2-tailed) is less than 0.05. It is seen that there is no significant relationship between innovativeness and price sensitivity, motivation to conform and time pressure. According to these results, loyalty and shopping enjoyment increase as innovativeness increases. There is a positive and significant relationship between price sensitivity, loyalty and shopping enjoyment (Sig.2-tailed) as it is less than 0.05. It is seen that there is no significant relationship between price sensitivity and innovativeness, motivation to conform and time pressure. According to these results, loyalty and shopping enjoyment increase as price sensitivity increases. A positive and significant relationship exists between motivation to conform and loyalty and time. There is no significant relationship between motivation to conform and shopping enjoyment, innovativeness and price sensitivity. According to these results, loyalty and time pressure increase as conformity motivation increases. There is a positive and significant relationship between time pressure and conformity motivation. It appears that there is no significant relationship between time pressure and loyalty, shopping enjoyment, innovativeness, and price sensitivity. According to these results, motivation to conform increases as time pressure increases.

**Cluster analysis findings**

Cluster analysis was performed using the Two Step technique. When the analysis values are examined, it is seen that the structure is determined as a cluster of four. The figure regarding the characteristics of the quadruple cluster structure is shown below.

**Table 5:** Clustering Analysis Statistics

| Cluster | 4 | 1 | 3 | 2 |
|---|---|---|---|---|
| Dimension | 29,3% (102) | 25,6% (89) | 23,0% (80) | 22,1% (77) |
| Values | Time Pressure 3,12 | Time Pressure 4,38 | Time Pressure 5,28 | Time Pressure 5,60 |
| | Loyalty 5,72 | Loyalty 4,06 | Loyalty 6,02 | Loyalty 5,27 |
| | Innovativeness 4,54 | Innovativeness 3,68 | Innovativeness 5,50 | Innovativeness 3,41 |
| | Price Sensitivity 5,99 | Price Sensitivity 4,35 | Price Sensitivity 5,16 | Price Sensitivity 6,14 |
| | Shopping Enjoyement 5,17 | Shopping Enjoyement 4,13 | Shopping Enjoyement 5,94 | Shopping Enjoyement 5,10 |
| | Motivation to conform 3,83 | Motivation to conform 3,80 | Motivation to conform 5,01 | Motivation to conform 4,06 |

Input Value Importance Level ■1,0 ■0,8 ■0,6 □0,4 □0,2 □0,0

In the four-cluster structure obtained from clustering analysis, the number of clusters is close to each other. When the table above is examined, it is seen that the first cluster is 25.6%, the second cluster is 22.1%, the third cluster is 23.0%, and the fourth cluster is 29.3%. Time pressure and loyalty are the most important input variables in determining the clusters. The distribution of the averages of the input variables according to the clusters is shown in the spider web chart below.
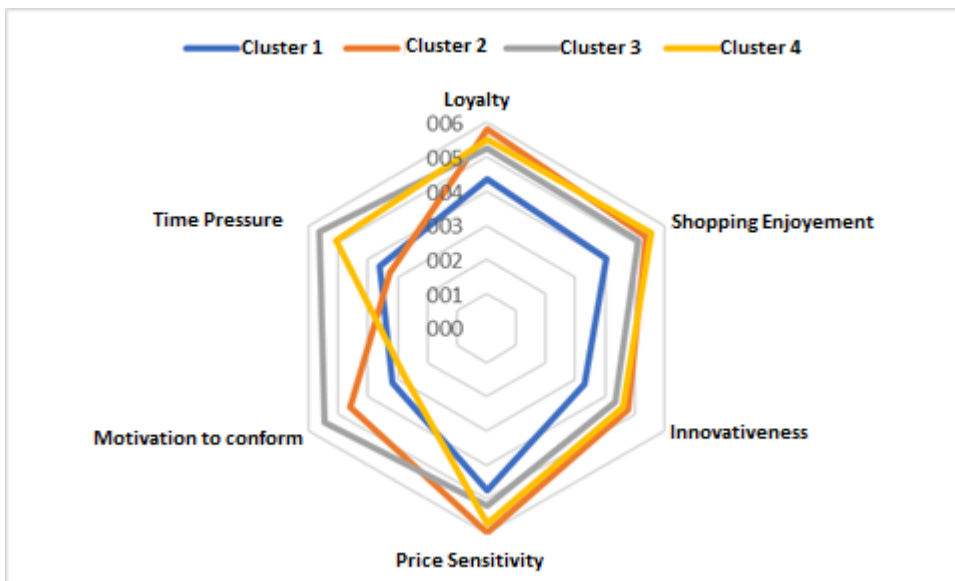


**Figure 1:** Spider Web Chart

Clusters were named by interpreting the spider web graph. Accordingly, cluster names and properties were determined as follows.

Cluster 1: The type of customer who uses e-retailing habitually and at low prices; those with high price sensitivity and high loyalty to a brand or store, mostly single marital status, mostly spending the most money on grocery products at minimum wage income level

Cluster 2: The customer who uses e-retailing to keep up with fashion and technology. Those who love to shop and spend time on this subject are mostly female, mostly at the minimum wage income level.

Cluster 3: Low type of customers who use e-retailing for efficient use of time; Those who feel time pressure when it comes to shopping and have a high motivation to adapt their choices, are mostly between the ages of 25-34, are mostly active in business life, shop for grocery products at least three times, are mostly middle-income.

Cluster 4: The type of customer who uses e-retailing to get new ideas; Those with a high rate of innovation and low motivation to adapt to their preferences, mostly single marital status, mostly female gender, mostly university education level

The bar chart below shows averages based on cluster characteristics.
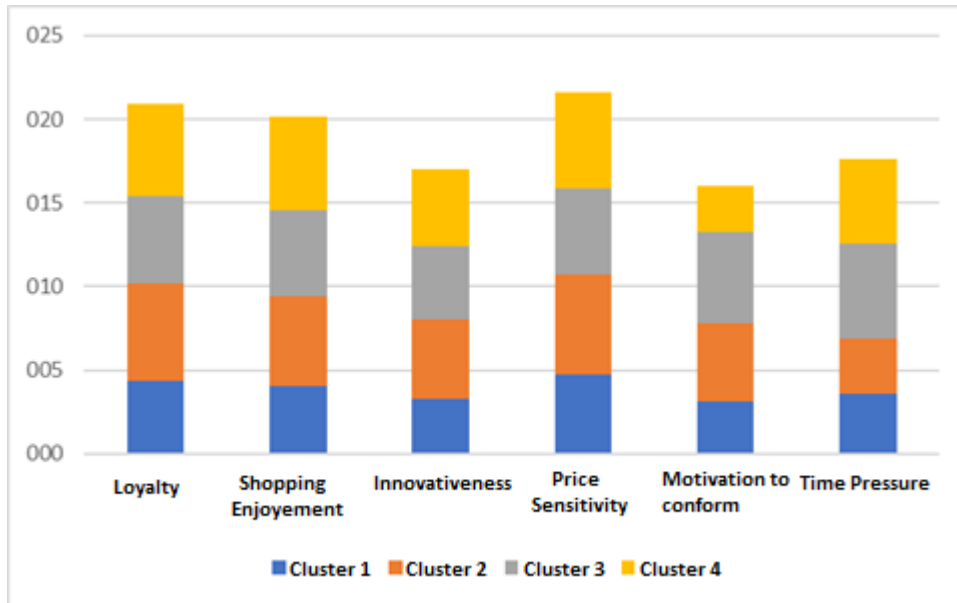


**Figure 2:** Bar Chart Showing Averages Based on Cluster Characteristics

When the above figure is examined, price sensitivity is the feature with the highest average. Secondly, loyalty seems to be the highest trait.

The following table shows customers' purchasing channel preferences and cluster media usage.

**Table 6:** Purchasing Channel and Media Usage Preferences of Customers by Clusters

| | Customer type | Purchase Channel | Media Usage |
|---|---|---|---|
| Cluster 1: Fallowers | Using e-retailing habitually and at low price | Physical Store (71%) Online Store (77%) | Mobile Application (83%) Personal Computer (58%) Social Media (57%) |
| Cluster 2: Innovators | Using e-retailing to follow fashion and technology | Physical Store (71%) Online Store (76%) | Mobile Application (83%) Personal Computer (50%) Social Media (46%) |
| Cluster 3: Pragmatists | Using e-retailing to use time effectively | Physical Store (73%) Online Store (72%) | Mobile Application (70%) Personal Computer (51%) Social Media (28%) |
| Cluster 4: Opportunists | Using e-retailing to get new ideas | Physical Store (76%) Online Store (84%) | Mobile Application (62%) Personal Computer (56%) Social Media (0%) |

As the table above shows, cluster 4 uses online stores much more intensively than physical stores. Additionally, cluster 4 is the only customer type not using social media. Cluster 3, on the contrary, uses the physical store more than the online store. Similar to Cluster 4, social media usage is low. Cluster 1 and Cluster 2 are similar to each other in terms of purchasing channels and media usage preferences. Customers in these clusters use mobile applications extensively regarding media preference. In addition, cluster 1 is the customer type that uses social media most intensively.

**Table 7:** Preferred Shopping Sites for Grocery Products

| | |
|---|---|
| Trendyol | 45% |
| Migros sanal | 19% |
| Hepsiburada | 10% |
| Getir | 20% |
| Gittigidiyor | 6% |

In the table above, it can be seen that the most used site for grocery products is Trendyol.

**Table 8:** Amounts of Money Spent on Online Shopping

| | |
|---|---|
| 200-300 TL | 20% |
| 300-500 TL | 28% |
| 500-1.000 TL | 18% |
| 3.000 TL and above | 34% |

In the table above, it can be seen that the monthly amount spent on online shopping is mostly 3.000 TL and above.

**T-test analysis findings**

**Table 9:** T-test Statistics

| | Group | N | Mean | SD | T | df | p |
|---|---|---|---|---|---|---|---|
| Loyalty | Female | 200 | 5.23 | 1.12 | -0.591 | 347 | 0.555 |
| | Male | 149 | 5.30 | 1.01 | -0.600 | 334.589 | 0.549 |
| Shopping enjoyment | Female | 200 | 5.29 | 1.18 | 4.049 | 347 | 0.000 |
| | Male | 149 | 4.77 | 1.21 | 4.032 | 313.968 | 0.000 |
| innovativeness | Female | 200 | 4.10 | 1.39 | -3.117 | 347 | 0.002 |
| | Male | 149 | 4.54 | 1.18 | -3.194 | 341.408 | 0.002 |
| Price sensitivity | Female | 200 | 5.38 | 1.41 | -0.433 | 346 | 0.665 |
| | Male | 149 | 5.44 | 1.18 | -0.443 | 341.142 | 0.658 |
| Motivation to conform | Female | 200 | 4.14 | 1.56 | -0.155 | 347 | 0.877 |
| | Male | 149 | 4.16 | 1.41 | -0.158 | 333.774 | 0.875 |
| Time pressure | Female | 200 | 4.42 | 1.44 | -0.892 | 347 | 0.373 |
| | Male | 149 | 4.56 | 1.35 | -0.901 | 329.474 | 0.368 |

Descriptive statistics in the table above examine the psychographic characteristics of the customers: loyalty, shopping enjoyment, innovativeness, price, compliance motivation, and time. The sample consists of 200 women and 149 men. According to whether our variances are greater than 0.5 or not, we look at whether they are homogeneously distributed or not. When the distribution of variances is examined, it is seen that the dimensions of innovativeness and shopping enjoyment show a homogeneous distribution ($p<0.05$), while the other dimensions do not show a homogeneous distribution. For this reason, only the differences of the two dimensions were examined. There is a significant difference in the attitudes of women and men to enjoy shopping. Looking at the averages, the average of women is higher than that of men. This means that women like to shop more than men. There is a significant difference in the innovative attitudes of women and men. When this difference is examined, the average of men's innovative attitudes is higher than that of women. The explanation for this is that men are more innovative than women.

## Results and discussion

The scope of the study is market segmentation based on consumers' purchases and communications from electronic retailers. When market segmentation is made, the target market is first divided into homogeneous segments, and then consumers are addressed more with different marketing mixes. Businesses can gain more competitive advantage by segmenting the market (Hüseyin, 2013). Consumers clearly determine their expectations, and businesses draw a more effective marketing roadmap. Within the framework of modern marketing, constant change and intense competition are observed. This necessitated providing more effective service to consumers. For this purpose, markets are analyzed geographically, psychographically, behaviourally, etc., and segmented according to characteristics (Kotler, Armstrong, Saunders & Wong, 1999).

There have been researchers who have previously examined the concept of market segmentation in different studies (Madi, 2016; Vyncke, 2005; Alabay, 2011; Cengiz & Şekerkaya, 2010; Nakano, Fumiyo, Kondo,2018; Sari & Setiaboedi, 2015; Wagner, Schramm, Steinmann,2013). It is thought that conducting this study on low-involvement products will contribute to the literature.

A literature review was conducted regarding previous studies, and based on this, the study's subject, problem, purpose, importance, assumptions and limitations were first stated in the introduction. Then, the concepts mentioned in the article and previous related studies are listed. The research population and sample are explained. The research sample consists of individuals residing in Erzurum province. The sample population was selected by convenience sampling and reached via e-mail. Findings from data analysis are presented. For this purpose, the first demographic items were asked of the participants. The validity of the measurement model was measured by factor analysis, and the Cronbach Alpha test measured its reliability. It has been determined that the scales provide validity and reliability. A six-subdimensional factor structure was obtained with factor analysis findings—these sub-dimensions include loyalty, innovativeness, shopping enjoyment, motivation to conform, time pressure, and price sensitivity. Then, cluster analysis was performed to determine customer characteristics. According to the analysis findings, four clusters were determined. Time pressure and loyalty are the most important input variables in determining the clustering analysis. Then, the distribution of the averages of the input variables into the clusters is shown in the spider web graph. Clusters were named by interpreting this graph, and customer characteristics were obtained.; The researcher named these Cluster 1: Followers, Cluster 2: Innovators, Cluster 3: Pragmatists, and Cluster 4: Opportunists. Then, with the bar chart showing the averages based on cluster features, it was concluded that the features with the highest average were price sensitivity and loyalty.

According to the clusters, a table of customers' purchasing channels and media usage preferences was created. It was determined which cluster used which purchasing channel, that is, physical or online store, and their media usage preferences (mobile application, social media, personal computer) were explained. In the study, the preferred shopping sites for market products were tabulated. According to the data in the table, Trendyol is mostly preferred in e-retailing. It has been concluded that the monthly amount spent on online shopping is mostly 3.000 TL and above. As a result of descriptive statistics, the psychographic characteristics of consumers consist of 6 scales: loyalty, innovativeness, shopping enjoyment, motivation to conform, time pressure, and price sensitivity. According to the t-test, shopping enjoyment and innovativeness dimensions showed a homogeneous distribution. The differences between these two dimensions have been examined, and women like shopping more. Men participants are more innovative averages than women participants.

The unique value of this research is that it provides new information about online shoppers' purchasing and information-seeking behaviours. The study determines which types of online shoppers mainly use online channels for information search and purchasing. In addition, the psychographic and demographic characteristics of online shoppers were revealed. Thus, it has been revealed that marketing managers can use research items to understand their customers. Suggestions for future research are provided below.

• There are almost no studies using real panel data, and it is recommended for other researchers to increase them.

- Revealing the factors affecting consumers in the creation of clusters with psychographic segmentation cluster analysis,

- More research to reveal the psychographic characteristics of consumers,

- The low-involvement product category has more samples, so the results are compared.

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