

Knowledge Levels of the Consumers About Eco-Friendly Products¹**Tüketicilerin Çevreye Dost Ürönlere Yönelik Bilgi Düzeyleri****Ebru Onurlubař²****Abstract**

The consumption behaviors which covary with globalization create negative effects for the environment. The increasing environmental consciousness of the consumers have caused their environmental concerns to raise in time. Thus, the consumers have been trying to change their purchasing behaviors and they show a tendency to purchase eco-friendly products more. Within this scope, the relations between the consumers' acquaintance with eco-friendly products and their behaviors of purchasing eco-friendly products according to their demographics have been examined. The data that were used in the study have been obtained from face to face interviews with 143 families in Keřan district of Edirne. In the research, it has been determined that 59;4% of the consumers are acquainted with eco-friendly products and 35,7% of them purchase eco-friendly products. In the Chi-square analysis, a significant relation has been determined between age, education, occupation, marital status and acquaintance with green products. Additionally, a significant relation has been found between age, education, income and purchasing of green products, as well.

Keywords: Consumer, Eco-Friendly Product, Level of Knowledge, Purchasing**Öz**

Küreselleřmeyle deęiřen tüketim alışkanlıkları çevreye olumsuz etkiler yaratmaktadır. Zaman içinde çevre konusunda tüketici bilincinin artması tüketicilerin çevre konusunda endişelerini arttırmaktadır. Bu nedenle, tüketiciler satın alma davranışlarını deęiřtirmeye çalışmakta ve ürünü tercih ederken çevreye dost ürünleri daha fazla satın alma eğilimi göstermektedirler. Bu bağlamda, tüketicilerin demografik özelliklerine göre çevre dostu ürünü tanıma ve çevre dostu ürünü satın alma davranışları arasındaki ilişkiler incelenmiştir. Çalışmada kullanılan veriler, Edirne'nin Keřan İlçesinde 143 aile ile yüz yüze görüşerek yapılan anketlerden elde edilmiştir. Arařtırmada, tüketicilerin %59,4'ünün çevre dostu ürünü tanıdıkları, %35,7'sinin çevre dostu ürünleri satın aldıkları belirlenmiştir. Yapılan Ki kare analizinde; yař eğitim, meslek, medeni durum ve yeřil ürünleri tanıma arasında anlamlı bir ilişki bulunmuştur. Ayrıca; yař, eğitim, gelir ile yeřil ürün satın alma arasında da anlamlı bir ilişki bulunmuştur.

Anahtar Kelimeler: Tüketici, Çevre Dostu Ürün, Bilgi Düzeyi, Satın Alma

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Introduction

Consumers have recently realized that using natural resources is limited and there are more precise realities about these resources than it is thought (Ay & Ecevit 2005). This has caused the emergence of the concepts of ecological product and ecological consumer. Eco-friendly products or in other words green products are the products that are produced by ecocredencial production methods, that are enduring, non-toxic and recyclable (Emgin & Türk, 2004:9). Green consumers are considered to be the consumers who are sensitive to environmental issues (Yıldız, 2016: 95). Precisely, they are the consumers who avoid the products and services which are harmful to people's health; which can be harmful to the citizens of one's own country and the other other countries by causing unnecessary energy consumption, pollution and waste through the processes of pre-production, during production and post production and which pose a threat to the environment (Elkington, 1994; Çabuk et al., 2008; Onurlubaş et al, 2017:282).

The facts that green consumers have recently emerged and the sensivity towards environmental problems have arisen, seeing eco-consciousness in the market more have caused important results in terms of organizational activities. Decreasing environmental problems to a minimum level requires the companies to change the functions of their organization – primarily production, purchasing and marketing activities – and their corporate cultures radically (McDaniel & Rylander, 1993: 6). The organizations which have social consciousness and social responsibility have gained a heavy image in the eyes of consumers (Varinli, 2000:15, Topal & Özer, 2014: 259). In this context, these kind of organizations pay more attention to the eco-efficiency practices, which are adopted in many different sectors to gain both competitive and cost advantages (Öztürk & Yılmaz, 2016: 8). This has led the emergence of the concept of eco-friendly product marketing. In other words, it is called green marketing. Green marketing is also named as social marketing, ecological marketing, environmental marketing and sustainable marketing (Soonthonsmai, 2001:18; Camorro & Banegil,2006). Polonsky described green or ecological marketing as; “ it contains all the activities that meet the requests and needs of the consumers and while meeting these requests and needs, it is important that minimum harm is given to the natural environment” (Polonsky, 1994:46). This marketing perception projects that the product needs to be green from the stage of packaging to the stage of being waste after the date of expiry and for this purpose, it gives priority to informative signs and annotations for consumers in the presentation stage of the product or service (Düren, 2000: 209-210).

The damages for the environment and limited natural resources are lowered by using eco-friendly products. Therefore, the aim is to determine the consumers' knowledge and purchasing statuses of eco-friendly products in relation to their demographics of the consumers in Keşan central district of Edirne.

1. Methodology

The main material of the study is formed by the questionnaires conducted in Keşan district of Edirne in 2015. The population of Keşan Central District in 2015 was determined as 66 533 (Anonim, 2015)

The formula of the sample size from the determined population is as below (Arıkan, 2007);

$$\frac{N * p * q}{(N - 1) * D + (p * q)}$$

N= Population (66 533)

p=0,5

q=0,5

D=(e/z)² (0,0819/1,96)²

D= Error rate (0,0017460455)

z= Statistics value (1,96 and 95% confidence interval)

n=143 (Number of participants)

The sample size has been determined as 143 as a result of the calculation made with error margin of 0,0819 and confidence interval of 95%. 143 questionnaires were distributed randomly.

1.1. Research Models

In Research Model 1 of this study, the aim is to determine whether the consumers’ knowledge status of eco-friendly products is different according to demographics or not. In Research Model 2, the aim is to determine whether the consumers’ status of purchasing eco-friendly products is different according to demographics or not.

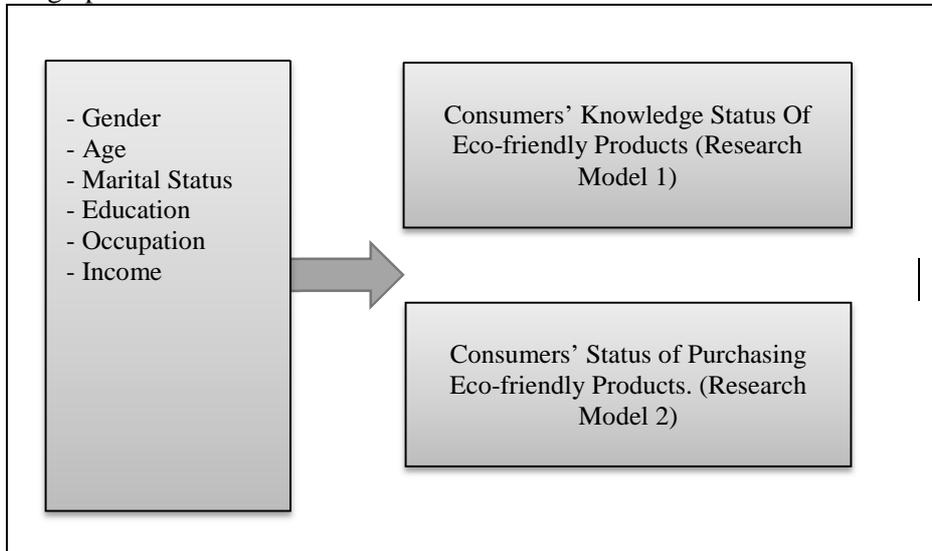


Figure 1: Research Model

The main hypotheses according to Research Model 1 are as below;

H1= There is a significant relation between gender and consumers’ knowledge status of eco-friendly product.

H2= There is a significant relation between age and consumers’ knowledge status of eco-friendly product.

H3= There is a significant relation between marital status and consumers’ knowledge status of eco-friendly product.

H4= There is a significant relation between educational status and consumers’ knowledge status of eco-friendly product.

H5= There is a significant relation between occupation and consumers’ knowledge status of eco-friendly product.

H6= There is a significant relation between income and consumers’ knowledge status of eco-friendly product.

The main hypotheses according to Research Model 2 are as below;

H1= There is a significant relation between consumers’ gender and their status of purchasing eco-friendly products.

H2= There is a significant relation between consumers’ age and their status of purchasing eco-friendly products.

H3= There is a significant relation between consumers’ marital status and their status of purchasing eco-friendly products.

H4= There is a significant relation between consumers’ educational status and their status of purchasing eco-friendly products.

H5= There is a significant relation between consumers’ occupation and their status of purchasing eco-friendly products.

H6= There is a significant relation between consumers’ income and their status of purchasing eco-friendly products.

1.2. Analysis of the Data

Chi-square analysis has been used in order to test if there is a statistical relation between the demographics of the consumers and their knowledge status of eco-friendly products and their status of purchasing eco-friendly products.

The formula of the Chi-square is as below (Gujarati, 1995; Mirer, 1995): In the formula;

$$\chi^2 = \sum_{i=1}^k \frac{(Q_i - E_i)^2}{E_i}$$

χ^2 : Chi-square value, Q_i : Observed value of frequency, E_i : Expected value of frequency

2.The Research and the Findings

It is observed that 45,5% of the participants are females and 54,5% are males. It has been determined that 25,9% of the participants are aged between 18 – 25; 13,3% are between 26 – 30; 21,7% are between 31– 40; 21,7% are between 41 – 50; 9,1% are between 51 – 60; 8,4% are aged 61 and above. 58,0% of the consumers are married, 36,4% are single and 5,6% are divorced.

According to the results of their educational statuses, it has been determined that 1,4% of the participants are illiterate, 2,8% are literate, 21,0% are primary school graduates, 11,9% are secondary school graduates, 27,3% are associate’s degree, 32,9% have bachelor’s degree and 2,8% have master’s degree.

When the average monthly incomes of the families are examined, it is observed that 9,1% of the participants have an income of 1000 TL and below, 14,7% have between 1001 – 1500 TL, 23,1% have between 1501 – 2000 TL, 28,0% have between 2001 – 2500 TL, 17,5% have between 2501 – 3500 TL and 7,7% have 3501 TL and above. When the professions of the participants are examined, it has been determined that 12,6% are civil servants, 27,3% are workers, 8,4% are self-employed, 14,7% are housewives, 5,6% are retired and tradesmen/businessmen 31,5% are private sector employees.

Table 1: Consumers’ Knowledge Status of Eco-friendly Product According to Their Demographical Features

		Knowledge Status of Eco-friendly Product			
		Cognizant of eco-friendly products		Miscognizant of eco-friendly products	
		Frequency	%	Frequency	%
Gender	Male	43	55,1	35	44,9
	Female	41	63,1	24	36,9
P: 0.336 χ^2 : 0.924 Df:: 1 p > 0.05 nonsignificant					
Age	18-25	34	91,9	3	8,1
	26-30	13	68,4	6	31,6
	31-40	22	71,0	9	29,0
	41-50	9	29,0	22	71,0
	51-60	3	23,1	10	76,9
	61 and above	3	25,0	9	75,0
P: 0,00 χ^2 : 43,173 Df:: 5 p < 0.05 significant					
Marital status	Married	44	84,6	8	15,4
	Single	40	48,2	43	51,8
	Divorced	0	0,0	8	100
P: 0,00 χ^2 : 29,564 Df: 2 p < 0.05 significant					

Educational status	literate	0	0,0	2	100
	illiterate	0	0,0	4	100
	Primary school graduates	0	0,0	30	100
	Secondary school graduates	4	23,5	13	76,5
	Associate's degree	29	74,4	10	25,6
	Bachelor's degree	47	100	0	0,0
	Master's degree	4	100	0	0,0
P: 0,00 χ^2 : 99,698 Df: 6 p < 0,05 significant					
Occupation	Civil servant	11	61,1	7	38,9
	Worker	16	41,0	23	59,0
	Self-employed	7	58,3	5	41,7
	Housewife	7	33,3	14	66,7
	Retired	6	75,0	2	25,0
	Private sector employee	37	82,2	8	17,8
P: 0,01 χ^2 : 21,796 Df: 5 p < 0,05 significant					
Monthly income(TL)	0-1000	6	46,2	7	53,8
	1001-1500	10	47,6	11	52,4
	1501-2000	21	63,6	12	36,4
	2001-2500	24	60,0	16	40,0
	2501-3500	16	64,0	9	36,0
	35001 and above	7	63,6	4	36,4
P: 0, 751 χ^2 : 2,668 Df: 5 p > 0,05 nonsignificant					

According to Chi-square analysis, whereas there is not a significant relation between gender and knowledge status of eco-friendly products , a significant relation has been determined between the knowledge status of eco-friendly products and age, marital status, educational status and profession.

Table 2: Consumers' Status of Purchasing Eco-friendly Products According to Their Demographical Features

		Purchasing Status of Eco-friendly Products			
		Purchases eco-friendly products		Does not purchase eco-friendly products	
		Frekans	%	Frekans	%
Gender	Male	30	38,5	48	61,5
	Female	21	32,3	44	67,7
P: 0,444 χ^2 : 0,585 Df: 1 p > 0,05 nonsignificant					
Age	18-25	15	40,5	22	59,5
	26-30	12	63,2	7	36,8
	31-40	9	29	22	71
	41-50	10	32,3	21	67,7
	51-60	4	30,8	9	69,2
	61 and above	1	8,3	11	91,7
P: 0,04 χ^2 : 11,436 Df: 5 p < 0,05 significant					
Marital status	Married	19	37,3	35,9	33
	Single	29	56,9	58,7	54

	Divorced	3	5,9	5,4	5
P: 0,976 χ^2: 0,048 Df:2 p > 0,05 nonsignificant					
Educational status	literate	1	50,0	1	50,0
	illiterate	2	50,0	2	50,0
	Primary school graduates	3	10,0	27	90,0
	Secondary school graduates	7	41,2	10	58,8
	Associate's degree	15	38,5	24	61,5
	Bachelor's degree	20	42,6	027	57,4
	Master's degree	3	75,0	1	25
P: 0,04 χ^2: 13,177 Df:6 p < 0,05 significant					
Occupation	Civil servant	9	17,6	9	9,8
	Worker	12	23,5	27	29,3
	Self-employed	5	9,8	7	7,6
	Housewife	4	7,8	17	18,5
	Retired	3	5,9	5	5,4
	Private sector employee	18	35,3	27	29,3
P: 0,402 χ^2: 5,115 Df:5 p > 0,05 nonsignificant					
Monthly income	0-1000	0	0	13	100
	1001-1500	1	4,8	20	95,2
	1501-2000	2	6,1	31	93,9
	2001-2500	24	60	16	40
	2501-3500	16	64	9	36
	35001 and above	8	72,7	3	27,3
P: 0,00 χ^2: 54,209 Df:5 p < 0,05 significant					

According to Chi-square analysis, a significant relation has been determined between the purchasing status of eco-friendly products and age, educational status and income.

In the study, the question "What does eco-friendly product mean to you?" has been asked to the 84 consumers who are cognizant of eco-friendly products. According to the answers, it has been determined that 58% of the participants think of it as the recyclable product, 57,3% think as the product which does not consume natural resources, 46,9% think as green or eco-friendly product, 49,0% think as the product which does not pollute the earth.

The question "Which of the definitions below are the features of eco-friendly product?" has been asked to the 84 consumers who are cognizant of eco-friendly products. 59,4% of the consumers have stated that the products are designed to be recycled and reused, 55,9% have stated that they do not cause pollution, 53,1% have stated that they do not harm human health. 42,7% have stated that they have the ability to lower global environmental problems, 41,3% have stated that they are energy-saver.

Table 3: Consumers' Knowledge Status of The Signs of Eco-friendly Products
* (%)

18,9	31,5	58,0	32,9	22,4	35,7	15,4

*As the participants answered more than one option the total exceeds 100 (Cognizant People)

In order to determine whether the 51 consumers who buy eco-friendly product know the signs of these products or not, the signs of eco-friendly products in Table 3 have been shown to them and it has been determined that 58,0% of them know the recyclable sign.

When the consumers were asked: "How would you behave when purchasing the products, if you realize that they have negative effects on environment and harmful?", 55,8% have stated that they would buy less, 35,6% have stated that they would stop buying and 8,6% have stated that they would go on buying the same products. Thus, it can be concluded that consumers are sensitive about the products that affect the environment negatively.

It has been determined that out of the participant consumers who have stated that they could pay more for the eco-friendly products, 22,2% have stated that they could pay 1-5% more than the normal price, 28,8% have stated that they could pay 6-10% more, 10,7% have stated that they could pay 11-15% more, 14,6% have stated that they could pay 16-20% more, 12,7% have stated that they could pay 21-30% more and 11,0% of them have stated that they could pay 30% and above more.

Conclusion

54,5% of the participants in the survey are males and 45,5% are females. It has been determined that 59,4% of the participant consumers know eco-friendly products and 35,7% of the participants purchase eco-friendly products.

It has been shown that young people know about eco-friendly products more. This can be explained by the reason that they use technological communication tools more and especially by using the internet they are quickly informed about the innovations. It has been determined that married people are more cognizant of eco-friendly products, too. This can be explained by the reason that married people feel responsible to their wives/husbands and children and so they do more research on these issues in order to avoid the possible environmental problems in the future. As the educational level increases the level of consciousness increases, too. We can see in this survey that as the educational level increases, the knowledge status of eco-friendly products increases to the top. A significant relation has also been determined between the knowledge status and profession and it has been determined that private sector workers know the products the most.

In the survey, it has been shown that young people purchase eco-friendly products more. The reason for this could be that young people use technology and communication tools more commonly. Due to the fact that the educational level has increased and so the level of consciousness increased, too, the purchasing habits of people have changed accordingly. We can see that the people with higher levels of education purchase the products more due to their high consciousness of environment.

As the level of income of the consumers increases, they purchase eco-friendly products more. It is a known fact that the prices of eco-friendly products are higher than the other products due to their high production costs. The high prices of eco-friendly products prevent the consumers with lower incomes from buying these products. Therefore, people with high incomes can buy these products more.

It has been determined that consumers mostly (58%) consider eco-friendly products as the products which are recyclable. Furthermore, it has been determined that they mostly think eco-friendly products are designed to be recycled and reused. When the participants are shown the signs of eco-friendly products, it was determined that most of them can recognize the recyclable sign. It has been determined that most of the consumers can pay 6-10% more at most.

The rising consciousness of the consumers towards the environment increases the purchasing ratio of eco-friendly products. Therefore, it is assumed that in order to have a corner on the market, organizations need to develop their production plans by considering the environmental sensitivity of the consumers.

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