# Consumer Responses to Sustainable Supply Chain Implementations

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#### Abstract

Environmental and social problems such as environmental pollution, depletion of natural resources, poverty, access to food and clean water are among the most criticalissues that have been on the world agenda. Consumers, non-governmental organizations, governments, and various groups are increasingly putting pressure on companiesto fulfill their responsibilities. Companiesare approaching these issues from a strategic perspective and show intense interest in environmental-social problems due to the increasing social awareness. Accordingly, sustainable supply chain practices have become a crucial for the business world. This study aims to explain consumers' responses to sustainable supply chain implementations by examining consumers' environmental awareness, subjective norms, purchasing intentions, attitudes towards sustainable products, and product choices variables. In this context, data were collected from 376 consumers through questionnaires to determine the factors that affect the product preferences of consumers. Results showed that sustainable supply chain implementations and demographic features play an essentialrole in consumers' product choices. Findings concerning the consumer behaviorsmight shed light on the prospects and challenges of the sustainable supply chain field. Limitations, managerial implementations, and directions for future studies are detailly discussed in conclusion.

Key Words: Sustainability, Sustainable Supply Chain Management, Consumer Product Choice Behavior

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#### I. 1.Introduction

Today's world faces global warming, resource, scarcity of food and water, decreased species diversity, poverty, and unemployment. Issues such as global warming, climate changes, and the release of greenhouse gases create hard-to-correct damage forhumans and nature. The increasing population irreversibly causes these problems. Consumers, enterprises, politicians, and NGOs now understand and accept the fact that social and economic conditions are unsustainable against the harmfulenvironment.

Sustainable development is a proposed solution to overcome these detrimental effects. Existing sustainable development goals that push to production and service industries beyond traditional economic goals focus on the triple bottom line approach (Elkington, 1994), which encircles environmental, social, and economic fields at the same time.

The concept of sustainability aims to create a balance between nature, human and economy. The current rate at which people use resources in our world is unsustainable, and this affects to environment and society in several ways. Responsible behavior ofpeople and firmsmight provide sustainable environment for future generations(Gulio, Fischer, Schäfer, & Blättel-Mink, 2014).

Firms are exposed to intense pressure by the public and stakeholders to clearly define and implement the goals related to sustainability in supply chains (Seuring & Müller, 2008). Integrating the concept of sustainability with core business functions in the chain, such as supply, logistics, and information management, has emerged as a critical and interdisciplinary aspect of Sustainable Supply Chain Management (SSCM)(Morali & Searcy, 2012). In sustainable supply chains, social and environmental criteria must be implemented by members to maintain their presence. Competitiveness also should be strengthened by adding customer needs and requests according to the economic criteria of sustainability (Seuring & Müller, 2008).

In response to the expectations of consumers, firms developed sustainable products that they define as recyclable products whichhave slight impact on the environment and do not deform or destroy natural resources.

The concept of sustainable production extends to almost every stage(raw material supply, production, storage, packaging, transportation, and distribution) of supply chain management. As a result of these variations, the importance given to sustainable consumption should be expected to affect and change consumer purchasing behavior.

While satisfying personal needs of consumers remains at the center of consumption behavior, exhibiting responsible purchasing behavior has become a priority. As consumers became aware of the environmental problems caused by consumption behavior, they started to buy environmentally friendly sustainable products and services. Although purchasing is considered as the cause of environmental and social problems, sustainability-oriented purchasing might be the solution for future generations.

Turkey is an emerging country according to her consumption society. Analyzing the consumer behavior in Turkey is critical for both domestic and international companies. Sustainable supply chain implementations of companies operating in Turkey need to be examined in several ways: (1) What is the response of consumers to sustainable supply chain implementations?(2) How do sustainable supply chain implementations affect consumers' purchasing behavior? (3) Does consumer's sustainable product choice behavior vary according to demographic characteristics? Answers of these questions mightshed light to understand consumers' responses to sustainability implementations and provide guidance on sustainability strategies implemented/will implement in developing countries such as Turkey.

# II. Literature Review and Hypothesis Construction

#### 2.1. Sustainable Supply Chain Management

In today's business environment, sustainability has been the new priority of companies with in the balance of cost and profitability(Kaypak, 2011). Many studies have concluded that companies with a sustainable culture perform better than other companies in the long run(Kleindorfer, Singhal, & Van Wassenhove, 2005; Pagell & Wu, 2009; Yang, 2013; Esfahbodi, Zhang, & Watson, 2016). Companies should use their economic, environmental, and social resources not only for production but also for the benefit of the society and environment. Businesses are expected to implement and maintain such activities. In this way, companies will both increase internal prosperity and satisfy external stakeholders in the long term. SSCM conducts the flow of materials, information, and capital along a supply chain and the collaboration of companies, while at the same time setting and achieving goals in three different dimensions (economic, environmental and social) of sustainable development(Seuring & Müller, 2008).SSCM implementations include internal and external implementations performed by a company to make the supply chain economically, environmentally, and socially more sustainable (Morali & Searcy, 2012). Therefore, SSCM implementations such as sustainable procurement, sustainable distribution and sustainable design are assumed to improve economic, environmental and social performance due to their ability to reduce material consumption, waste, emissions, energy use, and excess inventory and provide competitive advantage (Zaidi, Mirza, Hou, & Ashraf, 2018; Esfahbodi, Zhang, & Watson, 2016).

# 2.2. Consumer Responses to SSCM

The theory of planned behavior (TPB) is designed by Icek Ajzen(1991) to explain and predict human behavior. TPB suggests that the individual's behavior does not only occur by his or her own will, but other factors also affect shaping behavior. TPB argues that individuals'

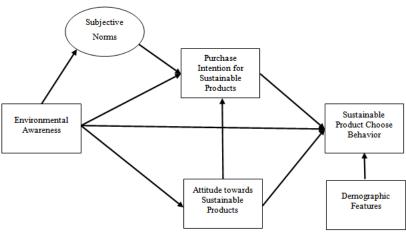


Figure 1: Conceptual Model

behavior is shaped and realized by the influence of individuals' intentions toward behavior, attitude, subjective norms, and perceived behavioral control factors. Accordingly, five variables are used in this studyto determine the relationship between sustainability and consumer behavior: consumers' environmental awareness (EA), subjective norms (SN), purchase intention for sustainable products (PIfSP), attitude towards sustainable products (AtSP), and sustainable product choice behavior (SPCB). The conceptual model of the study is shown in Figure 1.

#### 2.3. Environmental Awareness of Consumers

It is human behavior that causes damage to the environment, and that protects it. Environmental awareness is developed by individuals who perceive environmental problems and take measures to protect the environment. Individuals' awareness of their environment is the first step towards solving problems. The change of environmental behavior of individuals with awareness is possible through the change of their lifestyle. Individuals need to demonstrate these desires in the intellectual sense behaviorally. Individuals who are aware of environmental issues and are concerned about the impact of businesses on the environment will be more likely to act with environmental concerns to reduce the impact of business activities (Gadenne, Kennedy, & McKeiver, 2009). Consumers who see environmental management as an ethical issue may support environmental protection by regulating purchasing behavior.

Numerous empirical studies have reported about EA in the literature. Abu-Elsamen, Akroush, Asfour, & Al Jabali(2019) found a positive and significant relationship between EA and SN. Ha & Janda(2012) explored consumers' intention to purchase energy-efficient products, similarly found a significant relationship between EA and SN. Emekci(2019) reports that people with high awareness of the environment have a high intention to purchase green products. Kayabaşı & Bozkurt(2017) found a positive and significant relationship between EA and purchasing intent in their studies in which consumers examined green product purchasing behavior. De Farias, Eberle, Milan, & De Toni, 2019; Farani, Mohammadi, & Ghahremani, 2019 found a significant relationship between EA and attitude.

Accordingly, the hypotheses of the study are given below.

- $H_1$ : Consumers environmental awareness positively affects to their subjective norms.
- $H_2$ : Consumers environmental awareness positively affects their purchase intention for sustainable products.
- $H_3$ : Consumers environmental awareness positively affects to their sustainable product choose behavior.
- *H<sub>4</sub>*: Consumers environmental awareness positively affects their attitude towards sustainable products.

#### 2.4. Subjective Norms

SN represents the socio-psychological assessment of individuals' behaviors and expresses the social pressure that the individual feels about performinga behavior(Ajzen, 1991). In other words, the SN reflects the effects of individuals' motivation to perform certain behaviors, and the expectations of people(e.g., family, friends, colleagues, and society) who are affected by this behavior(Ham, Jeger, & Ivković, 2015; Shah, Adeel, Hanif, & Khan, 2016). In some cases, even if a person does not have a positive attitude towards performing a specific behavior, people who value and influence it can likely do so in line with their opinions. That is, how the social environment meets the behavior of a person or SN's concept understands its immediate environment.

Based on the recentstudies, social pressure perceived by consumers appears to have a direct impact on shaping the purchasing intentions(Bhatt & Bhatt, 2015; Asif, Xuhui, Nasiri, & Ayyub, 2018; Kim & Chung, 2011). It has also been concluded that perceived social pressures have a moderating effect on purchase intention(Shah, Adeel, Hanif, & Khan, 2016; Ahamed & Limbu, 2018). Therefore, the following hypothesis is included in the study;

 $H_5$ : Consumers subjective norms positively affect their purchase intention for sustainable products.

 $H_6$ : Relationship between consumers environmental awareness and their purchase intention for sustainable products is mediated by subjective norms.

## 2.5. Attitude towards Sustainable Products

Attitude has defined as an individual's tendency to evaluate a symbol, object, or event negatively or positively(Katz, 1960). The rationale for research on attitude is to make inferences about individuals' possible responses to an object, event, or situation and to help make decisions strategically in this direction. The consumer's attitude is formed by combining many features of product. Since the consumer attitude functions as a predictor of future purchases, consumer attitudes are critical that needs to be understand, especially for businesses(Kim & Chung, 2011). In other words, the attitude helps to understand the demand for a product. The concept of attitude for businesses is explained as the positive or negative tendency which an individual has about a product or brand(İslamoğlu, 2010).

Sinceattitude is an essential factor in designing consumer purchase intention and preference (Ajzen, 1991), there are many published studies on its antecedents and consequences (Ha & Janda, 2012; Emekci, 2019). Attitude towards a product has been widely studied within the scope of intention to purchase. There are

empirical studies in the literature showing that consumers who have a positive attitude towards nature and society have an increased PIfSP and SPCB (Ham, Jeger, & Ivković, 2015; De Farias, Eberle, Milan, & De Toni, 2019). Coherent with these evidences it is hypothesized that;

 $H_7$ : Consumers attitude towards sustainable products positively affects their purchase intention for sustainable products.

 $H_s$ : Consumers attitude towards sustainable products positively affects to their sustainable product choice behavior.

#### 2.6. Purchase Intention for Sustainable Products

Intention expresses subjective judgments about how people will behave in the future. According to Ajzen(1991), the intentionis the individual's willingness to perform a behavior, and the intensity of the effort expends. TPB argues that intentions are shaped by the influence of attitudes and subjective norms. The theory states that the realization of behavior depends on the intent and that the subjective norm and attitude towards the individual's behavior is useful (Mathieson, 1991). Attitude and subjective norms play a determining role in realizingthe behavior by directing the individual's intention to perform a behavior (George, 2004). Because of these reasons;

*H<sub>9</sub>:* Consumers purchase intention for sustainable products positively affects their sustainable product choice behavior.

#### 2.7. Sustainable Product Choice Behavior

Expected utility theory claims that consumers make decisions by choosing the benefits of the product rather than its importance(Rabin, 2000). This assessment is subject to various conditions -one may precede the other- depending on the situation, product type, and individual priorities(Khan & Mohsin, 2014). Based on this assumption, EA, SN, PIfSP, and AtSP variables are propounded to be usefulin explaining consumers' product choices. In addition to these four variables identified, personal consumer factors in the evaluation of consumer product preferences are also investigated in this study. Age, life period, profession, economic income, lifestyle, and personality of the consumer constitute the personal factors (Kotler & Armstrong, 2007).

Richardson(2012) found that education, income, and gender had a significant effect on consumer preferences, while age was not effective. Girard, Korgaonkar, & Silverblatt(2003), studied internet consumption behavior and concluded that consumer preferences differ according to gender, age, and income. However, Chen, Lobo, & Rajendran(2014) reported that age, gender, and education variables did not differ in consumer preferences. Accordingly, the hypotheses of the study are given below.

 $H_{10}$ : Sustainable product choices of consumers differ according to demographic characteristics.

 $H_{10a}$ : Sustainable product choices of consumers differ according to gender.

 $H_{10b}$ : Sustainable product choices of consumers differ according to educational status.

 $H_{10c}$ : Sustainable product choices of consumers differ according to profession.

 $H_{10d}$ : Sustainable product choices of consumers differ according to income status.

#### III. Method

## 3.1. Sampling and Data Collection

All consumers aged 18 and olderhad determined as the sample of the study. Data were collected from these individuals through questionnaires. Some surveys printed, and some have been carried out in electronic form on consumers. A convenience sampling method was applied to collect questionnaires. Six hundred people had reached by the printed and electronic survey filling method, but 383 of them returned, 376 had included in the analysis process. The remaining seven questionnaires had not included in the analysis due to missing data entry. The descriptive of the sample are summarized in Table I. Data were collected in December 2019.

**Table I:** Demographic Characteristics of The Survey Sample(n = 376)

Demographics	Percentage	Demographics	Percentage
Gender		Marital Status	
Male	26,3	Married	25,3
Female	73,7	Single	74,7
Age		Education	
18-24	55,8	Primary Education	0,3
25-34	21,5	High School	15,2
35-44	13,0	Academy	8,5
45-54	7,7	University	62,2
55 and Over	1,9	Postgraduate	11,4
		Doctorate	2,4
Monthly Income		Profession	
$2.000 \square$ and Below	48,3	Civil Servant	16,2
2.001 □ - 2.500 □	9,8	Private SectorEmployee	19,4

100,0	Total	100.0
3.2	Unemployed	4.5
8,0	Housewife	4,0
18,6	Student	48,7
13,0	Self-Employed	7,2
	18,6 8,0 3,2	18,6 Student 8,0 Housewife 3,2 Unemployed

The survey consists of six chapters and a total of 26 questions. The questionnaire wasarranged on a 5-point Likert scale ranging from 1 (Strongly Disagree) and 5 (Strongly Agree). Likert-type attitude scale developed by Rensis Likert (1932) is a sampling method where individuals whose attitudes are to be measured are asked to participate in these expressions by presenting various expressions.

Consumers' environmental awareness, personal norms, purchase intention for sustainable products, attitude towards sustainable products, and sustainable product choice behavior were measured based on the scales approved from the literature.EA was measured by items adapted from Severo, de Guimaraes, & Dorion, 2018. PN, PIfSP, and AtSP measures were adopted from Kumar, Manrai, & Manrai, 2017. Lastly, the scale for measuring SPCB was adopted product choice behavior scale from Khan & Mohsin, 2014. Measurement items had used in the survey are given in Table II.

Table II: ScaleItems

Constructs and Items	Factor Loadings	Cronbach's Alpha	CR	AVE
Environmental Awareness(Severo, de Guimaraes, & Dorion, 2018)		0,71	0,92	0,80
In my house, I carry out the separation of recyclable and organic waste.	0,70			
I target electronic waste (batteries, batteries, lamps, cell phones) at collection points suitable for the treatment of these wastes.	0,72			
I use environmental practices aimed at preserving natural resources for future generations.	0,78			
Personal Norm(Kumar, Manrai, & Manrai, 2017)s		0,78	0,78	0,55
My friends expect me to engage in environmentally sustainable product usage behavior.	0,85			
My family expects me to engage in environmentally sustainable product usage behavior.	0,83			
My society expects me to engage in environmentally sustainable product usage behavior.	0,82			
Purchase Intention for Sustainable Products(Kumar, Manrai, & Manrai, 2017)		0,72	0,80	0,51
I believe that use of environmentally sustainable products by me will help in reducing pollution and help in improving the environment.	0,60			
I believe that use of environmentally sustainable products by me will help in reducing wasteful use of natural resources.	0,63			
I believe that use of environmentally sustainable products by me will help in conserving natural resources.	0,83			
I choose the environmentally sustainable alternative for products if one with a similar price is available.	0,77			
Attitude towards Sustainable Products(Kumar, Manrai, & Manrai, 2017)		0,87	0,87	0,70
I bring my own shopping bag at store in order to reduce the use of plastic bags.	0,85			
If I understand the potential damage to the environment that some products can	0,91			
cause, I do not purchase those products I don't buy a product if the company which sells it is environmentally irresponsible.	0,91			
Sustainable Product Choice Behavior(Khan & Mohsin, 2014)		0,82	0,87	0,53
I make a special effort to buy paper and plastic products that are made from	0.70	0,02	0,07	0,55
recycled materials.  I have switched products for ecological reasons.	0,69			
When choosing between two equal products, I purchase the one less harmful to	*			
other people and the environment.	0,74			
I have avoided buying a product because it had potentially harmful environmental effects.	0,81			
I have boycotted the products of a company because I felt it was harming the environment.	0,71			
I make a special effort to buy household chemicals such as detergents and cleaning solutions that are environmentally friendly.	0,69			

#### 3.2. Validity and Reliability of Measures

In this study, reflective scales were used for all variables. Confirmatory factor analysis (CFA) was implemented to assess the multiple-item measures of validity and reliability. According to the CFA results, the

measurement model provided acceptable compliance, but the factor loadings of the two items that measured environmental awareness were very weak.CFA was re-applied after removing these questionable items from the scale.

Cronbach's alpha coefficient, composite scale reliability (CR), and average variance extracted (AVE) were calculated to evaluate the measures' reliability. The measures yielded acceptable reliability levels compared to the critical levels recommended by Fornell & Larcker(1981) and Nunnally(1978). Factor loadings, Cronbach's alpha coefficient, CR, and AVE values were given in detail in Table II. Pearson Correlation Coefficients, means, and standard deviations (SD) were shown in Table III.

Table III: Mean, Standard Deviations, and Pearson Correlation Coefficients

		Mean	SD	1	2	3	4
1	EA	3,55	,77				
2	SN	3,05	,94	0,536**			
3	PIfSP	3,99	,66	0,460**	0,329**		
4	AtSP	4,43	,62	0,354**	$0,175^{**}$	0,415**	
5	SPCB	3,64	,67	0,518**	0,464**	$0,714^{**}$	0,365**

<sup>\*\*</sup>Correlation Significance Level 0.01

#### 3.3. Analysis and Results

The PLS path analysis, which allows a clear and sharp calculation of latent variable (LV) scores, is used to test the relationships within the theoretical model shown in Figure 1.Besides, t-test and One-Way ANOVA tests were used to test the hypotheses about demographic features.

 Table IV: Structural Equation Model Results for Hypotheses

Hypotheses	otheses Relations		Inference
$\mathbf{H_1}$	$\mathbf{H}_1$ EA $\rightarrow$ SN		Supported
$\mathbf{H_2}$	$EA \rightarrow PIfSP$	2,38	Supported
$H_3$	$EA \rightarrow AtSP$	4,06	Supported
$\mathbf{H_4}$	$EA \rightarrow SPCB$	2,47	Supported
H5	$SN \rightarrow PIfSP$	1,04	Not Supported
H6	$EA \rightarrow SN^* \rightarrow PIfSP$	5,14	Supported
$H_7$	$AtSP \rightarrow PIfSP$	2,60	Supported
$\mathbf{H_8}$	$PIfSP \rightarrow SPCB$	6,85	Supported
$\mathbf{H}_{9}$	$AtSP \rightarrow SPCB$	0,42	Not Supported
$\mathbf{H_{10a}}$ :	$Gender \rightarrow SPCB$	0,06	Not Supported
$\mathbf{H_{10b}}$ :	Educational Status→ SPCB	0,42	Not Supported
H <sub>10c</sub> :	$Profession \rightarrow SPCB$	4,52**	Supported
$\mathbf{H}_{\mathbf{10d}}$ :	Income Status→ SPCB	4,36**	Supported

<sup>\*</sup> Moderating Variable

Findings showed that nine out of thirteen hypotheses are supported.EA has been found to significantly affect SN(t = 7.27, p <0.05), PIfSP(t = 2.38, p <0.05), AtSP(t = 4.06, p <0.05), and SPCB(t = 2.47, p <0.05) variables.In the light of these results,  $H_1$ ,  $H_2$ ,  $H_3$ , and  $H_4$ hypotheses are supported.It has been identified that SN has no significant effect statistically (t = 1,04, p <0.05) on PIfSP. However, it has been reached the end of that SN have a moderator effect between EA and PIfSP (t = 5,14, p <0.01). Although these analyzes do not support the  $H_5$  hypothesis, the  $H_6$  hypothesis is supported.It was observed that AtSP on the PIfSP(t = 2,60, p <0.05) had a positive and significant effect likewise PIfSP on SPCB (t = 6,85, p <0.05). However, it was determined that the AtSP had no significant effect on the SPCB (t = 0,42, p <0.05).  $H_7$  and  $H_8$  hypotheses were supported, while the  $H_9$  hypothesis was not supported.As a result of the t-test conducted to determine whether the composite scores of sustainable product preferences of consumers participating in the research show a significant difference according to gender and educational status variable; (t=0,064; p=0,949 > 0,05, t=0,420; p=0,532 > 0,05) there wasno statistically significant difference between the group averages.Moreover, SPCB differs according to the profession and income status of the consumers (F=4,525; p=0,001<0,05, F=4,363; p=0,001<0,05). As a result of the analysis of demographic features,  $H_{10a}$  and  $H_{10b}$  hypotheses were supported, but  $H_{10c}$  and  $H_{10d}$  hypotheses were supported.

<sup>\*\*</sup>F value

#### IV. Conclusion and Recommendations

Today, we are under the pressure of environmental problems such as climate change, global warming, desertification, and pollution of water resources. Although the interest of sustainable methods has increased in conditions with population, production, consumption, and competitive environment, the implementation direction progressed slowly. Each stakeholder in the supply chain must face environmental, social, and economic challenges. Even sustainable development might be the goal; there are conflicts according to the income inequality, worsening competitive conditions, failure to provide social welfare, and developing country policies based solely on economic conditions. Despite this, the fact that information is easier and faster to access thanks to its expanding communication network provides awareness of stakeholders from every group in the supply chain, while strengthening the possibility of achieving sustainable conditions with direct or indirect contributions. Supply chain members developing new formulas and practices on sustainability and approaching sustainable policies are indications that this hope mightmove towards achievable stages. As a result of the study, it has been observed that companies that adopt sustainable supply chain management are evaluated positively by the consumer and affect consumer choices.

Consumers are affected by the environmental conditions they live in and react voluntarily or involuntarily to changing conditions. In this context, awareness, social pressure, attitude and intentions play a significant role in shaping the consumer preferences. Moreover, the level of education, age, social status, gender group, and professional status of the people shape their perspectives and create motivation fortheir interests.

The study results have verified that the sustainable product choice behavior varies according to the demographic classes of consumers. According to these results, when we look at the gender group of consumers, it is seen that there is no significant difference. Still, both genders have high preferences for sustainable products. According to the consumers' marital status, it has been determined that married consumers prefer more sustainable products than single consumers. It is also determined that the consumers who are thirty-five years old and above favor the sustainable products compared to the younger consumers. The differences in consumers' education levels did not make a variation in their approach to sustainable supply chain practices and product preferences. Therefore, environmental and social problems are remarkable for consumers at all educational levels. When consumers are analyzed in terms of profession and income groups, it is determined that sustainable products are preferred by more working and high-income groups. In this respect, it mightbe said that firms reflect their sustainability practices on product prices and these products might bemore expensive than others.

### 4.1. Recommendations for Managerial Implementations

In the light of the theoretical studies and empirical findings, it is possible to reach the following suggestions. Companies must follow technological developments, increase the quality, product variety and innovation to respond to the demands on time. Speed, creativity, predictability, continuous learning and improvement are crucial for managers to provide customer-oriented solutions. Managers should continue their activities by giving importance to these factors.

Supply chain management is a business function aimed at managing and coordinating activities on the supply chain that connects suppliers, in-house departments, distributors, customers, and information systems. It is a management system that covers the supply of materials in delivering a product from its source to the enduser, production, stocking, marketing, order management, distribution, and delivery to the customer. It has been seen that consumers support sustainable actions and products, and executives are required to perform their supply chain activities in the best way and to restructure the chain by considering the sustainability.

Dynamic strategies are an essential factor for companies to comply with today's competitive conditions. Capturing market opportunities and responding to customer expectations is critical for companies. In line with the trends of efficient use of energy resources as well as sustainable distribution, production, and design, managers should pay attention to these issues.

## 4.2. Directions for Future Studies

In this study, the relationships between environmental awareness, subjective norms, purchase intentions for sustainable products, attitude towards sustainable products, and sustainable product choice behavior were examined. It mightbe said that this study has a distinct importance in terms of being the pioneerforfuturestudies considering its findings.

Futureresearch with relevant variables mightbe conducted a sectoral basis and with larger samples. In this way, it might also be determined whether there is a difference between the consumers' product preferences in terms of product groups.

In addition to the awareness, subjective norms, attitude, and intention, many individual, social and psychological factors are mentioned in the emergence of consumer product preference. In the upcoming studies, other factors (such as religion, culture, social class, social media behaviors) that affectconsumer product

preference may be added to structural models, and detailed research can be conducted. Therefore, consumer behavior and sustainability might be considered as an emergingresearch area for future studies.

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