DETERMINANTS OF SUSTAINABLE CONSUMPTION BEHAVIOR: A FIELD STUDY ON TURKISH GEN Z

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Abstract

Today, environmental and societal issues, such as climate change and social inequities, have been worsening. Sustainable consumption and production, though not a panacea, seem one of the ways to tackle environmental and social problems. So far, extant studies have sought to determine the factors that have an impact on sustainable consumption from an environmental perspective, and limited research has taken the social dimension of sustainability into account. Thus, this paper aims to address components of sustainable consumption behavior in a more holistic way, from an economic, environmental, and social standpoint. The present study employs consistent partial least squares structural equation (PLS-SEM) modeling to process 350 questionnaires which have been collected through a face-to-face survey method. The study's findings revealed seven variables that have an impact on the Z generation's sustainable consumption patterns. The perceived seriousness of environmental and social problems, perceived environmental and social responsibility, perceived knowledge of environmental and social problems, personal image, word-of-mouth communication, attitude toward sustainable consumption, and intention are among the factors that influence sustainable consumption. The determinants affecting sustainable consumption involve perceived seriousness of environmental and social problems, perceived environmental and social responsibility, perceived level of consciousness about environmental and social problems, personal image, word-of-mouth communication, attitude towards sustainable consumption, and intention.

Keywords: Sustainability, Sustainability Marketing, Sustainable Consumption, Gen Z, Consumer Behavior.

SÜRDÜRÜLEBİLİR TÜKETİM DAVRANIŞININ ETKENLERİ: TÜRKİYE'DE Z KUŞAĞI ÜZERİNE BİR SAHA ARAŞTIRMASI

Öz

Günümüzde iklim değişikliği ve sosyal eşitsizlikler gibi çevresel ve toplumsal sorunlar giderek kötüleşmektedir. Her derde deva bir çözüm gibi durmasa da sürdürülebilir tüketim ve üretim, çevresel ve sosyal sorunların üstesinden gelme yollarından biri olarak görünmektedir. Şimdiye dek, mevcut çalışmalar,

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sürdürülebilir tüketim üzerinde etkisi olan faktörleri çevresel bir bakış açısıyla ele almış ve sadece sınırlı sayıda araştırma, sürdürülebilirliğin sosyal boyutunu dikkate almıştır. Bu doğrultuda makale, sürdürülebilir tüketim davranışının bileşenlerini ekonomik, çevresel ve sosyal açıdan daha bütünsel bir şekilde ele almayı amaçlamaktadır. Çalışmada, yüz yüze anket yöntemiyle toplanan 350 anketi işlemek için tutarlı kısmi en küçük kareler yapısal eşitlik modellemesi (PLS-SEM) kullanılmıştır. Çalışmada Z kuşağının sürdürülebilir tüketim davranışını etkileyen yedi faktörün bulunduğu tespit edilmiştir. Sürdürülebilir tüketime etki eden öncüller; çevresel ve sosyal sorunların algılanan ciddiyeti, algılanan çevresel ve sosyal sorumluluk, çevresel ve sosyal sorunlar hakkında algılanan bilinç seviyesi, kişisel imaj, ağızdan ağıza iletişim, sürdürülebilir tüketime yönelik tutum ve sürdürülebilir tüketim niyetinden oluşmaktadır.

Anahtar Kelimeler: *Sürdürülebilirlik, Sürdürülebilirlik Pazarlaması, Sürdürülebilir Tüketim, Z Jenerasyonu, Tüketici Davranışı.*

Introduction

It is evident that global warming and climate change have been exacerbating particularly in the previous few decades due to high carbon emissions. Soil and water pollution, rubbish heaps, and deforestation have also been adding to the escalation of climate change. Unfortunately, people (i.e., producers and consumers) live on a planet with limited resources. Mainstream economic growth policies of governments as well as the existing production and consumption patterns, are not sustainable, given the absorptive capacity of the world or the planetary boundaries (Kelleci and Yıldız, 2021: 1479). Furthermore, the Brundtland Report has already pointed out that the amount of resources cannot keep up with the rising rate of the current human population (McLellan, 2013: 225). This growth-oriented system may even jeopardize the essential needs of the future generations. Disasters brought on by change and shocks, such as pandemics and supply chain shortages (e.g., chip crisis, food, and drug shortages) underline the need for changes in the regnant socio-economic system, infused by the Western dominant social paradigm (Kilbourne, 2004: 195; Prothero et al., 2011: 31; Yıldız, 2022a: 168). Resolving the aforementioned issues requires responsible production and consumption in a manner consistent with the UN's Sustainable Development Goals (SDGs).

The United Nations Conference on the Human Environment, which took place in 1972, introduced the notion of sustainable development to the literature (Hall et al., 2010: 440). Another renowned initiative is the World Commission on Environment and Development, also known as the Brundtland Report, which describes sustainable development as "sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 37). Accordingly, sustainable consumption, which is a key part of sustainable development, focuses on environmentally friendly and socially responsible

consumption patterns among consumers (Vermeir and Verbeke, 2006: 170). It can also be defined as using products and services that meet essential needs rather than wants, reducing negative environmental impacts, and caring for future resource dependency (Mostafa, 2007: 446; Liobikiene et al., 2016: 38; Joshi and Rahman, 2017:111). In parallel with the aforementioned issues, in 2015, the UN member states made a commitment to make sufficient efforts to fulfill specific purposes by approving the 2030 Agenda for Sustainable Development. This agenda, which includes responsible or sustainable consumption and production (SDG 12), points to a global consensus on social sustainability targets, such as gender equality, maternity and paternity leave as well as environmental sustainability goals, such as reducing carbon emissions and recycling of waste. It also calls for responsible policies for economic growth, which make sure no one is left behind, both in developed and developing countries (Rajadurai et al., 2021: 2019). Accordingly, research with a holistic perspective should be conducted to cover both the environmental and social dimensions of sustainable consumption. This integrative approach will enable in creating and formulating sustainable consumption patterns and realizing the SDG 12 goal.

In explaining sustainable consumption behavior, Theory of Reasoned Action (Fishbein and Ajzen, 1975: 381) and Theory of Planned Behavior (TPB) are broadly employed in the literature (Ajzen, 1991: 182). According to TRA, individuals decide to perform a behavior based on their attitudes towards that behavior and social norms. These two conceptual constructs then affect behavioral intention, which in turn determines whether a person will perform a behavior or not. Theory of Planned Behavior is based on TRA and extended the model with perceived behavioral control that implies the existence of resources that behavior requires. The basic assumptions of these essential models and extended models with context-sensitive structures have been broadly examined in the acceptance of environmentally friendly products and green purchase decisions. Furthermore, previous research has just tried to explain why people engage in green purchasing behavior by employing above-mentioned models with determinants that are mainly about environmental issues, such as environmental concerns, environmental knowledge, and the seriousness of environmental problems (Kanchanapibul et al., 2014: 529; Zhao et al., 2014: 144; Yadav and Pathak, 2016: 733; Joshi and Rahman, 2017: 113; Liobikiene and Bernatoniene, 2017: 113; Jaiswal and Kant, 2018: 65, Al-Swidi and Saleh, 2021: 13448; Wijekoon and Sabri, 2021: 6-10). However, sustainability has a tripartite approach, which includes economic, environmental, and social dimensions. The social dimension comprises of gender equality, child labor, maternity and paternity leave as well as the inclusion of people with different ethnicities, races, and religions.

Today, social sustainability dimension is getting more attention from conscious consumers, voluntary and/or simple livers, and Gen Zers. For example, Gen Zers do not want to buy from companies that do not have a

transparent procurement process (e.g., provision of raw materials, production processes, working conditions, etc.) (Koch, 2019: 1). As such, the present study seeks to explain the determinants of sustainable consumption behavior of Gen Z with novel consumption patterns. What makes this paper distinct is that it examines the impacts of social sustainability indicators, which have been omitted by most of the previous studies. A face-to-face questionnaire has been conducted to collect data from university students who are representatives of Gen Z. The authors have employed structural equation modeling (SEM) to test the proposed model using consistent PLS-SEM in SmartPLS 3. The present study contributes to the sustainability literature in three ways. First, this study presents the determinants of sustainable consumption behavior of Turkish Gen Zers, who will soon be the dominant green market consumers. Second, it provides the initial steps to examine the impacts of social sustainability indicators on sustainable consumption behavior so that academics can utilize this study's findings. Last, the present study has examined the impacts of novel conceptual structures, such as country image and word-of-mouth communication on sustainable consumption.

The following sections start with a literature review that explains essential behavioral models and the determinants that have been employed to define sustainable consumption behavior in previous studies. And it continues with research methodology that explains the data gathering method, measurement models, and data analysis procedures. After the methodology section, the findings of the study are presented and discussed in the following two sections. The present study ends with conclusions and limitations of the study.

1. LITERATURE REVIEW

The determinants of sustainable consumption behavior can be classified into three categories: intrinsic, extrinsic, and situational factors (Zhao et al., 2014: 144; Kumar and Ghodeswar, 2015: 331). The first two classifications are in contrast with each other. Intrinsic factors are what drive individuals from the inside out. These individuals feel responsible for the environment and society. They also question their daily actions from a sustainability standpoint. Contrastingly, extrinsic factors have nothing to do with the consumers themselves. Extrinsic factors include the societal perception of consumers' personal images, the qualities of goods such as price, durability, performance, as well as the effects of these goods on human well-being. Lastly, situational factors require government incentives, the convenience of sustainable products, purchasing power and normative dominance that define sustainable consumption behavior (Vermeir and Verbeke, 2006: 172).

The majority of studies on sustainable consumption have utilized essential behavioral models like TRA and TPB, which aim to explain behavior in terms of people's attitudes, intentions, and perceived control structures.

Additionally, extant research seeks to explain environmentally friendly purchasing and sustainable consumption by employing extended models that incorporate context-sensitive constructs, such as environmental concerns, perceived consumer effectiveness, and seriousness of environmental problems. In this study, the authors have employed theoretical findings to support the following hypotheses, as could be seen in the forthcoming sections.

1.1. Environmental and Social Concerns

The harmful impacts of the climate crisis, such as wildfires and flash floods, have been signaling significant warnings on a global scale. Serious environmental concerns have been rising pertaining to the future of the earth, thus driving people to live in a more resource-conscious way. Environmental concern is defined as "an affective attribute that can present a person's worries, compassion, likes, and dislikes about the environment (Yeung, 2004: 101). In addition, social and environmental concern refers to the consciousness level of people, who can process and consider problems related to society and the environment. It also denotes to responsible living with limited resources and being conscious about the societal issues. Studies that examine environmentally friendly products and green purchase behavior have assumed that concern is a crucial determinant (Lee, 2008: 577; Jaiswal and Kant, 2018: 62). The findings show that people who have powerful concerns for the environment and society have a greater tendency to pursue sustainable consumption behavior (Zhao et al., 2014: 144; Yadav and Pathak, 2016: 735; Joshi and Rahman, 2017: 113; Yıldız and Kelleci, 2022: 1482). On the other hand, some studies suggest that the impact of concern on behavior has remained low to medium level (Mostafa, 2007: 449). Taking the previous studies into consideration, the following hypotheses have been proposed:

H1: Societal and environmental concerns significantly affect attitudes toward sustainable consumption.

H2: Societal and environmental concerns significantly affect the behavioral intention toward sustainable consumption.

1.2. Perceived Seriousness of Environmental and Social Problems

Business enterprises that rest on the dominant social paradigm have exploited limited natural resources to sell many more products to different markets in the world and to maximize profits and shareholder value. (Prothero et al., 2011: 32; Yıldız and Kelleci 2022: 1482). Overconsumption of individuals puts catastrophic burden on the environment. Furthermore, existing manufacturing processes cause growing carbon emissions and harmful impacts on the environment, as well as poor working conditions for society, such as longer working hours with low wages, diminished rest periods, and the physical and mental pressures in the workplace environment.

This results in unfair distribution of wealth, which prevents access to quality nutrition, quality education, as well as health services All these detrimental effects have been intensifying the perceived seriousness of citizens in relation to environmental and social problems. Lee (2008: 577) has noted that the perceived seriousness of environmental issues is a significant factor that affects younger consumers' green purchase decisions. Accordingly, the authors have proposed the following hypothesis:

H3: Perceived seriousness of environmental and social problems significantly affects attitudes toward sustainable consumption.

1.3. Perceived Environmental and Social Responsibility

Environmental and social responsibility refers to consumers' engagement toward ecological and societal issues and their individual-level efforts related to the quality of these dimensions (Kumar and Ghodeswar, 2015: 332). Rising inequalities between men and women (e.g., wage differences, access to education) and environmental degradations (e.g., climate change and water pollution) have been driving consumers to act more responsibly (Gadenne et al., 2011: 7687). For instance, given consumers' environmental and social concerns, Unilever collaborates with government organizations to enhance the hygiene conditions of primary schools in Turkey. After buying the bleach product, consumers have the option to scan the QR code on the product, and they may donate various cleaning products to schools of their choice. Such responsible behaviors enable changes in other consumers' consumption patterns. Accordingly, perceived responsibility related to the environment and society has a significant effect on green product purchase decisions (Lee, 2008: 577; Kumar and Ghodeswar, 2015: 332; Yıldız and Kelleci, 2022: 1482). Therefore, the following hypothesis has been proposed:

H4: Perceived environmental and social responsibility significantly affects attitudes toward sustainable consumption.

1.4. Perceived Knowledge about Environmental and Social Problems

Perceived knowledge about environmental and social problems refers to the mental capacity to process issues concerning ecological and societal issues (Yadav and Pathak, 2016: 734; Joshi and Rahman, 2017: 113). In perceived knowledge, consumers are cognizant of their consumption activities that exacerbate environmental and social problems (Yadav and Pathak, 2016: 734; Al-Swidi and Saleh, 2021: 13448; Yıldız and Kelleci, 2022: 1482). Thus, the more consumers' perceived knowledge about environmental and social problems, the more they would tend to perform sustainable consumption patterns (Kozar and Hiller Connell, 2013: 322; Matsumoto et al., 2017: 969). On the other hand, it has also been noted that an increased level of social and

environmental knowledge does not always entail green purchasing behavior in some markets, such as India and China (Zhao et al., 2014: 144; Kumar et al., 2017: 3). Resting on Jaiswal and Kant's (2018: 63) study, the authors put forward the following hypotheses:

H5: Perceived knowledge about environmental and social problems significantly affects attitudes toward sustainable consumption.

H6: Perceived knowledge about environmental and social problems significantly affects the behavioral intention toward sustainable consumption.

1.5. Personal Image

Most people care about how their peers and community members perceive them. As an illustration, consumers purchase certain goods, such as luxury goods and durable goods to construct their identities (e.g., environmentalist, sustainable consumer, ecological) (Belz and Ken, 2012: 273). Today, people from all walks of life, particularly Gen Z, seek to be perceived as sustainable consumers, given that sustainability is the new megatrend. In other words, Gen Z seeks to purchase sustainable products and communicate themselves as concerned citizens about nature and society (Park and Ha, 2012: 391), given that consuming sustainable products has symbolic and social appeal (Griskevicius et al., 2010: 394). As such, the following hypothesis has been proposed:

H7: Personal image significantly affects the behavioral intention of sustainable consumption.

1.6. Word-of-Mouth Communication

Word-of-mouth communication is an informal verbal dialogue about a product or service that takes place one-on-one, over the phone, by email, or via any other communication medium (Goyette et al., 2010: 6-8). As a current and popular means of communication, social media, and other platforms facilitate and increase the interaction of consumers in comparing goods and utilities. The findings have shown that word-of-mouth marketing makes customers more likely to buy and significantly affects what they plan to purchase in the future (Nikookar et al., 2015: 219; Yıldız, 2021: 594). Thus, social interactions through platforms may influence customers to make sustainable consumption choices (Wijekoon and Sabri, 2021: 14; Yıldız and Kelleci, 2022: 1484). Accordingly, the authors have come up with the following hypotheses:

H8: Word-of-mouth communication significantly affects the behavioral intention toward sustainable consumption.

H9: Word-of-mouth communication significantly affects sustainable consumption.

1.7. Country Image

The stringent implementation of sustainability practices in the country reflects its reputation and sends implicit messages to its residents and companies (Köksal and Strähle, 2021: 17). For example, plastic waste separated for recycling in England was sent to Turkey. However, plastic waste was incinerated in a southern city in Turkey instead of being recycled (Crawford, 2022: 1). A country's dedication and commitment to sustainability policies (e.g., whether a company is transparent about production processes, whether a company treats its employees fairly, etc.) plays a crucial role in establishing citizens' trust towards a country's regulations and image. Thus, the country's sustainability policies and regulations have an impact on consumers' purchase decisions, stimulating them to engage in sustainable consumption patterns (Yıldız and Kelleci, 2022: 1485). Therefore, the following hypothesis has been proposed:

H10: Country image significantly affects the behavioral intention toward sustainable consumption.

1.8. Social Norm

Subjective norms refer to "perceived social force to carry out a particular behavior" in TRA (Ajzen, 1991: 182). In other words, community, peers, and family members whose thoughts are important to an individual have an impact on the individual's behaviors (Joshi and Rahman, 2017: 113). Social norms or subjective norms enable people to distinguish between what is morally good and wrong. Social norms related to creating value for society and safeguarding the environment are connected to the behavioral intention toward sustainable consumption (Bamberg and Möser, 2007: 16). Hence the following hypothesis has been proposed:

H11: Subjective norms significantly affect the behavioral intention towards sustainable consumption.

1.9. Attitude towards Sustainable Consumption

The definition of attitude refers to "a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object." Attitude toward sustainable consumption implies individuals' opinions or emotions towards sustainable goods and services (Fishbein and Ajzen, 1975: 381; Jaiswal and Kant, 2018: 62; Al-Swidi and Saleh, 2021: 13447). In other words, people's perspectives on using recycled bags, energy-saving bulbs, and sustainable transportation options are all examples of attitudes toward sustainable products (e.g., mopeds and e-scooters). The findings have shown that individuals who have a positive attitude toward sustainable consumption also have a tendency to purchase sustainable products (Joshi and Rahman, 2017: 112; Jaiswal and Kant, 2018: 66). Therefore, the following hypothesis has been proposed:

H12: Attitudes towards sustainable consumption significantly affect the behavioral intention towards sustainable consumption.

1.10. Behavioral Intention Towards Sustainable Consumption

Sustainable consumption intention or willingness to buy sustainable products implies that individuals are concerned about environmental and societal problems and have sufficient motivation to act on these issues. So far, research on sustainability has found that behavioral intention, which is a crucial part of the TRA, is also a significant determinant of green purchasing behavior (Jaiswal and Kant, 2018: 62; Yıldız and Kelleci, 2022: 1482). Hence the following hypothesis has been proposed:

H13: Purchase intention for sustainable products significantly affects sustainable consumption behavior.
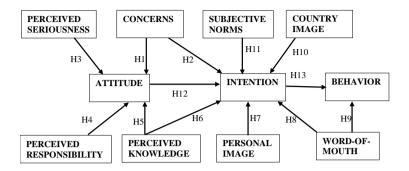
2. RESEARCH METHODOLOGY

As mentioned in the introductory section, extant research has suggested that numerous determinants have an impact on buying environmentally friendly products as well as green purchasing behavior (Lee, 2008: 577; Suki, 2016: 2897; Joshi and Rahman, 2017: 115; Jaiswal and Kant, 2018: 66; Cerri et al., 2018; 347-348, Al-Swidi and Saleh, 2021: 13448). These constructs consist of conceptual structures, such as attitude towards sustainable consumption, environmental concerns, perceived responsibility, the seriousness of environmental problems, perceived consumer effectiveness, existing knowledge about sustainability, price, and product availability. The present study considers factors proposed frequently in previous studies relating to sustainable consumption. In addition, the present paper rests on Yıldız and Kelleci's (2022: 1474-1491) study, which examines determinants of sustainable consumption by employing confirmatory and structural analyses in the Turkish culture. Accordingly, the research model for this study includes the following structures: perceived social and environmental responsibility and knowledge, social and environmental concerns, perceived seriousness of social and environmental problems, social norms, personal image, country image, word-of-mouth communication, attitude toward sustainable consumption, the behavioral intention to sustainable consumption, and sustainable consumption behavior.

In this study, a face-to-face questionnaire was used to get information from Turkish university students, whose ages are between 18 and 24, as representative of Gen Zers. While 55% of the participants are women, 45% are men. The present study employed the purposive sampling method (Forster 2001: 13467). Purposive sampling, classified as a non-probability sampling method, refers to units that possess specific qualities the researcher looks for. Three hundred and fifty (350) university students contributed to the research by filling in the questionnaires. The survey starts with questions to find out

how much students know about sustainable products like electric cars, biodegradable plastics, and recycled cartridges. The present study adapts tested and proven measurement models from prior studies where the indicators and answers appear on a five-point Likert scale, ranging from "1: strongly disagree" to "5: strongly agree." This questionnaire involves: eight indicators measuring environmental and social concerns (Zhao et al., 2014: 150; Jaiswal and Kant, 2018: 67); six indicators measuring the perceived seriousness of environmental and social problems (Lee, 2008: 579; Yıldız and Kelleci, 2022: 1489); eight indicators measuring perceived environmental and social responsibility (Lee, 2008: 579; Kumar and Ghodeswar, 2015: 337); four indicators measuring perceived environmental and social knowledge (Mostafa, 2007: 449 ; Joshi and Rahman, 2017: 115); three indicators measuring personal image (Lee, 2008: 579; Kumar and Ghodeswar, 2015: 337); four indicators measuring word-of-mouth communication (Yıldız, 2021: 599, Yıldız, 2022b: 8); four indicators measuring the country's image (Yıldız and Kelleci, 2022: 1489); four indicators measuring social norms (Liobikiene et al., 2016: 41; Al-Swidi and Saleh, 2021: 13449); four indicators measuring the attitude towards sustainable consumption (Zhao et al., 2014: 150; Jaiswal and Kant, 2018: 68); four indicators measuring the behavioral intention for sustainable consumption (Kanchanapibul et al., 2014: 531; Jaiswal and Kant, 2018: 68); and four indicators measuring sustainable consumption behavior (Joshi and Rahman, 2017: 115; Jaiswal and Kant, 2018: 68). The present study utilizes partial least squares structural equation modeling (PLS-SEM) to verify the research model and its proposals using SmartPLS 3 (Ringle et al., 2015). In line with the results of a study that compared regular and consistent PLS-SEM (Yıldız, 2022b: 13), the authors chose the consistent PLS-SEM method for the analysis process because reflective indicators are used to estimate sustainable consumption behavior.

PLS path modeling can deal with complex models that have many reflective or formative indicators. Also, it does not have strict requirements like the normal distribution or large sample size. There are two kinds of sample size rules for PLS-SEM (Barclay et al., 1995: 301). First, the number of observations needs to exceed ten times the item numbers of a construct that has the most indicators in the structural model. And the second one is that the sample size must be ten times the arrow numbers of the construct with the most arrows in the structural model. This study meets the sample size prerequisite for the analysis of the data.

Figure 1. Research Model

3. RESULTS

Examining PLS-SEM results depends on the model structure. If the research model involves the common factor model with reflective indicators, the evaluation of the results starts with the reliability of the indicators of every construct in the model (Sarstedt et al., 2017: 17). Eliminating indicators with loadings between 0.4 and 0.7 requires rising scores of the composite reliability and AVE (Hair et al., 2017: 130). Table 1 shows that most of the indicators have factor loadings greater than 0.7, except for six items. These indicators accompany perceived responsibility, perceived knowledge, word-of-mouth communication, personal image, country image, and sustainable consumption. The loadings (VAR36, 20, 43, 48, 29, 54) between 0.4 and 0.7 were not excluded from the study, considering the prerequisites mentioned before. It can be inferred that all the indicators in Table 1 are reliable.

The next step is to check all conceptual structures whether they fulfill internal consistency and convergent validity. Composite reliability and rho coefficient, which are parts of the consistent PLS-SEM in terms of internal consistency, are taken into account during the analysis (Hair et al., 2017: 123). Table 1 shows all composite reliability scores and rho coefficients that are higher than 0.7, which is the threshold. Consequently, all conceptual structures meet internal consistency conditions in the research model. Also, all of the AVE scores in the model are above 0.5, except for the perceived knowledge score, which is very close to the threshold. Although this score is below the threshold, a researcher can decide to keep a structure in the model based on only the composite reliability score as attested by Malhotra and Dash (2011: 714).

Table 1. The Results of PLS-SEM Analysis

Structure	Indicators	Outer Loadings	Composite Reliability	Rho Coefficient	AVE	VIF
	VAR22	0.766	0.892	0.893	0.579	1.990

Perceived Seriousness	VAR23	0.752				
	VAR24	0.820				
	VAR25	0.700				
	VAR26	0.773				
	VAR27	0.751				
Perceived Responsibility	VAR31	0.803				
	VAR32	0.784				
	VAR33	0.754	0.887	0.889	0.568	1.877
	VAR34	0.706				
	VAR36	0.692				
	VAR37	0.770				
Concerns	VAR14	0.762				
	VAR15	0.746	0.789	0.789	0.555	1.968
	VAR16	0.726				
Perceived Knowledge	VAR17	0.747				
	VAR19	0.704	0.715	0.726	0.459	1.982
	VAR20	0.568				
Word-of-Mouth Communication	VAR43	0.655				
	VAR44	0.750	0.839	0.845	0.568	2.715
	VAR45	0.770				
	VAR46	0.820				
Social Norm	VAR1	0.796	0.725	0.729	0.570	1.391
	VAR2	0.711				
Personal Image	VAR47	0.917	0.776	0.776	0.639	1.973
	VAR48	0.662				
Country Image	VAR28	0.848				
	VAR29	0.575	0.782	0.805	0.551	1.813
	VAR30	0.776				
Attitude Towards Sustainable Consumption	VAR6	0.852				
	VAR7	0.856	0.866	0.869	0.684	1.990
	VAR8	0.771				
Behavioral Intention	VAR50	0.708				
	VAR51	0.773	0.860	0.870	0.608	2.715
	VAR52	0.716				
	VAR53	0.906				
Sustainable Consumption	VAR54	0.587	0.782	0.800	0.549	1.574
	VAR55	0.817				

VAR56	0.796

SRMR for Saturated Model: 0.055 / SRMR for Estimated Model: 0.061

After confirming the model's internal consistency and convergent validity, the next step is to evaluate its discriminant validity. PLS-SEM employs the heterotrait-monotrait ratio of correlations (HTMT) and assumes 0.90 as a threshold for a model with similar conceptual structures (Henseler et al., 2015: 123). Table 2 shows that all constructs have scores below 0.85, which means the model has fulfilled the discriminant validity condition.

The next phase begins with examining the multi-collinearity problem in the structural model. Table 1 exhibits the variance inflation factor (VIF) scores of the structures that have the greatest value among conceptual structures. A VIF score above 3.3 indicates a collinearity problem and a common method bias problem (Kock, 2015: 7). According to VIF scores, the research model has no collinearity or bias problem.

Table 2. Discriminant Validating (HTMT)

	ATT	BEH	C.I.	CON	INT	KNOW	S.N.	P.I.	RES	SER
ATTITUDE										
BEHAVIOR	.261									
COUNTRY IMAGE	.496	.286								
CONCERNS	.292	.420	.485							
INTENTION	.314	.818	.301	.346						
KNOWLEDGE	.189	.461	.278	.497	.508					
NORM	.261	.380	.153	.223	.355	.402				
PERSONAL IMAGE	.216	.462	.254	.400	.487	.440	.199			
RESPONSIBILITY	.555	.607	.576	.504	.564	.494	.402	.429		
SERIOUSNESS	.550	.376	.739	.603	.389	.275	.119	.242	.588	
WOM	.197	.648	.366	.338	.602	.601	.420	.657	.539	0.278

Following the estimation of the path coefficients of the structural model, the bootstrap analysis has been carried out to test proposals in the research model. PLS-SEM requires a minimum of 5.000 subsamples for bootstrapping analysis (Hair et al., 2017: 212). Considering the results, 8 of the 13 hypotheses have been accepted. While six conceptual constructs have established indirect relationships with sustainable consumption behavior, behavioral intention and word-of-mouth communication have a direct

relationship with sustainable consumption. The environmental and social concerns do not have a significant relationship with either the attitude toward sustainable consumption or the behavioral intentions toward sustainable consumption in the research model. Thus, H1 and H2 are not supported. Perceived seriousness of environmental and social issues and perceived responsibility of environmental and social issues significantly affect the attitude toward sustainable consumption, which supports H3 and H4. Although the perceived knowledge about environmental and social problems does not have a significant relationship with the attitude toward sustainable consumption, it has established a meaningful relationship with behavioral intention. Along with those outcomes, H5 is rejected, and H6 is accepted. Personal image, which reflects how individual behaviors are perceived by close friends, has established a significant relationship with the behavioral intention of sustainable consumption. Thus, H7 is supported. Word-of-mouth communication that reduces behavioral ambiguity is linked to both behavioral intention and sustainable consumption. Thus, H8 and H9 are supported. The country image that was verified as a determinant of sustainable consumption in the previous study (Yıldız and Kelleci, 2022: 1485) does not have an impact on that behavior. The basic assumptions of TRA have been verified through the present study, except for social norms. To put it another way, the attitude toward sustainable consumption affects behavioral intention significantly. In turn, the behavioral intention has a significant impact on sustainable consumption behavior. Thus, while H12 and H13 are supported, H10 is not.

Table 3. Hypothesis Results

Hypotheses	Beta Coefficients	T Statistics	P Values	Result	R^2
(H1) CONCERNS => ATTITUDE	-0.055	0.742	0.458	Rejected	
(H2) CONCERNS => INTENTION	0.055	0.921	0.357	Rejected	
(H3) SERIOUSNESS => ATTITUDE	0.340	4.263	0.000	**Accepted**	
(H4) RESPONSIBILITY => ATTITUDE	0.347	4.830	0.000	**Accepted**	
(H5) KNOWLEDGE => ATTITUDE	-0.034	0.561	0.575	Rejected	0.400
(H6) KNOWLEDGE => INTENTION	0.145	2.092	0.037	**Accepted**	
(H7) PIMAGE => INTENTION	0.124	2.008	0.045	**Accepted**	
(H8) WOM => INTENTION	0.311	4.319	0.000	**Accepted**	
(H9) WOM => BEH	0.229	3.791	0.000	**Accepted**	
(H10) CIMAGE => INTENTION	0.018	0.294	0.769	Rejected	
(H11) SOCIAL NORM => INTENTION	0.081	1.465	0.143	Rejected	
(H12) ATTITUDE => INTENTION	0.140	2.076	0.038	**Accepted**	0.426
(H13) INTENTION => BEH	0.560	11.325	0.000	**Accepted**	0.693

4. DISCUSSION

This section covers the results of the previous studies and discusses the present study's findings about social and environmental attitudes and

intentions toward sustainable consumption, respectively. Although extant studies confirm the significant impact of social and environmental concerns on sustainable consumption, the present study proves otherwise (Yadav and Pathak, 2016: 737; Jaiswal and Kant, 2018: 66). In other words, our findings confirm Mostafa (2007: 446), who noted that environmental concerns have a low to medium impact on green consumption. This implies that people with high environmental concerns do not necessarily get involved in sustainable or green consumption. Reasons for this could be varied, such as high prices, non-availability, and inaccessibility to sustainable goods. This study supports Lee (2008: 582), who put forward that escalating social and environmental problems increase perceived seriousness toward green or sustainable consumption. Thus, the present study verifies that exacerbating environmental and social problems, such as deforestation, wildfires, and miserable working conditions have a meaningful effect on individuals to consume sustainable goods and services. Environmental and social degradations (e.g., high carbon emissions and wage inequities between men and women) trigger individuals to consume more sustainably. These individuals also have an impact on others in changing their consumption patterns toward more sustainable options. Consumer knowledge that increases individuals' capacity to understand environmental and social problems better has an indirect impact on sustainable behavior via intention. Thus, individuals should be educated and informed from the early stages of their education concerning the detrimental effects of social and environmental problems. The current study confirms that individuals who are perceived as sustainable consumers by other members of society have a proclivity to maintain more sustainable consumption behaviors. Thus, the authors recommend that business entities that seek to enter into sustainability markets to grow their businesses should collaborate with opinion leaders, influencers, and celebrities as early adopters in promoting their brands and companies. Similar to previous studies, the present study confirms that social interactions through various outlets, whether online or offline, affect intention toward sustainable consumption behavior as well as sustainable consumption. Thus, companies should inform their front-line employees about the ecological and social benefits of their brands. This approach requires strong internal marketing, which is an essential component of holistic marketing. These employees, in turn, would inform users and consumers, who would then spread these sustainable goods and services to their peers via online or offline outlets. Although the strict adherence of countries to sustainability practices is an important antecedent for sustainable behavior (Yıldız and Kelleci, 2022: 1485), the present study, on the contrary, reveals that country image does not affect sustainable consumption behavior. Extant studies reveal that attitude and social norms have an impact on intention and behavior (Yadav and Pathak, 2016: 733; Kumar et al., 2017: 4, Joshi and Rahman, 2017: 113, Al-Swidi and Saleh, 2021: 13459). Nevertheless, the present study confirms Kumar et al.'s (2017: 5) findings, which proved otherwise. In other words, rather than the effect of social norms,

social appeal, which is closely related to the image as discussed above, is the significant determinant in sustainable consumption. In the upshot, as claimed by TRA, the present study confirms that attitude toward sustainable consumption affects intentions, which in turn affects consumer behavior. Consequently, business organizations and governmental institutions should stress the significance of the social and environmental benefits of sustainable consumption with the aim of changing attitudes and intentions, which helps to stimulate behavioral changes.

Conclusion

Considering the environmental and social degradations, people from all walks of life, particularly Gen Z, are more attentive to sustainability-related issues and sustainable consumption patterns. So much so that this new era is called the age of sustainability (Mittelstaedt et al., 2014: 255). So far, extant studies have paid much attention to the ecological dimensions of sustainable behavior. Nevertheless, scant attention has been paid to the social dimension of sustainability. Thus, this paper sought to combine both environmental and social indicators of sustainable consumption behavior via the proposed research model (Figure 1). By integrating both dimensions of sustainable consumption, this paper is more holistic compared to most studies, which are mono-factorial in their approach to explaining sustainable consumption. The holistic approach of this study, thus, serves to achieve SDG 12 goal by creating and formulating a novel model. In this study, three significant determinants make a considerable difference in sustainable consumption behavior: (i) knowledge, (ii) personal image, and (iii) word-of-mouth, respectively. Knowledge about environmental and social problems increases consciousness, which in turn helps the adoption of sustainable consumption behavior. Thus, while business organizations should promote the benefits of sustainable goods and services, governmental and non-governmental institutions should encourage sustainable consumption initiatives via public announcements on mass media and online channels. Concerning personal image, business enterprises may benefit from influencers who are influential in promoting sustainable consumption behavior. These influencers may be very instrumental on Gen Z, who wish to be perceived as green consumers or as environmental consumers from a personal image standpoint. Lastly, the use of word-of-mouth through peer-to-peer networks (e.g., Reddit, Quora, Ekşi Sözlük) enables the diffusion of sustainable goods and services more efficiently compared to traditional firm-centric communicational activities.

This paper sought to determine the factors of sustainable consumption, taking Gen Z into consideration. Thus, further studies should be performed on larger demographic segmentations, such as Gen X and millennials. In addition, this study has addressed the most common determinants of sustainable consumption behavior. Thus, future research could be performed by taking a larger set of determinants, such as price and availability of

sustainable goods and services, which affect sustainable consumption behavior.

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