DOKUZ EYLÜL UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF BUSINESS ADMINISTRATION (ENGLISH)
BUSINESS ADMINISTRATION (ENGLISH) PROGRAM

MASTER'S THESIS

AN ANALYSIS OF SUSTAINABLE CONSUMPTION BEHAVIOR PATTERNS IN TÜRKİYE: A SYSTEMATIC LITERATURE REVIEW

Ege Ilgın GEDİZ

Supervisor
Prof. Dr. Banu DEMİREL

İZMİR - 2024

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Prof. Dr. Asuman ALTAY
Müdür

DECLARATION

I hereby declare that this master's thesis titled as "An Analysis of Sustainable Consumption Behavior Patterns in Türkiye: A Systematic Literature Review" has been written by myself in accordance with the academic rules and ethical conduct. I also declare that all materials benefited in this thesis consist of the mentioned resourses in the reference list. I verify all these with my honour.

…/…/2024

Ege Ilgın GEDİZ

ABSTRACT

Master's Thesis

An Analysis of Sustainable Consumption Behavior Patterns in Türkiye: A Systematic Literature Review

Ege Ilgın GEDİZ

Dokuz Eylül University

Graduate School of Social Sciences

Department of Business Administration (English)

Business Administration (English) Program

In addition to being key players in sustainable consumption, consumers also play a significant part in promoting sustainable development. Thus, research on sustainable consumption behavior offers valuable insights to practitioners and businesses on consumer education towards sustainability. Moreover, the significance and input of research conducted in developing countries like Türkiye is critical to comprehending and pinpointing the particular circumstances of sustainable consumption practices in these economies. The purpose of this study is to determine the extent and trajectory sustainable consumption behavior literatüre from the Turkish consumer perspective and to apply the systematic review approach to analyze, categorize, and synthesize the research on "sustainable consumption behavior" in Türkiye. Determining how the factors examined and the variables found significant on sustainable consumption behavior in the applied research carried out in Türkiye thus far exhibit a trend is also one of the study's primary goals. A thorough analysis of 93 papers from the national literature was done as part of a systematic review. The analysis revealed that the most often studied set of variable categories included demographic characteristics, disposition, education level, environmental concern, income level, and intention. Sustainable consumption intention, education level, gender and environmental concern are the most frequent independent variables that are found to affect sustainable consumption behavior of Turkish consumers. The significance of this study is seen to be increased by the

fact that it is one of the review studies on the topic in the nation and that it approaches the topic holistically. It is anticipated that this study will serve as a reference source in Türkiye's sustainable consumption area.

Keywords: Sustainable Consumption Behavior, Sustainable Consumption Intention, Green Buying Behavior, Systematic Literature Review

ÖZET

Yüksek Lisans Tezi

Türkiye'de Sürdürülebilir Tüketim Davranış Kalıpları Üzerine Bir Analiz: Sistematik Literatür Taraması

Ege Ilgın GEDİZ

Dokuz Eylül Üniversitesi
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Tüketiciler, sürdürülebilir tüketimin kilit oyuncuları olmalarının yanı sıra, sürdürülebilir kalkınmanın teşvik edilmesinde de önemli bir rol oynamaktadır. Bu nedenle, sürdürülebilir tüketim davranışı üzerine yapılan araştırmalar, sürdürülebilirliğe yönelik tüketici eğitimi konusunda uygulayıcılara ve işletmelere değerli içgörüler sunmaktadır. Ayrıca, Türkiye gibi gelişmekte olan ülkelerde yapılan araştırmaların önemi ve katkısı, bu ekonomilerdeki sürdürülebilir tüketim uygulamalarının özel koşullarını anlamak ve saptamak açısından kritik öneme sahiptir. Bu çalışmanın amacı, sürdürülebilir tüketim davranışı literatürünün Türk tüketicisi perspektifinden kapsamını ve yörüngesini belirlemek ve Türkiye'de "sürdürülebilir tüketim davranışı" üzerine yapılan araştırmaları analiz etmek, sınıflandırmak ve sentezlemek için sistematik derleme yaklaşımını uygulamaktır. Türkiye'de bugüne kadar yapılan uygulamalı araştırmalarda sürdürülebilir tüketim davranışı üzerinde incelenen faktörlerin ve anlamlı bulunan değişkenlerin nasıl bir eğilim gösterdiğinin belirlenmesi de çalışmanın öncelikli amaçlarından biridir. Sistematik taramanın parçası olarak ulusal literatürden 93 makalenin kapsamlı bir analizi yapılmıştır. Analiz, en sık çalışılan değişken kategorilerinin demografik özellikler, eğilim, eğitim düzeyi, çevresel kaygı, gelir düzeyi ve niyet olduğunu ortaya koymuştur. Sürdürülebilir tüketim niyeti, eğitim düzeyi, cinsiyet ve çevresel kaygı, Türk tüketicilerin sürdürülebilir tüketim davranışını etkilediği tespit edilen en sık tekrar eden bağımsız değişkenlerdir. Bu çalışmanın önemi, ülke çapında konuyla ilgili

derleme çalışmalarından biri olması ve konuya bütüncül yaklaşması nedeniyle artmaktadır. Bu çalışmanın Türkiye'de sürdürülebilir tüketim alanında bir referans kaynağı olması beklenmektedir.

Anahtar Kelimeler: Sürdürülebilir Tüketim Davranışı, Sürdürülebilir Tüketim Niyeti, Yeşil Satın Alma Davranışı, Sistematik Literatür Taraması

AN ANALYSIS OF SUSTAINABLE CONSUMPTION BEHAVIOR PATTERNS IN TÜRKİYE: A SYSTEMATIC LITERATURE REVIEW

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INTRODUCTION

The industrial revolution brought about countless economic advancements for the entire planet. The creation of environmental issues has been facilitated by the technical and economic growth ambitions envisioned by these breakthroughs. The idea of sustainability, which is predicated on averting environmental issues and safeguarding the ecosystem, has grown in significance at this time. However, while certain regions of the world are fast depleting their scarce natural resources, others are unable to fulfill even their most basic demands, which has given rise to societal issues like wealth disparity. The primary driver of sustainable consumption is these issues.

Sustainable consumption behaviors represent an approach that considers the needs of future generations while consuming natural resources. This approach is critical not only for the welfare of individuals but also for the welfare of society and the world economy. Sustainable consumption behaviors aim to use natural resources efficiently and reduce waste production. In addition, these behaviors guide decision-making processes by considering environmental and social impacts and contribute to the sustainable development goals of the society (Quoquab and Mohammad, 2020; Glavič, 2021; Suarez et al., 2020). Sustainable consumption behavior is becoming increasingly important in developing countries. These countries generally have higher populations, which increases the environmental impact of consumption behaviors. Moreover, in these countries where sustainable resources are limited, the impact of consumption behaviors on sustainability is more pronounced. Therefore, increasing sustainable consumption behaviors in developing countries is of great environmental and social importance. In addition, considering the economic growth potential of these countries, increasing sustainable consumption behaviors can make significant contributions to global sustainability goals (Shiel et al., 2020; Sesini et al., 2020; Saari et al., 2021). The importance and contribution of research provided in developing countries is of great importance for understanding and identifying the specific conditions of sustainable consumption behavior in these countries. Such research helps to identify how developing countries can contribute to sustainability goals in economic, social and environmental terms and which factors are influential. In addition, such research also makes important contributions in the context of

international cooperation and knowledge sharing. Research in developing countries has great potential to promote sustainable consumption behaviors and contribute to social and economic development in these countries (Wojciechowska-Solis and Barska, 2021; Hosta and Zabkar, 2021; Dong et al.2020).

Understanding sustainability requires research and study from a transformational perspective, especially in the social sciences. This study has reviewed the literature on sustainable consumption behavior in Türkiye in order to hasten this transition and offer guidance for future research. 93 publications from the national literature on sustainable consumption behavior that provided new and updated ideas, methods, concepts, techniques, and frameworks from the perspective of the consumer were reviewed in order to conduct a systematic review. This review aims to provide an overview of research design and methodology distribution, the distribution of institutions and regions that have conducted studies in this field, and the trend of the variables both analyzed and found signifaicant in the applied studies conducted in this field in Türkiye to date.

This study is among the first to cross-examine the ideas and context used in research on sustainable purchase behavior. Due to its position as one of the first national review studies on the subject and its attempt to provide the data in a comprehensive way, this research has made a significant contribution to the literature. It is thus intended that this study would act as a source of knowledge on sustainable consumption in Türkiye.

The thesis consists of 3 main chapters. In the first chapter, the definition and dimensions of sustainability are mentioned and the status of the concept of sustainability in the world is stated. In the second part, sustainable consumption is first defined and then the sub-dimensions of sustainable consumption behaviors are discussed. By examining the situation of sustainable consumption behaviors in the world, the theories that help to explain these consumption behaviors are mentioned. In the third part, 93 articles were analyzed by applying the steps that constitute the systematic literature review one by one and the findings were explained.

CHAPTER ONE

SUSTAINABILITY

1.1 DEFINITION AND EXPLANATION OF SUSTAINABILITY

The knowledge of nature that humans possess goes back thousands of years. Throughout this process, every scientific and technical advancement has made it possible for people to make greater use of natural resources (Teksöz, 2014: 73). Similar to today's sustainability issues, ancient Egypt, Mesopotamia, the Greek, and Roman civilizations faced environmental issues like salinity, desertification, and infertile soil. Environmental deterioration is a result of human activities like farming, logging, and mining, according to philosophers like Plato, Strabo, and Columella. The 16th century saw the beginning of discussions about the consequences of logging and mining on animals since wood was used as fuel, building material, and in many other production activities. By the 18th century, Europe was heavily relying on trees for mining, shipbuilding, and other industrial processes. As a result of these concerns, responsible resource use by both current and future generations has emerged as a new way of thinking about human life (Pisani, 2006: 85). Hans Carl von Carlowitz first introduced the term "sustainability" in 1713 in response to these developments, "implying a balance between cutting down old trees and keeping enough young trees to replace them" (Pisani, 2006: 85–86). Huge amounts of wood were required at the time Carlowitz developed the idea in order to process iron ore, build ships, and stabilize mining shafts, among other things. According to Carlowitz, when the number of trees being produced in a given amount of time equals or exceeds the number of trees that must be cut, sustainable forest management can be achieved (Wilderer, 2007: 2). Furthermore, in the 18th century, scholars like T. Robert Malthus, William Petty, and Matthew Hale claimed that population expansion was the primary cause of the issue of natural resource depletion (Pisani, 2006: 86).

By the eighteenth century, the expanding population was causing issues with energy and land, calling for drastic measures. It was around this time that coal began to replace wood, thanks to the Industrial Revolution that began in England. In practice,

a number of issues including ground movement, mine building, water pumping, transportation, and regulated combustion arose from the fast growing use of coal. These advancements made it necessary for science and technology to take center stage in human society due to the growing demand for labor in mining and industrial settings. Changes that were unimaginable were brought about by all of these advancements. The fundamental definition of production became to include machines rather than land (Mebratu, 1998: 495).

The Club of Rome was established in 1968, and its 1972 report "Limits to Growth" highlights how important it is for development programs to consider how the economy and the environment are interdependent (Kaypak, 2011: 23). The relationship between the environment and the economy in the West was getting more and more stale, which had an impact on the formation of the notion of sustainable development. In the context of a sustainable society, sustainable development is a notion that arose in the 1980s as a result of attempts to reconcile environmental concerns and socio-political concerns regarding the increasingly obvious ecological effects of human activity and development (Robinson, 2004: 370).

With environmental deterioration on the rise, the terms sustainability and sustainable development have been strongly discussed over the past few years. Due to its centrality to the energy, economy, and environment circle, sustainability is a topic of discussion among a broad spectrum of stakeholders, including politicians, social scientists, researchers and representatives of governments as well as national and international ecological organizations. The multifaceted nature of the idea of sustainability has led to disparate methods and meanings from many fields studying it. Because sustainability is a multifaceted topic, several academic fields that study it have produced varying definitions and methodologies.

The World Commission on Environment and Development, sometimes known as the Bruntland Commission, was responsible for many of the concepts of sustainability that are widely accepted today. The Bruntland Commission's 1987 report identified sustainability as having three co-equal aspects or elements, all beginning with the letter e: environment, economy, and equity. The premise is that sustainability is feasible only by simultaneously protecting the environment, sustaining economic growth and development, and promoting equity (Portney, 2015:6). Sustainability is the

preservation or sustenance of anything, not only the integration of ecological, social, and economic concerns, public consultation, or raising standard of living (McKenzie, 2004: 5). The 1987 study "Our Common Future" by the United Nations World Commission on Environment and Development brought the notion of sustainability in a global context to the general audience. It said that humanity has the ability to sustain development by providing for daily needs without jeopardizing nature's ability to meet the needs of future generations. (https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf)

Sustainability, as defined by Gilman (1992), is the capacity of a community, ecosystem, or other continuing system to continue operating indefinitely without depleting its fundamental resources. In the words of Ruckelshaus (1989), it is "the doctrine that within the broadest limits of ecology, economic growth and development will be achieved and maintained over time through mutual interaction". The notion of sustainability, which is both active and proactive in nature, is described as a society's, ecosystem's, or any system's capacity to continue working without interruption, degradation, or overloading the key resources that constitute the system's critical connection (Karaman, 1996:102). The major element of this idea, which is employed in a variety of areas, is that it is concerned with human futures and is based on the conservation of resources in the field in which it is used. In this perspective, sustainability encompasses economics, social justice, environmental science and management, corporate management, politics, and the law. It is also described as a dialectical idea that encompasses rights, democracy, and integrity, among other significant social concepts (Wilson, 2003:1). Welfare maximization is the definition of sustainability in economics, particularly in neo-classical economic theory. While some have criticized the definition of sustainability which integrates welfare maximization with utility maximization caused by consumption as "oversimplifying," it is important to remember that this definition encompasses the most essential components of human welfare, such as food, clothing, well-being, and education, and it has the benefit of distilling the issue down to an analytically measurable one-way indicator (Harris, 2000:2).

1.2 EVOLUTION OF SUSTAINABILITY

The origins and evolution of the notion of sustainability may be found in the Middle Ages and even in ancient Greek mythology, however it is unclear exactly when and how it was originally used (Bozloğan, 2005) According to O'Riordan (1998), the goddess of the earth Gaia may have been the inspiration behind the concept of sustainability in ancient Greek mythology. As a goddess, Gaia tends to all living things as if they were her own offspring. Everything comes from her and will come back to her in the hereafter. Based on how the nation appeared overall, the ancient Greeks thought that Gaia either praised or punished the kings. As a result, the nation's leaders had to toil selflessly in order to appease Gaia. In turn, this objective necessitated actions that would produce favorable outcomes (O'Riordan, 1998: 31).

It seems that the concept of sustainability as such first appeared in connection with renewable resources like fisheries, forestry, and agriculture. One may argue that the concept of sustainability started to take on a tangible form in early 19th-century literature. In his book General View of Agriculture of Hertfordshire, published in 1804, Arthur Young clarified his beliefs regarding the concept of sustainability based on his observations that the amount of agricultural products and efficiency increased steadily with the shift from the communal system of cultivation of agricultural lands to the individual system during his journeys in the British Isles (Kula, 1998: 151).

Another field where the concept of sustainability was initially introduced is forestry. In the laws passed in the late 18^{th} and early 19^{th} centuries to prevent the destruction of the Black Forests in the Baden region of Germany, it was stressed that although forests are used to meet the need for wood on the one hand, they should also be protected for their ability to block wind, provide water, and serve as recreational areas. In other words, they should not only consider the needs of the present, but should always be replenished to ensure that the forests continue to benefit future generations (Hill, 1993: 56).

The concept of sustainability was first introduced by A. Pigou in his economic science works published in 1912 and 1920. Pigou contends that three forms of capital are essential to human flourishing. These are: (1) nature; (2) materials created by humans; and (3) human knowledge and resources. Pigou made the unconventional

claim that any one of these three forms of capital may take the place of the other in the context of modern sustainability theory. This theory holds that in the event that one of them weakens, the others will be able to restore it, leaving future generations with a steady amount of capital (Pigou, 1912; Pigou, 1920). The literature has referred to this perspective—which holds that natural resources have no unique place—as "weak sustainability" (Pearce, Markyanda, and Barbier, 1990).

The environmental pollution study Silent Spring by Rachel Louise Carson, published in 1962, had a significant impact on Western society and brought attention to the harm that modern industrialized processes were causing to the environment (Carson, 1962). The Club of Rome was established in 1968 and commissioned a research from the Massachusetts Institute of Technology (MIT). The report was released in a book titled "Limits to Growth" in 1972. The research refocused attention on environmental concerns by highlighting the significant and positive link between economic development and the environment. The research painted a pretty bleak image of the world's future by focusing on five main factors and the relationships between them: population, industrial output, nutrition (foodstuffs), raw resources, and environmental pollution. It was underlined that environmental issues and a lack of raw materials will put mankind in danger of extinction if the existing growth plans are maintained (Meadows et al., 1973).

One might say that the environmental movement quickly evolved into a more comprehensive strategy as a result of the environmental issues that were present around the world, particularly in industrialized areas. The movement began in the 1970s. In this regard, Stockholm, the capital of Sweden, hosted the United Nations Conference on the Human Environment (Stockholm Conference) on June 5–6, 1972. Following the Stockholm Conference, environmental issues gained prominence on the global agenda (Larre, 1986: 26–29).

The fundamentals of sustainability were established in the Conference's Declaration on the Human Environment, which was adopted with the following words: "principles that draw attention to the carrying capacity of the environment, observe intergenerational equity in resource use, link economic and social development with the environment, and emphasize the coexistence of development and the environment" (IULA-EMME, 1997: 3). According to the Declaration, rational action may lead to a

better environment that satisfies the requirements of both the present and the future, but doing so will take consistent, hardworking effort. In order to achieve the goal of improving the human environment for current and future generations, it was pointed out that people, communities, initiatives, and entities at all levels must take responsibility; that national governments and local authorities bear a major responsibility for enacting comprehensive environmental policies and taking action within their borders; that developing nations must receive the support they need to carry out their obligations; and that global collaboration is critical to solving environmental issues (The United Nations, 1972).

During the intensive ecological discussions of the 1970s, sustainability emerged as a central subject. Within ten years, the concept gained significant traction in both national and international environmental movements and economic theory (Harborth, 1991: 7). Sustainable development strategies, which are more compassionate and tolerant (moderate), started to take the place of continuous and aggressive development strategies (Dinçer, 1996: 192).

A historic event, the so-called Rio Earth Summit brought together 114 heads of state from 178 nations, 10,000 delegates, and 1,400 non-governmental organizations in Rio de Janeiro, Brazil, during the summer of 1992. It was organized by the UN Conference on Environment and Development (UNCED). It served as an example of North-South negotiating at the UN. The Rio Declaration, Agenda 21, and the Commission on Sustainable Development were the main products of the summit. Since they are all directly tied to sustainable development, it is reasonable to assume that the idea had indeed gained traction on a global scale by the time of the Earth Summit (Paul, 2008: 578). The United Nations World Summit on Social Development was then held in Copenhagen, Denmark, in 1995. Following the 186-delegate summit, eleven promises were made and presented in a 25-page declaration and a 100-page action program. The summit's agenda items included ending poverty, increasing work opportunities, lowering the rate of unemployment, and fostering social integration on a national and worldwide scale (Angus, 1995:1).

The foundation Convention on Climate Change (FCCC), which recognized shared but distinct responsibilities and related capabilities, social and economic conditions, and provided the foundation for the eventual stabilization of greenhouse

gases in the atmosphere, was the result of the Rio Earth Summit. 1994 saw the Convention come into effect. Following this, the 1997 Kyoto Protocol, which came into effect in 2005, reiterated how crucial it is to maintain greenhouse gas concentrations in the atmosphere at a stable level and to follow the guidelines of sustainable development. Guidelines and regulations on the amount that developed nations that are parties to the Protocol must cut emissions of six greenhouse gases—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons—are contained in the Protocol. According to Sathaye et al. (2006) and Gundimeda (2004), the Protocol also mandates that industrialized nations cut their greenhouse gas emissions by 5.2% from 1990 levels between 2008 and 2012. However, this reduction is not enough to stop climate change by 2100.

1.3 SUSTAINABLE DEVELOPMENT

The notion of sustainable development has evolved over a considerable amount of time. This idea came about as a result of the need to find practical solutions to issues brought about by conceptions and behaviors that, from the industrial revolution to the present, have ignored the long-term benefits to society and the environment in favor of profit and economic gain in the processes of production and consumption. Numerous international organizations, most notably the United Nations, conducted extensive research that shaped the idea. Numerous scientific investigations and national, international, and local conferences have been held, particularly since the 1970s. With every new research, the notion of sustainable development has been further developed.

When considered with the notion of development, sustainability is employed as sustainable development within the context of examining if the necessary will is applied appropriately and sufficiently to ensure the society's ongoing social and economic advancement (Akgül, 2010). The UN Brundtland Report of 1987 defined sustainable development as "development that meets the needs of present generations without jeopardizing the ability of future generations to meet their own needs" (WTO, 1998:20).

Three interconnected characteristics of sustainable development have been widely acknowledged in discussions and applications of the idea from its original introduction by the World Commission on Economic Development (Harris, 2000: 5; McKeown et al., 2002: 8). Continuous production of products and services, controllable levels of external and governmental debt, and an avoidance of severe sectoral imbalances that jeopardize industrial or agricultural output are all necessary components of an economically sustainable system. A system that is ecologically sustainable must preserve a steady supply of resources, refrain from overusing renewable resources, and only use non-renewable resources when sufficient replacements are invested in. This involves preserving the atmosphere's stability, biodiversity, and other ecosystem services that aren't often categorized as financial resources. Adequate social services, such as equitable distribution, health and education, gender equality, and political responsibility and involvement, should be provided under a socially sustainable system. By dissecting the idea of sustainable development into its component elements and assessing each one independently, the philosophy behind it may be examined. Put differently, sustainable development may be viewed as an equation that reflects the comparison of two distinct objectives or procedures. Thus, development theory and the idea of sustainability are combined in sustainable development theory (Sharpley, 2000: 3).

1.3.1. Economic Dimension of Sustainable Development

Hamilton (2006: 307) argues that the Hicksian concept of income is the best place to start when talking about the economic aspect of sustainability. According to Hicks, income is the most that a person or a country may spend in a certain amount of time and still be in the same financial position at the end of it (Hicks, 1946: 172). The highest sustainable consumption in this instance is income. Maintaining the productive capacity of the capital stock required to maintain the flow of commodities and services susceptible to consumption is one strategy to sustain consumption for a given amount of time (Hamilton, 2006: 307). To put it simply, raising or maintaining the productivity of the capital stock in tandem with a rise in human welfare is necessary to ensure sustainable growth.

Because they overemphasize the ability of the market to allocate resources efficiently, economists have traditionally assumed that natural resources are limitless (Basiago, 1999: 150). Historically, natural resources have not received much attention in economics (Goodland, 2002: 2). The preservation of capital and the avoidance of its deterioration constitute the widely recognized concept of the economic dimension of sustainability (Goodland, 2002: 2). The economic meaning of sustainability revolves around the idea of welfare. Traditionally, having visible economic value (goods and services) has been used as a measure of well-being in national statistical accounts and in some economic models. These calculations do not account for non-market outcomes that enhance overall well-being. Benefits from volunteer work, recreational pursuits, and social connections, for instance, are bolstered by different types of social capital (Markulev and Long, 2013: 4). A definition of sustainability by Bilgili (2017:563) that emphasizes "ensuring that well-being is at least maintained over time" raises issues of equity across generations. Each generation in this situation has to choose how much wealth to spend right away and how much to conserve and protect for future generations (Markulev and Long, 2013: 5). The possibility of resource depletion is a significant factor in sustainability's economic aspect. Sustainability has always been a key component of the economy based on renewable natural resources because of its potential (Vivien, 2008: 4). At this phase, practices like recycling wastes produced by producers or consumers as a result of manufacturing processes, using less material to provide goods and services, and recycling energy and materials into raw materials can all be evaluated (Vivien, 2008: 5).

The following four fundamental qualities dictate how the economic component of sustainable development is defined and explained (Quass and Baumgartner, 2009: 2):

- The interaction between humans and nature should be the main emphasis of the discussion,
- A focus on the long-term, inherently uncertain future,
- Creating normative frameworks for fairness between people and the natural world, as well as between the current and next generations,
- It is believed that considering economic efficiency when allocating artificial supplements and replacements for natural products and services is pointless.

When it comes to the economic aspect of sustainability, neoclassical economists' opinions carry a lot of weight. This viewpoint holds that the objective of sustainable development is to preserve societies' ability to provide economic welfare and to ensure that future generations enjoy a standard of living comparable to that of the present. Within this framework, sustainability is defined as the continuity of personal utility, income, and consumption throughout time, as determined by individual welfare analysis methodologies (Vivien, 2008: 2).

Economists that follow the natural capital approach contend that all of the world's natural resources, soil and atmospheric functions, and environmental functions make up natural capital, in opposition to neoclassical economics. According to the theory of natural capital, two choices can be made by taking non-renewable and renewable resources into account. The rule for non-renewable resources is to employ renewable natural capital investments to reinvest in waste generated from the use of non-renewable resources. The rule for renewable resources is to limit resource consumption to maintain the sustainability of products. It is acknowledged that the balance of natural capital will be maintained by following these guidelines (Harris, 2000: 8–9).

1.3.2. Environmental Dimension of Sustainable Development

Sustainability's ecological component approaches the environment with more than just economic considerations. In this context, ecology investigates the sub-habitat sustainability laws, while ecological economics takes a closer look at the larger framework that exists outside of entire systems. According to Sutton (2004), maintaining the physical environment's qualities or assets is what is meant to be understood as environmental sustainability in this context. More generally, environmental sustainability refers to meeting the requirements of present and future generations for resources and services without compromising the health of the ecosystems that sustain them. The broadest meaning of environmental sustainability is actions that consider the principles of resilience, flexibility, and interconnectedness of ecosystems that meet human needs, while also taking into account the ability of ecosystems to recreate themselves and not reduce biodiversity (Morelli, 2011: 6).

According to Goodland (1995: 3), environmental sustainability in this context refers to maintaining the extent of the human economic subsystem within the biophysical bounds of the larger ecosystem, upon which it depends.

It is also possible to think of environmental sustainability as a strategy that prioritizes the ideas of conservation and natural capital. The concept of conservation in this context refers to the preservation or at least not depletion of environmental assets, whereas natural capital essentially emphasizes the natural environment of humans or the entirety of the assets provided by the environment (land, forests, water, atmosphere, etc.) (Goodland and Daly, 1996: 1005).

According to Goodland (1998: 38), achieving environmental sustainability requires the fulfillment of four fundamental requirements. These conditions can be summed up as follows: lowering the Northern countries' excessive use and consumption of environmental resources; maintaining the Northern countries' population balance; promoting the growth of developing nations while preventing their welfare from declining or their carrying capacities from being exceeded; and maintaining the developing nations' population balance (Goodland, 1998: 38–39).

Environmental sustainability can be divided into four categories: weak, moderate, strong, and extremely strong. Natural, artificial, social, and human capital are the four categories of capital that are not distinguished by weak environmental sustainability. Weak environmental sustainability thus acknowledges the possibility of converting all or most of the natural capital of the planet into capital or artifacts created by humans. In order to achieve moderate environmental sustainability, one must consider the makeup of the entire capital stock, specifically determining how much is natural, artificial, or human. According to strong environmental sustainability, various capital stocks must to be safeguarded independently. This presupposes that in the majority of production functions, natural and artificial capital are complements rather than true substitutes. Strong environmental sustainability advocates contend that there is no need for consumption. According to this level of environmental sustainability, renewable resources can only be used above their yearly net growth rate, whereas non-renewable resources should never be used at all (Goodland and Daly, 1996: 1006).

1.3.3. Social/Cultural Dimension of Sustainable Development

The fulfillment of societal members' fundamental needs is emphasized by the social dimension of sustainable development. A socially sustainable society needs to be adaptable enough to safeguard and grow its own resources as well as be able to stop and/or resolve issues before they arise in the future (City Of Vancouver, 2005: 3). Within this framework, social sustainability can be conceptualized as the process of identifying the needs of people and developing successful, long-lasting environments that promote wellbeing (Woodcraft et al., 2011: 16). To put it another way, social sustainability is the process of developing social, cultural, and physical environments that promote social well-being and community sensitivity as well as engaging with the local population (Palich and Edmonds, 2013: 1). Thus, social sustainability can be understood as guaranteeing that social space design is integrated with physical space design (e.g., social amenities, infrastructures supporting social and cultural life, people's participation and development, and spaces for spatial development) (Woodcraft et al., 2011: 16). According to these justifications, social sustainable development is the process of guaranteeing that future generations will have equal or greater access to social resources than present generations. It also includes corporate governance, human rights, and labor rights (Mak and Peacock, 2011: 4). To sum up, a society's quality is its social sustainability.

The "promoting sustainability," "committing to sustainability," and "protecting sustainability" phases include the social dimension of sustainability. According to Vallance et al. (2011: 342), sustainability development is the provision of necessities like social capital, justice, and equality; sustainability commitment is the adoption of new behaviors to achieve environmental goals; and sustainability protection is the maintenance of socio-cultural traits in the face of change.

A community need two resources in order to be socially sustainable. These resources fall into two categories: social/community and individual/human. Social or community capacity can be defined as the relationships, networks, and norms that enable collective action to improve quality of life and ensure that these improvements are sustainable. Individual or human capacity, on the other hand, refers to the qualities and resources that individuals can contribute to their own well-being and the well-

being of the community, such as education and leadership ability. Individual and community resources must be developed and used in the framework of equity, socialization and interaction, safety, and flexibility in order to create a society that is both successful and sustainable (City of Vancouver, 2005: 3). It might be stated in this regard that different investments ought to be made in order to guarantee social sustainability. These investments can be summed up as follows: making sure that everyone has equal access to various social benefits; making sure that everyone has basic rights to energy, housing, health care, and education; making sure that no one's livelihood is disrupted or forcibly relocated; making sure that workplaces are safe and healthy; and avoiding child or forced labor (United Nations, 2012: 26). It is crucial to recognize that social sustainability has a positive aspect at this moment, which is demonstrated by the right to equitable access to basic services and strong social cohesion.

A society can be made socially sustainable by adhering to five fundamental principles. According to McKenzie (2004: 18–19), these tenets are:

- Diversity: the local community ought to promote diversity,
- Connectivity: formal, informal, and institutional processes and structures that facilitate connection inside and outside the community should be encouraged and made available.
- Ensuring that everyone's basic requirements are satisfied and that they have a decent quality of life on an individual, group, and communal level is what is meant by "quality of life."
- Democracy and governance: It is important to guarantee democratic procedures as well as open, accountable, and transparent governing structures for the community.
- Equality; everyone in the community should have equal access to opportunities, particularly the most vulnerable and financially disadvantaged people.

1.4 SUSTAINABLE PRODUCTION AND CONSUMPTION

The implementation of all production processes while taking environmental aspects into account and demonstrating the appropriate level of environmental

sensitivity is known as sustainable production. Reusing old items and recycling them before reintroducing them to the market is another aspect of sustainable production. By guaranteeing that old goods are reused using diverse techniques, sustainable production minimizes environmental harm and lowers the usage of raw resources (Özesen, 2009:29). Sustainable production is a manufacturing technique in which production activities are evaluated from both environmental, social, and economic points of view, with the goal of limiting the adverse effects on public health, welfare, and the environment from ore extraction to the finished product, as well as throughout the product's economic lifespan (Akkoyun, 2016:7).

The goal of sustainable production techniques, which include the effective use of natural resources, is to minimize resource waste and use natural resources in an environmentally friendly way. (Karadaş, 2022) In this case, recycling and reuse allow resources to be used for longer periods of time while consuming fewer raw materials. Simultaneously, advances in technology are being developed to optimize the utilization of vital resources like electricity and water. (Öztopçu and Salman, 2019)

Recycling and waste management are crucial elements of sustainable production methods. Waste is avoided with these methods by gathering, classifying, and recycling waste. Recycling waste helps save energy and lessens the need to produce new raw materials. Simultaneously, it supports the circular economy model that seeks to preserve the environment and extend the life of natural resources. (Bostan, and Karslı, 2023)

Using renewable energy sources and energy efficiency are essential components of sustainable production methods. By lowering energy use, energy efficiency guarantees a more effective use of resources. To achieve this, energy-efficient technology must be used, inefficiencies must be found and removed, and energy management systems must be put in place. Energy sources that are renewable and do not harm the environment are known as renewable energy sources. Utilizing renewable energy sources, such solar, wind, and hydroelectric power, lowers the need for fossil fuels and makes it possible to use ecologically beneficial production techniques. (Önal, 2022)

Human consumption patterns have a wide range of negative effects on the environment, including depletion of natural resources, reduction of biodiversity, direct

or indirect CO2 Bemissions, and global warming. In recent years, there has been a lot of discussion about these effects. This argument is influenced by a number of variables, most notably population increase and rapid economic development. It has been made clear by the recent and steady rise in consumption, particularly in developed nations, that there is a risk of depletion of natural resources. As a result, it is necessary to consider the effects of consumption on the environment and to change current consumption patterns into sustainable ones (Karalar and Kiracı, 2011). The need for sustainable consumption habits is demonstrated by the rise in environmental pollution, the appearance of indicators of food and water shortages, the growing awareness of the issue of global warming, and the issues brought on by the ozone hole.

Sustainable consumption is defined as using products and services to meet basic needs and improve quality of life while minimizing the use of natural resources, toxic substances, waste emissions, and pollutants from a life cycle perspective, taking into account the needs of future generations (Seyfang, 2004:324).

Consuming products that are produced more effectively than alternatives is known as sustainable consumption. It is carried out by ethical and environmentally conscious customers who are able to change the market by incorporating social and environmental considerations into their decision-making process (Seyfang, 2005:294). The phenomena of sustainable consumption is predicated on using strong instruments to influence governmental decision-makers as well as consumers (Veenhoven, 2004:1-2). A discourse known as "sustainable consumption" aims to address the environmental issues brought on by industrial production (Dolan, 2002:170).

In the context of business and industry, sustainable consumption entails "enriching" the supply chain, creating more economical, efficient, or environmentally friendly products, and educating consumers about products, markets, and advertising (Kong et al., 2002:109). The product dimension defines sustainable consumption as using products that are made in a way that minimizes the use of energy and natural resources, produces less waste, can be recycled to a large extent or, in the event that it cannot, its waste won't harm the environment, requires the least amount of natural resources to operate, is long-lasting, and can be fixed. Conversely, consumption patterns that demonstrate behaviors that cause less environmental harm than other

lifestyles and are less reliant on social injustices give rise to sustainable lives (Hertwich, 2002).

Energy efficiency is the process of consuming less energy and employing energy resources more effectively. Energy conservation, cost savings, and environmental protection are all reasons why energy efficiency is important. In addition to guaranteeing the sustainable use of energy resources, energy efficiency lowers greenhouse gas emissions into the atmosphere. (Batı, 2013) Because it lowers energy costs, it also presents a fantastic economic opportunity. By encouraging consumers to save energy, energy efficiency regulations and practices are crucial for a sustainable energy future. These practices and regulations include developing energy-saving technology, building energy-efficient structures, and installing energy-efficient appliances. There are advantages to energy efficiency for both businesses and individual consumers. Energy conservation lowers energy expenses for people while giving industries a competitive edge and reducing manufacturing costs. (Kaypak, 2011) As a result, energy efficiency is growing in significance on a global scale and is essential to the development of sustainable energy sources.

Using less energy and natural resources and producing less waste for the same amount of production through the use of highly efficient production technologies and methods is the foundation of the concept of sustainable consumption and production, which does not merely mean reducing consumption and production. Because of this, the idea of sustainable consumption and production is a method that takes into account issues related to many other aspects of life, including quality of life, health, education, industrial productivity, poverty alleviation, and the preservation of natural resources (Demirer, 2006:1).

There are primarily two categories of consumption that come into play when discussing sustainable consumption. These are the consumption of industrial products and the direct use of natural resources, such as water, fossil fuels, and energy resources. Consumption of products include both the use of commodities and services. There are two categories of sustainability: normative and positive, and strong and weak (Fuchs and Lorek, 2005:262). The literature on neoclassical economic growth is where the idea of weak sustainability first appeared. The concept's methodological aspects were developed by Hartwick (1977, 1978) and Solow (1974a, 1974b, 1986, 1999).

Examining the circumstances that would guarantee a non-decreasing per capita consumption flow for an economy under natural resource constraints for an indeterminate amount of time (generations) has been the primary focus of the growth literature. According to Cabeza Gutés (1996), the growth literature's application of the savings-investment rule can be used to describe the idea of weak sustainability. The Hartwick or Hartwick-Solow rule is a saving-investment guideline that talks about maintaining the value of a society's total capital assets.

The weak sustainability strategy is an anthropocentric one that is predicated on the idea that human capital is more significant than natural capital. Therefore, pollution or the depletion of non-renewable resources by future generations is not an issue as long as enough physical capital—such as factories, ports, machinery, etc. —is developed to replace natural capital (Neumayer, 1999). In conclusion, there are no detrimental effects on sustainability as long as natural capital is converted into man-made capital, which suggests great substitutability between the two types of capital.

The environmental economics movement has harshly attacked the weak sustainability approach due to its fundamental premise that artificial capital may replace natural capital (Neumayer, 1999). Furthermore, there has been much criticism leveled at the sustainability index mentioned above, which was put forth by Pearce and Atkinson in 1993. One of the most prominent of these criticisms comes from Gowdy and McDaniel (1999), who demonstrate that Nauru—a Pacific island nation where mining activities have destroyed 80% of its natural environment over the course of nearly a century in order to extract rich phosphate resources—may be the most sustainable nation based on calculations made using the aforementioned indicator. Conversely, Martínez-Alier (1995), Cabeza Gutés (1996), and Ayres et al. (1998) contend that the industrialized Nordic countries can be regarded as highly sustainable countries despite having destroyed a sizable portion of their natural resources in the past because their savings rates are typically fairly high when using the Pearce and Atkinson (1993) indicator. In contrast, Gowdy and O'Hara (1997) challenge the actual savings method, arguing that as long as the weak sustainability requirement is satisfied, the devastation of ecosystems and species or the use of fossil fuels does not conflict with the objective of sustainability.

Pearce, Markandya, and Barbier (1989) were the first to distinguish between strong and weak sustainability. In response to sustainability thinking in the neoclassical environmental literature, ecological economists began to embrace the strong sustainability approach more frequently as the differences between strong and weak sustainability became evident thanks to the works of Pearce et al. (1990) and Turner and Pearce (1992). The idea of environmental economists that people live in a world of absolute biophysical limits forms the foundation of the robust concept of sustainability. This realization naturally leads environmental economics to contend that natural capital has a distinct structure from other types of capital, such as physical capital (P), human capital (H), and social capital (SC). To begin with, natural capital is a vital component of life as we know it (Neumayer, 1999; Turner and Pearce, 1992). In addition to giving living things food, drink, and other renewable resources, ecosystems also carry out essential life-supporting tasks like pollinating crops, storing genetic information, conserving and reproducing soil, the water cycle, converting organic matter and mineral nutrients, filtering pollutants and assimilating wastes, and maintaining the atmosphere's gas composition (Barbier, Burgess and Folke, 1995: 44, 45). According to Ehrlich & Ehrlich (1992), ecosystems and the biodiversity they support are therefore multifunctional in a way and to an extent that other forms of wealth are not.

The second is natural capital's quasi-irreversibility or irreversibility. Certain types of natural capital cannot be recovered once they have been destroyed. Contrarily, man-made capital, which has existed from the dawn of time, is replicable even in the event of its destruction. Global warming and ozone depletion are examples of near-irreversibility cited by Neumayer (1999), while the loss of biodiversity is cited as an example of irreversibility. If given the chance to heal, the climate and the ozone layer can both return to their previous conditions, even though it will take a very long time for humans to do so (Ayres et al., 1998).

Strong sustainability fundamentally undermines the notion that natural capital may be replaced by man-made capital due to the aforementioned qualities of natural capital. Natural capital can be highly substitutable to man-made capital in a number of ways, including between different types of natural capital (such as copper and aluminum) and even between renewable and non-renewable natural capital (Costanza and Daly,

1992). Daly (1990) contends that natural capital is also complementary to man-made capital because it absorbs waste produced by the latter and provides raw materials and energy for production. As a result, stocks of various capital kinds require distinct protection (Ayres et al., 1998).

The strong sustainability approach has been interpreted in two different ways in the literature according to Yeni (2014). According to the first of these interpretations, both the total value of natural capital and the sum of the values of man-made and natural capital must remain constant. This perspective holds that weak sustainability is a part of strong sustainability. Additionally, the profits from the exploitation of non-renewable resources must be put back into natural capital in order to develop renewable resources, maintaining the overall value of the natural capital stock at a steady level. The Pearce et al. (1990: 58–65) shadow project approach bears some traces of this interpretation. This method, which is based on cost-benefit analysis, stipulates that in order to make up for the harm these projects bring to the environment, the value of the environmental benefits of the shadow projects must be greater than the value of the environmental harm these projects create.

According to the second meaning of strong sustainability, the non-replaceable natural capital stock should be protected as a physical stock rather than as a financial asset. Income, in the Hicksian sense, is consumption that is sustainable. However, since the consumption of natural capital is essentially a negative investment, it is not appropriate to refer to consumption based on the destruction of natural capital as income. Its regeneration capability must thus not be exceeded if the flows produced by this stock of natural capital are to be exploited. Therefore, there won't be any harm to natural capital's environmental functions (Daly, 1990; Goodland, 1995; Hueting and Reijnders, 1998). This view was expanded upon with the introduction of the notion of critical natural capital (CNC). Based on Ciriacy-Wantrup's 1952 study, Ekins, Simon, Deutsch, Folke, and De Groot (2003) proposed three criteria for defining significant natural capital, emphasizing its environmental roles. Therefore, when these environmental services are irreplaceable in terms of creating wealth, when their loss is irreversible, and when their loss results in significant losses to other parties, these environmental functions are considered fragile natural capital. A four-point program for robust sustainability was put forth by Daly (1991). The first is that the earth's

carrying capacity should be taken into consideration when limiting the volume of flows, which he describes as an economy's metabolic rate. Second, technological advancements should focus on increasing efficiency rather than volume; third, the rate at which renewable resources accumulate should not be more than the rate at which they are renewed; and fourth, waste emissions should not be greater than the environment's ability to absorb them. The final point is that the creation of renewable alternatives to non-renewable natural resources should not outpace the rate of consumption of those resources.

Waste management and recycling include actions taken to ensure that society's garbage is disposed of appropriately and that recyclable resources are turned into useful goods. By allowing garbage to return to the natural cycle without endangering the environment, proper waste management promotes environmental conservation and a sustainable future. Additionally, by repurposing waste and generating revenue from it, recycling helps to preserve natural resources. (Gürcan and Açıksöz, 2023) Activities related to recycling and waste management benefit not just the environment and the natural world but also human health. Consequently, promoting awareness in society and ensuring a sustainable future depend on waste management procedures and recycling initiatives. Numerous significant laws and initiatives pertaining to recycling and trash management are being carried out in Türkiye. These include several processes for waste disposal, waste separation at the source, system development, and facility establishment. Recycling and waste management practices contribute to the preservation of natural resources, a clean environment, and long-term economic growth. (Gökdeniz, 2019)

Healthy diets, animal welfare, and the preservation of natural resources all depend on sustainable agriculture and food consumption. Sustainable agriculture drastically lowers the use of chemical pesticides and fertilizers while simultaneously protecting biodiversity and restoring soil fertility. (Tirkeş, 2008) To guarantee the preservation of natural resources, sustainable agriculture—which is also predicated on organic agricultural practices—produces food in an environmentally friendly manner. The foundation of sustainable food consumption is a nutritious, well-balanced diet. People safeguard their physical well-being in this way, greatly enhancing the

preservation of natural resources at the same time. Food security is also greatly impacted by sustainable food usage. (Ergün and Çobanoğlu, 2012)

1.5. DEFINITION AND EXPLANATION OF SUSTAINABLE CONSUMPTION

Human consumption patterns have a wide range of negative effects on the environment, including depletion of natural resources, reduction of biodiversity, direct or indirect CO2 emissions, and global warming. In recent years, there has been a lot of discussion about these effects. This argument is influenced by a number of reasons, chief among them being the rapid increase of the economy and population. The following are a few of these factors (Karalar and Kiracı, 2011):

- Falling prices for products,
- Globalization and the resulting economies of scale,
- Cultural shifts (such as urbanization and the entry of women into the workforce).
- An increase in people's standard of living,
- Environmental issues are revealed.

In the 2020s, it is anticipated that global trade would rise from its present $12 trillion to $32 trillion, bringing with it greater riches and prosperity but also a rise in environmental issues brought on by trade. Population growth will definitely contribute to this increase. Based on data from 2006, the UN Department of Economic and Social Affairs (DESA) released a research that predicted that, in the following 43 years, there will be a 2.5 billion rise in the global population, from 6.7 billion to 9.2 billion (http://www.ntvmsnbc.com/news/402658.asp). While it is believed that rapid population expansion could have a major effect on consumption, it is important to remember that this impact is limited. For example, between 1850 and 1970, the global population more than tripled, yet the amount of energy consumed rose twelve times (Sawin, 2004:26). The world population expanded by almost 70% between 1965 and 1995, while the use of paper climbed by more than 300%, that of seafood by 160%, and that of water by more than 400% (Princen et al., 2002:6-7). This data demonstrates that the influence of population growth on growing consumption levels is minimal.

Türkiye is ranked 17th in the world with 72.9 million people, and its population is predicted to grow to 90.2 million in 2025 and 100.8 million in 2050. It is expected to overtake Germany and Japan, two countries with populations currently greater than Türkiye, in 2050 (www.ntvmsnbc.com/news/392667.asp). It is also predicted that, between 2004 and 2020, Türkiye's yearly population growth rate of 1.2 percent will place it among the three nations with the fastest population growth rates, behind only India and Ireland (www.ntvmsnbc.com/news/385593.asp).

The eight trade agreements that have been concluded since 1950 are thought to be among the major forces behind global economic expansion. Although globalization has improved lifestyles and boosted income, there is always potential for negative outcomes as well. Due to the fact that multinational corporations profit from low labor costs across international borders, the cost of transportation and raw materials has dropped, and these factors have all contributed to a decline in product prices, which has raised consumption levels. (Karalar and Kiracı, 2011) For instance, many households now have access to electrical appliances and electronic equipment (TVs, PCs, DVD players, etc.).

Due to the extensive use of marketing, production, and consumption systems in the latter half of the 20th century, business administration, which has been practiced since then, has contributed to the depletion of the universe's limitless resources and—more importantly—to an irreversible climate crisis. The need for a transformation has primarily arisen from the emergence of social and environmental issues such as human-induced climate change and global temperature increase, rapid and irreversible ecosystem destruction, unequal income distribution, violations of human rights, poverty, and rapid population growth. Numerous scholars have proposed that a new paradigm shift that transforms social structure should be the primary focus of issue solving in this process. Building on this idea, sustainable consumption can be viewed as a new organizational paradigm (Atrek and Madran, 2017:4).

Indeed, environmental issues play a significant role in the conversation about sustainable consumption. The need for sustainable consumption habits is demonstrated by the rise in environmental pollution, the appearance of indicators of food and water scarcity, the growing awareness of the issue of global warming, and the issues brought on by the ozone hole.

A key factor in the success of the sustainable consumption movement is the definition of sustainable consumption. There are numerous definitions of sustainable consumption in the literature. Some people define sustainable production, while others define sustainable consumption only. According to Paavola (2001:228), "a form of consumption behavior that has considerably less environmental impact than other consumption behaviors" is what is meant to be understood by sustainable consumption.

Sustainable consumption is defined as using products and services to meet basic needs and improve quality of life while minimizing the use of natural resources, toxic substances, waste emissions, and pollutants from a life cycle perspective, taking into account the needs of future generations (Seyfang, 2004:324). This definition was made by the Norwegian Ministry of Environment in 1994 and published in an OECD report in 2002. Economy, society, and environment are the three pillars of sustainability, according to the Norwegian Ministry of Environment's definition of sustainable consumption from 1994 (http://reports.tr.eea.europa.eu/state_of_environment_report_2007_1/tr/TR-SCP-chapter-final-web.pdf). The social component addresses consumer protection as well as equality within and across generations.

Sustainable consumption has been defined as "economic and social development that meets the needs and aspirations of current and future generations in a way that leads to a better quality of life, while respecting the limits of the global ecosystem" (DEFRA, 2003:10) by the UK government's DEFRA (Department for Environment, Food and Rural Affairs) in a 2003 report on strategies for sustainable production and consumption.

According to Williams and Dair (2007:162), sustainable consumer behavior is characterized by actions that contribute to lowering resource consumption, waste, and pollution—the three primary objectives of sustainability. Sustainable consumption is the practice of green and ethical consumers who purchase products that are produced more effectively than others, consider social and environmental issues while making decisions, and have the power to change the market (Seyfang, 2005:294). The phenomena of sustainable consumerism is predicated on using strong instruments to influence governmental decision-makers as well as consumers (Veenhoven, 2004:1-

2). A discourse known as "sustainable consumption" aims to address the environmental issues brought on by industrial production (Dolan, 2002:170). By taking into consideration the possibility of meeting the requirements of future generations, sustainable consumption aims to meet our current needs without depleting natural resources or harming the environment (Mortensen, 2006:142).

Every economic sector—public, private, and government—faces particular issues as a result of sustainable consumption. Reducing purchases in the near run requires major lifestyle adjustments in the long run for households. In this particular setting, the topic of people's willingness to modify or give up their existing behavior emerges (Kong et al. 2002:109).

In the context of business and industry, sustainable consumption entails "enriching" the supply chain, creating more economical, efficient, or environmentally friendly products, and educating consumers about products, markets, and advertising (Kong et al. 2002:109). Nonetheless, it's important to determine the incentives required to carry out these actions. For instance, the state defines sustainable consumption as utilizing governmental tools to promote sustainable production and consumption practices in the public and private sectors. It now becomes evident that a shared solution is needed to solve the issue. As a result, all parties involved in sustainable consumption ought to collaborate to create workable solutions for the issue of the current patterns of consumption.

The two interconnected aspects of products and lifestyles may be used to define sustainable consumption (Hertwich, 2002:2). The product dimension defines sustainable consumption as using products that are made in a way that minimizes the use of energy and natural resources, produces less waste, can be recycled to a large extent, or even if it cannot, does not harm the environment when its waste is produced, is long-lasting, and is repairable. Conversely, consumption patterns that demonstrate behaviors that cause less environmental harm than other lifestyles and are less reliant on social injustices give rise to sustainable lives (Hertwich, 2002:2).

Living within the material standards of the present without sacrificing the standards of future generations is what is meant by sustainable consumption; it means using natural resources to the extent that human activity or environmental systems can conserve them (or, in the case of non-renewable resources, to the extent that renewable

alternatives can be substituted for them); at the same time, it means producing the amount of waste or pollution that environmental systems can tolerate without endangering their own ability to survive (Peattie, 2001:131).

Individuals will attain ecological citizenship through their private consumption decisions in politics and the environment, and sustainable consumption is a mechanism for putting that citizenship into practice (Seyfang, 2005:292). This concept makes it clear that when customers make eco-aware decisions when making purchases, sustainable consumption may be achieved. On the other hand, ecological citizenship is a notion that considers how we should live while minimizing the ecological effects of the decisions and actions we make on others on a daily basis (Seyfang, 2005:291). The concept of ecological footprint is the foundation of ecological citizenship. According to ecological citizenship, we need to act in a way that leaves the least amount of an ecological imprint. The concept of "planetary citizenship," which was first put forth by Henderson and Ikeda (2004) and further developed by Alexender (2004), goes hand in hand with the term "ecological citizenship." It asserts that, rather than competing with other people on their planet, every individual should work together to achieve sustainability (Seyfang, 2006:394).

One notion put up as a substitute for current consumption is sustainable consumption. Stated differently, every advancement toward sustainable consumption from current patterns of consumption gets us one step closer to the goal of sustainable consumption. Sustainable consumption seems idealistic to some people (Dobers and Strannegard, 2005:333). The definition of utopian as "a project or idea that seems impossible to realize" might lead one to believe that sustainable consumption is an unattainable goal.

The definitions of sustainable consumption that are now in use describe what consumption ought to be rather than what it actually is. Furthermore, as the definitions make clear, the concept of sustainable consumption is both a long-term strategy—it seeks to leave a better world for future generations—and a comprehensive strategy—it calls for the involvement of all humankind. It is possible to think of ourselves as microbes dwelling in various bodily tissues or organs if we draw a comparison between our environment and the human body. Any organ, tissue, or cell malfunction in a human body impairs the overall system's ability to operate, and if the issue is

irreversible, death follows. Therefore, sustainable consumption initiatives must be undertaken by all nations, corporations, and individuals worldwide. Put another way, sustainable consumption is a process that all countries in the globe must engage in, not just a pointless topic that only the wealthy find interesting (SCR, 2006:4).

In recent years, the concept of sustainable consumption has been widely explored both domestically and internationally, despite the fact that it is still not well defined. The notion of sustainable consumption made its way into the literature when it was incorporated into the Agenda 21 document, which was part of the Earth Summit's 1992 action plan for sustainable development in Rio. "Changing consumption patterns to ensure sustainable development and minimize the negative effects of human actions on the ecological environment is one of the greatest challenges of humankind," it is said in the aftermath of the Rio Summit. (Karalar and Kiracı, 2011)

Consumer sovereignty is revered in today's consumer society, and customer choice is always seen as the correct one (Cooper, 2005:53). In this situation, the argument in favor of limiting consumption has mostly taken place in public forums (Cooper, 2005:53). Customers have been influenced by advertising to build cultural norms and societal factors that have led to their making poor consumption decisions based on inaccurate and biased information. This false belief has caused a discontent with consumerism that goes beyond providing for necessities like food, water, and shelter. In actuality, there are two fundamental components to an individual's general wants that drive consumption. These requirements are both emotional and functional (Casimir and Dutilh, 2003:316). To put it another way, every human need has both an emotional and a functional component. They should embrace a concept of consumption that will optimize both individual and societal gain by meeting their functional and emotional demands (Hansen and Schrader, 1997:448). According to this perspective, current consumption patterns endanger human welfare even if ecological goals are often seen as a restraining factor (Jackson and Mark, 1999:439). This is due to the fact that excessive consumption endangers the planet's future.

1.6. SUSTAINABLE CONSUMPTION IN THE WORLD

Regarding national cultural norms and infrastructure, Thøgersen (2010) discovers that variations in political regulation, funding allocated to sustainable infrastructure, and labeling specifications for sustainably manufactured products are some of the reasons sustainable consumption varies across nations.

There are two primary issues with consumerism in the globe today. The two types of consumption are excessive and insufficient (Clark, 2007:492). Thus, for "developed" and "developing and underdeveloped" nations, the notion of sustainable consumption entails various things (Cohen, 2010:3). As an illustration, the richest quarter of the globe consumes 86% of all goods and services, while the lowest quarter consumes only 1.3%. This means that while certain regions of the planet carelessly devour all resources, other regions are unable to even fulfill their most basic demands. The goal of sustainable consumption is to eradicate global inequity. An American, for instance, eats 20 times as much as an Indian or Chinese, and 70 times more than a Bangladeshi. Similarly, it's commonly said that three planets would be required if everyone on the planet devoured as much as the British did (SCR, 2006:4). Within nations, as much as between them, there is inequality. Global consumption expenditures have grown by 3% year on average since 1970 (Clark, 2007:492). Globally speaking, although consumption is rising year, not everyone benefits from this rise. For instance, an African's consumer spending fell by almost 20% between 1973 and 1998 (Clark, 2007:493). But in terms of its effect on the environment, is underconsumption as reprehensible as overconsumption? By using cyanide to fish, impoverished fishermen in Southeast Asia pose a hazard to the underwater habitat. By using cyanide to fish, impoverished fishermen in Southeast Asia pose a hazard to the underwater habitat. Similar to this, impoverished farmers in Africa's southern Sahara Desert burn trees to make room for rice fields. In the long run, this activity leads to poverty and deprivation by raising the risk of erosion and desertification in the area. (Karalar and Kiracı, 2011)

People who reside in the developed world's nations are accustomed to a wide range of options and conveniences in a consumer society. The primary challenge facing the modern economy is how to protect the environment in which humans live,

use up all of its resources, pollute it quickly, and leave it for future generations. Consumption acts have a part in this conflict both directly and indirectly. People will always do harm to the environment through their product selections and consumption habits. To reduce these impacts, there is a movement centered around sustainable consumption. (Karalar and Kiracı, 2011)

1.6.1. Sustainable Consumption in Developed Economies

In industrialized and developing nations, sustainable consumption is seen and practiced differently. Developed civilizations now possess a larger capital stock. Naturally, having more capital enables one to produce and distribute more commodities. (Peattie, 2010) This suggests that people in developed economies have a higher level of life. Developed nations have utilized natural capital extensively, turning it into economic capital and driving development, but they have disregarded it up to this point. In truth, there are a lot of prospects for contemporary economic output provided by large-scale firms, factories, well-maintained roadways, major building projects, irrigation systems, dams, and many other signs of growth. (Yüksek, 2010)

Still, it is an inevitability that sustainability entails some environmental challenges (Bernardini & Gali, 1993). The economy of a developed nation does not, however, always have detrimental externalities to the environment. Economies in development possess cutting-edge technology and can swiftly and affordably implement environmental protection measures. In addition, because of the stronger socio-economic structure, establishing a legislative framework for environmental protection is less expensive. Attitudes and behaviors have also advanced. (Yüksek, 2010)

Wealthy nations, home to 25% of the global population, use 40–86% of all natural resources. Twenty percent of people on the planet are consumers, and they account for about 85% of global revenue. The average individual in a developed nation uses three times as much energy, nineteen times as much electricity, and ten times as much drinking water as someone in a less developed one.These nations use slash-and-burn techniques to meet their resource needs, destroying innumerable forms of life, including the impoverished people who live in tropical jungles.Ready-made meals,

miraculous cleaning solutions, and disposable cameras are available to a time-pressed, money-strapped public for an increased cost. The idea that one's level of freedom is directly correlated with their spending has started to permeate generations. Only at significant environmental expense can these new opportunities be made available (Kilim, 2005).

Research on sustainable consumption in developed nations indicates that although consumers are highly conscious of issues like ecological products, environmental sensitivity, and supporting local businesses, they are not as consistent in incorporating these awareness into their everyday routines. A study of 1600 households in the UK was done to find out who the environmentally conscious consumer is and how they behave. Based on the frequency of behaviors like purchasing organic products, staying away from environmentally harmful products, favoring products made from recycled materials, encouraging local production, choosing products with less packaging, conserving energy, and forming recycling habits, consumers were clustered. As a result, it has been found that although some people adopt these practices on a daily basis, many customers do so infrequently or never at all (Gilg et al., 2005). Similar research on young, well-off consumers in Finland revealed that while these consumers are aware of recycling, waste management, and buying eco-friendly products, their behavior does not always reflect this awareness, and they may have uncontrollable consumption habits (Autio and Heinonen, 2004).

First of all, it is important to recognize that when it comes to sustainable consumption behaviors, the United States of America (USA) and the European Union (EU) are quite comparable. The EU and the USA have different per capita incomes; the EU has a higher value than the USA. Fascinatingly, consumer spending in the EU is noticeably lower despite this discrepancy, indicating a stronger focus on investments. It is also important to note that the GDP (gross domestic product) of the United States is somewhat higher than that of the European Union. (Eroğlu, Dinçer and Hacıoğlu, 2016)

The EU and the USA have both made great progress in putting various policies meant to encourage sustainable consumption into effect. Both areas employ a common approach that centers on educating consumers and raising public awareness. This goal is achieved in the USA through a variety of strategies, including media campaigns,

club organization development, and incorporation into the official school system. On the other hand, the European Union has utilized the Environmental Management and Audit Scheme (EMAS) to get comparable results (Tourais and Videira, 2016).

The Portuguese "Pingo Doce" grocery campaign was one notable and revolutionary effort. Customers discovered that this store was squandering over 30,000 kg of food annually, mostly as a result of overstocking and the application of an erroneous, "anti-human" stock management system. About 40,000 consumers made the decision to boycott Pingo Doce and all other holdings' stores in favor of the Family Farmers' Association of Portugal, which advocates fair trade, local, and regional development in the Algarve. By doing this, they committed to practicing sustainable consumerism. In order to do this, these Portuguese consumers filled the supermarkets with "empty trolley" demonstrations, announcing their intention to refrain from purchasing any food from Pingo Doce until the firm changed its inefficient procedures and stock policies (Luderer, 2023).

1.6.2. Sustainable Connsumption in Emerging Economies

When it comes to attaining sustainable development, developing nations confront distinct obstacles than developed ones. Since their levels of income (GNI) are significantly lower, raising output is the primary socio-economic goal. For emerging countries, high population growth rates may be both a big advantage and a burden. A large population will be the engine of economic growth if resources are used effectively, as it will generate demand for the goods and services that are produced. On the other hand, rapid population increase will strain natural resources, increasing pollution and waste generation. (Gürlük, 2010)

In actuality, developing nations have a significant edge. These nations are still growing, as the name implies. They have the option to choose their own strategies for sustainable development rather than adopting the industrialized economies' methods without considering environmental implications (World Bank, 2003). Developed nations have persistently pursued their economic endeavors without permitting nature to replenish itself. The amounts of environmental contamination have gotten quite high because of this. Conversely, sectors with a significant potential for pollution are not

yet present in developing nations. But high levels of pollution are unavoidably reached as economic development advances. Developing nations can bypass developed nations' experiences in development if they can maintain their current pollution levels and guarantee efficient energy consumption in industry, agriculture, and other sectors (Fisunoğlu, 1997; Gürlük and Karaer, 2003). Developing nations might emulate the environmental regulations that wealthier nations have either established or are attempting to implement. Therefore, by leaving a less contaminated environment and fewer natural resources utilized for future generations, the sustainability principle will be satisfied (Ertürk, 1998).

The issue of resource creation, is the most significant barrier to underdeveloped nations implementing sustainable development plans. Due to their low economic levels, developing nations will find it difficult to provide the funding required to determine sustainable development methods. An estimated $5 billion would be needed to bring developing nations' environmental regulations up to par with those of wealthy nations (LeQuesne and Clarke, 1997). It is now acknowledged that this sum is greater. There exists an additional internal dynamic wherein measures aimed at producing jobs might be subordinated to environmental conservation. Large-scale economic endeavors that generate employment are always backed by the populace in emerging nations. However, by following sustainable tactics, it is feasible to accomplish such economic operations. High-tech projects may be made ecologically beneficial in many cases. In this situation, foreign funding might be used to support developing nations' transfers of ecologically favorable technologies.

It is also a truth that they are competing with the economy of industrialized nations by using the little resources that nature has provided them. Despite having a greater population, emerging nations lag considerably behind wealthy nations in terms of energy consumption, CO2 emissions, and gasoline consumption per capita. Developed economies transfer hazardous wastes directly to underdeveloped nations while using more natural resources or goods reliant on them and releasing more trash into the environment. According to Elliott (1999), a large number of emerging nations are in the position of receiving nations. It is hard to keep an eye on the introduction of these wastes into emerging nations due to their weak economic position. An estimated

20 million tons of ecologically hazardous garbage are transferred annually to poor nations through international commerce (Elliott, 1999).

There is an obvious tendency toward the growth of middle classes with more disposable income as these countries mature and industrialize. Because positional goods have a negative value, this may promote a move towards consumerism. This may have a number of drawbacks. For instance, if people put in more hours at work to purchase these products, stress levels may rise and mental health problems may arise. Furthermore, as a person's home fills up, a larger portion of their income is utilized to pay for storage of these items. The environmental effect is made worse by the expense of transportation, consumption, and manufacturing needed to fuel this cycle. China, for instance, currently emits more greenhouse gases per person than the majority of European nations (Peter Newell, 2005). Nonetheless, a number of rising economies like India, Brazil and China have demonstrated sustainable consumption.

India is a prominent player in developing novel solutions for sustainable development since it accounts for more than one-sixth of the world's population and around one-twelfth of its GDP, according to Nowak, Hirabayashi, Bodine, and Greenfield (2014). As economic growth advances, more people have access to better technology and, consequently, improved living standards. Sustainability is still a major issue for India, though, as concerns about the country's capacity to continue its rapid consumption growth have surfaced. There are concerns about the sustainability of India's present economic trajectory, which is why the Indian government and several domestic and foreign businesses are currently pushing the idea of sustainable consumption. In 2016, Anantharaman M. However, Nowak, Hirabayashi, Bodine, and Greenfield (2014) contend that, similar to previous attempts to define sustainable consumption, it remains undefined in the rapidly developing economies of India due to the attitudes of the populace toward environmental friendliness, their degree of cultural deviation from a particular mode of consumption, and the influence of government policies.Their research examines many notions found in the literature and investigates how these ideas may be used in the context of Indian management. They examine topics like how to make the consumption of products like electronics and hardware more environmentally friendly and how recycling and other more environmentally friendly services could contribute more to meeting society's needs,

given that legislative measures and government support were implemented to enhance and promote these kinds of endeavors. In order to provide a useful definition, they review the idea of sustainable consumption. The fulfillment of fundamental requirements, enhancement of living quality, development and support of cultural variety, preservation of natural resources, and advancement of social justice and equity were the five primary characteristics they identified as indicators of sustainable consumption. Nowak, Hirabayashi, Bodine, and Greenfield (2014) propose that India may move towards a more sustainable future by combining economic growth with responsible resource usage and environmental preservation by including these aspects into the framework of sustainable consumption. This would help the nation as a whole as well as international sustainability initiatives, as India's sizable population and economic clout may have a broad effect. In the end, their study highlights the necessity of a mentality change and the implementation of sustainable purchasing habits to build a wealthy and ecologically aware India.

Per capita, Brazilians use more electricity than Chinese do, and most of that electricity comes from renewable sources like wind, solar, and hydropower. It is noteworthy that Brazil has achieved an astounding 85% grid penetration rate as its principal energy source, even if submetering is still not widely accepted. Brazil's smart power meter data has proven to be a useful resource, offering critical insights into resource consumption and user behavior. This data is an essential resource for supporting planning and monitoring activities (Sparke, 2007).

In addition, Brazil's easy access to renewable energy sources and the increasing use of smart power meters have made the nation a shining example for further research and development. These initiatives aim to examine the enormous potential for improving energy efficiency in residential structures. In particular, installing photovoltaic systems seems like a potential option, especially in light of the implementation of feed-in tariffs that encourage the production of renewable energy and the export of power. Seizing and exploiting these chances will make a big difference in Brazil's continuous efforts to lower carbon dioxide emissions and promote a more ecologically friendly and sustainable economy (Schaeffer et al., 2005).

1.6.3. Sustainable Consumption in Türkiye

Türkiye, a country that connects Europe and Asia, must deal with the complex issue of promoting sustainable growth while addressing the increasing worries about environmental damage. In light of this, adopting sustainable purchasing habits becomes imperative for guaranteeing a more environmentally friendly future.

Türkiye's Third Five-Year Development Plan (1973–1977) was the first to address environmental issues. Evaluations were conducted following the Fifth Five-Year Development Plan in order to create new policies that would guarantee the sustainable use of natural resources and their transmission to future generations. For the first time, environmental concerns were integrated into other sectoral policies and the strategy that prioritized sustainable development in the Sixth Five-Year Development Plan (1990–1994). Environmental concerns were integrated into social and economic policies and sectors in the Seventh (1996-2000) and Eighth (2001-2005) Five-Year Development Plans. Türkiye has adopted the EU's policy for sustainable development with the implementation of the Ninth Development Plan (2007–2013). The National Environmental Strategy and Action Plan and the Project on Integration of Sustainable Development into Sectoral Policies are two significant examples of tangible research on sustainable development conducted in Türkiye (Çetinbakış and Şahin Kutlu, 2022).

Türkiye has made progress in encouraging environmentally friendly consumption habits at the national level. The nation actively engages in global programs such as the Sustainable Development Goals (SDGs) of the United Nations, with a focus on SDG 12: Responsible Consumption and Production. Furthermore, the government has instituted many regulations with the objective of promoting environmentally sustainable activities. These policies include the National Waste Management Plan and the Zero Waste Master Plan, which prioritize resource recovery and waste reduction. Moreover, programs such as the Blue Card program encourage appliances to use less energy, which lowers greenhouse gas emissions (Tan, 2021).

Notwithstanding these endeavors, a number of obstacles impede the extensive implementation of sustainable purchasing habits in Türkiye. Educating consumers about how their purchase decisions affect the environment is one difficulty. Although

there is a growing consciousness, a considerable segment of the populace still lacks familiarity with the notion of sustainable consumption and its advantages. Furthermore, one obstacle is the restricted availability of sustainable choices. In many areas, the cost and accessibility of eco-friendly goods, such organic food or energy-efficient appliances, sometimes lag behind those of traditional alternatives. (Küçükyörük and Kurtuldu, 2022)

CHAPTER TWO
SUSTAINABLE CONSUMPTION BEHAVIOR

2.1. CONSUMPTION BEHAVIOR

Consumption is now defined as “a process involving the acquisition, use, or destruction of goods and services to meet physiological, psychological, and sociological needs.” (Torlak, 2000:21) Previously, the term represented the desires and wishes to fulfill mandatory needs, such as clothing and nutrition. Accordingly, whereas a consumer is defined as an individual who buys, discards, or utilizes items and services (Goworek et al., 2012), customers are those who buy and use goods and services from a certain seller within a particular period of time and procedure (İslamoğlu and Altunışık, 2010; Odabaşı, 2013).

Following the Industrial Revolution, there was a surge in production, which led to the creation of a "consumer society" where people were obsessed with buying things they didn't need (Kayan, 2018: 15). But today's consumer behavior, or consumption, encompasses more than just the buying and utilizing of goods and services; it also involves people's behavioral and emotional responses (Kardes, Cronley, and Cline, 2011).

In an effort to understand how and why people engage in consumption behavior in response to different stimuli, behaviorists have developed classical models such as Marshall (1890), Pavlov (1896), Veblen (1899), Freud (1904), and Maslov (1943), as well as more modern models like Engel, Kollat and Blackwell (1990), Howard and Sheth (1960), Nicosia (1976), and Assael (1995). By using these models, we can see that the main factors influencing consumption behaviors are sociological factors like family, culture, and status, psychological factors like attitude, belief, perception, motivation, and learning, and personal factors like income level, occupation, gender, and education (Eroğlu, 2012).

People's values—which are affected by their aims, beliefs, perceptions, and attitudes—explain their purchase and consuming behavior, according to research on how and why consumer behavior happens (Babin et al., 1994; Teller et al., 2008).

When discussing how a person's consuming behavior impacts them, the idea of "value" has been examined in terms of psychology, sociology, philosophy, and economics (Joung, 2013). Value has come to be recognized as a social or personal component that is valued over other beliefs as a unique state or life objective in opposition to a different or opposing state or objective (Rokeach, 1973). Furthermore, "values are explained in the form of dichotomies such as good versus bad, beautiful versus ugly, with the criteria of desiring desires, likes, pleasures" (Hofstede, 1978). But values are also viewed as desirable, situation-neutral objectives that serve as a general direction for an individual or a group of people (Schwartz, 2012).

The "Gains, Costs and Transaction-Values" approach (Monroe, 1979), the "Perceived Value" classification (Sheth, Newman, and Gross, 1991), and the "Dilemma of Hedonistic and Utilitarian Values" approach (Holbrook and Hirschman, 1982) are the most well-known classifications of which values influence consumer behavior. Value is described as an interactive, relative preference experience and is divided into eight classes: adequate, excellent, pleasant, aesthetic, prestigious, ethical, and status in Holbrook and Hirschman's (1982) hedonistic and utilitarian value dichotomy approach. In addition, it may be categorized as having active or passive control over the object, being self- or other-centered in the social dimension, and being hedonistic (intrinsic) or utilitarian (extrinsic). Utilitarianism is a notion near to motivation driven by external causes, whereas hedonism is closer to intrinsic motivation (internal forces prevail) (Arnold and Reynolds, 2003).

Although Schecter (1984) refers to the entire purchasing behavior as "perceived values" without breaking it down into quality and quantity or objective and subjective elements, Monroe (1979) and Doyle (1984) explain perceived value as "quality for the price paid" in the classifications of which of these values influences consumer behavior. Despite this complexity, two subcomponents—hedonic and utilitarian values—are commonly used in the literature to quantify consumer value (Babin et al., 1994).

Prior to discussing hedonistic consumption, it is important to comprehend hedonism as a school of philosophy. According to Holbrook and Hirschman (1982) and Aydın (2013), hedonism is the most enjoyable lifestyle pursued or dedicated to pleasure, whereas unusual conduct in which a person is totally committed to pleasure

is called hedonism. According to Babin et al. (1994), hedonistic consumption value is the value generated from the multifaceted, imaginative, and affective parts of the consumer experience.

According to Babin et al. (1994), utilitarian consumption is a consumer behavior that is based on efficient and logical behavior that seeks to solve issues, accomplish certain objectives, and finally acquire optimal value. When it comes to utilitarian consumption, consumers make decisions based on rational reasoning. In this method, the customer concentrates on a product's functional aspects while the approach considers the usefulness of the consumed goods (Babin et al., 1994).

In the modern day, when environmental issues are of grave concern, the primary causes of these issues are production methods, the growing global population, and consumption patterns that cannot continue at their current rates. Globally, unsustainable behavior is depleting energy, water, and forest resources. The loss of biodiversity, depletion of minerals, and air pollution all contribute to the breakdown of the ecological equilibrium (Connell and Kozar, 2014). Due to rising consumer numbers, overconsumption, and the mounting environmental impact of these activities, there is an increase in both the quantity of things purchased and needless consumption (Ruirui, 2014). Until recently, producers and population growth in many of the world's poorest countries were held responsible for environmental degradation by public interest policy makers and consumers, especially those who reside in wealthy nations. The effects of an increasingly pervasive consumer culture were not sufficiently taken into account (Murphy and Cohen, 2001). The majority of studies on the connection between contemporary consumption patterns and environmental issues look at consumption at the individual level and concentrate on the problem's symptoms rather than the primary cause of the issue (Heiskanen and Pantzar, 1997; Kilbourne et al., 1997). Nonetheless, it is well recognized that outside circumstances, in addition to personal characteristics, also play a significant role in influencing people's purchasing habits. (Stern, 2005). Consequently, establishing the necessary ecologically conscious purchasing habits in communities is a major responsibility of local governments, who actively participate in environmental management (Şengül, 2002; Üste, 2005).

The planet's environment is suffering irreparably from the current consumption habit. Overconsumption by wealthy people or wealthy classes exacerbates the poverty

issues facing developing countries or lower classes (Iyer and Munchy, 2009). Consumer behavior in postmodern culture is typified by extremes of overconsumption and anti-consumption (Kırmızı and Baboğul, 2012). The concept of anti-consumption is expressed in the literature using various terms such as consumer revolts, consumer boycotts, ethical consumption, and non-consumption. It can range from the preference of certain products for ethical or ecological reasons to the complete reduction of consumption or boycott of certain product categories (Lees and Hill, 2002). Resistance to the influence or results of the prevailing consumer culture is a common feature of anti-consumption movements (Cherrier, 2009). According to research on common anti-consumption behaviors, the meaning attached to them, and how they fit into a larger framework of sustainable living, anti-consumption toward sustainability is a balance between personal needs and environmental protection and is symbolized by the 3Rs: refuse to consume, reduce, and reuse (Black and Cherrier, 2010).

With their study attempting to ascertain to what degree sustainable activities are viewed as "normal" or "abnormal" by customers and how these views may be employed in building sustainable marketing strategies, Rettie et al. (2012) introduce a novel perspective to the field of sustainable marketing. The authors state that prior research has demonstrated that whilst certain sustainable activities are seen as "no longer normal," others have deviated from sustainability due to this perception. The authors contend, utilizing the idea of "social normalization," that while some social processes have been labeled as "abnormal" and "no longer normal," others have acquired widespread acceptability and have come to be understood as regular, everyday occurrences. For instance, whereas most customers considered using a basket or shopping bag when they went shopping in the 1960s to be normal, this practice gradually lost its acceptability when retailers began giving their patrons plastic bags. In a similar vein, recycling has gained widespread acceptance in nations like the UK and Canada. It is recommended that marketers present unsustainable habits as "no longer normal" after successfully persuading consumers to undertake sustainable activities by framing them as "mainstream and normal."

When it comes to sustainability, marketing has thus far adopted a reactive and passive approach. It has been happy to create substitutes that are frequently more costly and ineffective, catering solely to the market niche of consumers who have healthy

lives. In contrast to the past, Achrol and Kotler (2012) recommend a new, proactive strategy for businesses that includes the following: (i) educating consumers about the negative effects of wasteful consumption; (ii) expanding the market for environmentally conscious products by creating high-quality goods at standard market prices; and (iii) refraining from marketing any particular goods or technologies. At this moment, critical marketing provides an alternative viewpoint that may compete with the mainstream marketing strategy by moving the emphasis from growing consumption to other goals like sustainability, quality of life, and contentment. The critical marketing position holds that rather than emphasizing excessive materialism and unsustainable spending, marketing should concentrate on giving benefits, satisfying needs, and producing satisfaction.

The notions of product sharing, repair-maintenance, and waste recovery through sustainable marketing instead of increased consumption are brought up by the environmental catastrophe brought on by excessive and unsustainable consumption. However, marketers alone won't be able to make a more significant contribution to sustainability. Peattie and Crane (2005) state that active taxes, education, industrial policies, public expenditure, and investment are particularly effective means of promoting sustainability as a social policy. To put it briefly, firms must take into account the state's perspective on sustainability in order to fulfill their objectives for sustainable marketing.

It is suggested that five evolutionary tendencies are the root cause of contemporary environmental and societal issues in a research (Griskevicius et al., 2012) looking at the evolutionary process of harmful and environmentally detrimental human behavior. These are: (1) the propensity for personal interests; and (2) the incentive of the relative as opposed to the absolute condition. (3) social mimicry; (4) the propensity to ignore the future; and (5) the disdain for impersonal issues. To suggest that we should value the needs of future generations is an incorrect approach to tackling one of the hereditary inclinations of "not caring about the future". The authors contend that emphasizing the effects of unsustainable conduct on the current generation as opposed to future generations is the best course of action (Griskevicius et al., 2012). Important hints on how to enhance sustainable consumption may be found in ancestral patterns, which can aid marketers. A few examples of these include

focusing on local sustainability goals rather than just the environment, communicating in a more appealing and upbeat manner to boost motivation, presenting sustainability as more attainable than goals that are difficult or even impossible to achieve, and making sustainability as tangible as possible rather than an abstract idea (Griskevicius and Kenrick, 2013).

Therefore, local administrations should carry out the essential information operations, considering that there may be a lack of knowledge about environmental problems and their causes, particularly current consumption patterns and quantities. Local governments may effectively disseminate environmental information to the public, increase awareness of these concerns, and modify individual consumption habits by organizing campaigns, instructional pamphlets, and other initiatives. Beyond only raising awareness of environmental issues, local governments should provide a wide range of services that encourage ecologically responsible purchasing habits. Furthermore, it is evident that local governments have the ability to indirectly influence the intended individual consumption habits through the control of corporate operations through the implementation of environmental laws, regulations, and punishments (Örten, 2009).

2.2. DEFINITION OF SUSTAINABLE CONSUMPTION BEHAVIOR

The World Commission on Environmental Development defined sustainable consumption in 1987 as attempting to satisfy present needs and desires while taking into account resources that can satisfy the needs and wants of future generations and without compromising on this problem (Hayta, 2009). Understanding sustainable consumption is becoming more and more important as a result of the rise in production and consumption that has occurred, as well as the fact that this process has reached a stage where it will negatively impact the environment, animals, and human health. The ease and speed with which information may now be accessed because to evolving technology has raised consumer awareness.

In the literature, sustainable consumption behavior has been framed in a number of ways. The two elements of sustainable consumption that Kiracı and Kayabaşı (2010) explored were actual and superficial consumption behavior. Two

perspectives on sustainable consumer behavior were examined by Şener and Hazer (2008) and Özgül (2010): environmental orientations and saving behaviors. According to Doğan, Bulut, and Çımrın (2015), their study on sustainable consumption behavior follows a four-dimensional framework. These measurements are (Doğan, Bulut, and Çımrın, 2015) as follows: Environmental sensitivity refers to the consumer's refusal to buy environmentally friendly items. A non-need purchase is one that a customer makes when they don't require it. The actions customers take to save energy are referred to as saving. Reusability is the ability of consumers to repurpose discarded materials.

Six sections provide a summary of the accepted attributes and features of sustainable consumption (Fien et al., 2008; Quoquab and Mohammed, 2020). According to Haider et al. (2022: 4), these include: (1) meeting people's basic needs; (2) putting life quality above certain material standards; (3) consuming less; (4) responsible and careful consumption taking future generations into consideration; (5) making decisions with a socially and environmentally friendly approach; and (6) minimizing waste and pollution. Within this framework, sustainable consumption behavior refers to how consumers choose to protect the environment in their day-to-day activities by accounting for the environmental factors that are social, ecological, and economic—these three categories comprise the core elements of sustainability (Balderjahn et al., 2013). Thus, in order to prevent or at least lessen environmental damage, consumers with sustainable consumption behaviors favor recyclable packaging, eco-friendly products, and brands that offer social benefits (social dimension). They also avoid excessive consumption (economic dimension) in order to safeguard the financial well-being of both themselves and society in the future (Suarez et al., 2020).

The scope of sustainable consumption is divided into two categories: lowering total consumption levels (the economic aspect of consumption) and altering current consumption patterns to align with the goals of sustainable consumption (the ecological aspect of consumption) (Fuchs and Lorek, 2005; Schaefer and Crane, 2005; Mont and Plepys, 2008). Various research construct sustainable consumption behavior in different ways based on these two fundamental understandings. Based on the characteristics of Doğan et al. (2015), this study examines sustainable consumption habits in four areas: environmental awareness, non-essential consumption, saving, and

reusability. The concept of environmental sensitivity pertains to selecting products that do not negatively impact the environment by incorporating eco-friendly materials into their composition; the concept of non-essential consumption involves replacing unnecessary products with new ones; the concept of saving pertains to the inclination to minimize costs associated with product use; and lastly, the concept of reusability involves prolonging the life of current products or avoiding needless use of electronic devices (Doğan et al., 2015).

The term "green consumption behavior" is used interchangeably with "responsible sustainable consumer behavior" (Hosta and Zakbar, 2021), "ecological behavior" (Kaiser et al., 1999), "green and ethical consumerism" (Tripathi and Singh, 2016; Quoquab and Mohammad, 2017), "green consumer behavior," "environmentally friendly behavior," and "green consumption behavior" when referring to sustainable consumption behavior in the literature. The intricate and erratic character of sustainable consumption is partially to blame for this (Piligrimiene et al., 2020).

2.3. DIMENSIONS OF SUSTAINABLE CONSUMPTION BEHAVIOR

The literature discusses sustainable consumption using a number of sub-dimensions, and attempts are made to quantify the sustainable consumption habits of individuals. Real sustainable consumption behavior and superficial (spurios) sustainable consumption behavior are the two elements of sustainable consumption identified by Kiracı and Kayabaşı (2010). When we talk about superficially sustainable consumption, we primarily mean sustainable consumption for financial gain and the capacity to reap financial rewards from the activity. However, in actual sustainable consumption practices, financial gain is not the primary consideration. The study's findings indicate that people are more likely to display surface-level sustainable consumption behavior than they are to demonstrate genuine sustainable consumption behavior.

According to Özgül (2010), there are two aspects to sustainable consumption: environmental attitudes and the propensity to save. The inclination to save is the more preferred sustainable purchasing behavior than outright environmental protection. According to Şener and Hazer's (2008) findings, women exhibited greater caution

when it came to actions directly related to the use of financial resources, such as "turning off the lights in rooms they do not use," "not running the washing machine and dishwasher before they are fully loaded," and "turning off devices such as televisions and stereos when they are not listening or watching." They also showed greater caution when it came to actions directly related to the use of financial resources, such as "collecting recyclable products like glass separately from others" and "turning off the lights in rooms they do not use" and "paying attention to products such as detergents, shampoos, sprays and deodorants that do not harm the environment when purchasing them".

At the 2004 G8 meeting, former Japanese Prime Minister Junichiro Koizumi introduced the 3Rs concept—reduce, reuse, and recycle—which represents the characteristics of sustainable consumption (Visvanathan and Kumar, 2007). In their investigation on the aspects of recycling and reuse in Mexico, Corral-Verdugo (1997) discovered that while beliefs are more influential in shaping intended behaviors, abilities are more influential in shaping actual behaviors. However, in his study conducted in China, Li (2003) found that three factors—gender, age, and household income—are effective in exhibiting sustainable consumption behavior due to recycling. Older women and women with lower household income levels are more likely to exhibit sustainable consumption due to recycling, according to the research's findings.

2.3.1. The 3Rs of Green Consumption

The three methods of disposing of garbage produced by modern customers during and after purchases are categorized as Reduce, Reuse, and Recycle. Environmentally conscientious customers may guarantee that less waste is created or that the garbage they produce is utilized to produce new products by adopting the "3Rs"—reduce, reuse, and recycle. Individual trash, such as food packages that are thrown away or plastic forks and spoons, can harm rivers and seas due to weather-related occurrences like storms or wind up in places where wildlife is at risk. Products can be recycled, reused, or made with fewer resources, which will lessen their harmful effects on the environment and lessen environmental harm. As a result, the reduction

strategy mostly emphasizes buying. Buying items with less packaging or those that can be composted (and therefore become natural fertilizers) are two examples of how to put it into practice. Reuse is the practice of using acquired goods over and again. Reuse behavior includes actions like buying beverages in reusable containers or utilizing cloth shopping bags. Recycling is the process of gathering spent materials to make new ones when a product's usage has over (Schultz, 2002). It is evident that recovery and recycling are used interchangeably. But recycling may also be thought of as an umbrella term for the ideas of reuse and recycling (www.tudam.org.tr)

Reuse, reduction, and recycling are essentially distinct activities. The least popular green consumption strategy is reduction. Though it is carried out more frequently, reuse behavior is comparable to reduction behavior. The behavior of recycling is not like the other two. Recycling behavior is assured (Barr et al., 2001: 78). Recycling attempts to keep waste out of the environment and contribute value to the economy, but it is never a guaranteed solution for getting rid of waste. Because energy and labor are consumed in all these operations, even if the items are remanufactured or utilized as recycling materials (Öztürk, 2010).

Once a product has been utilized, it can either be thrown away directly in landfills or recycled and remanufactured. The study literature has largely ignored post-use elements of consumer behavior, with the majority of studies concentrating on recycling attitudes, practices, and motives (Peattie, 2010). While consumer items like food are also significant, durable goods like vehicles and electrical appliances are usually linked to the environmental effects of their usage and after-use. Foodstuffs are affected, for instance, by the length of time and temperature at which they are chilled or heated, by whether they are prepared on a stovetop or in a microwave, and by whether waste is produced (Peattie, 2010). In light of the research on how customers would use and discard the product beginning with the stage of product selection, three common environmental consuming behaviors are described.

2.3.1.1. Reduce

The foundation of consumer behavior in the reduction component of green consumption behavior is careful product selection and avoidance of overly packaged

goods. When selecting white goods, consumers who practice reduction behavior choose products that use less energy and water, produce less trash by selecting products that are economically proportioned or less packed.

According to the Environmental Regulation, which went into effect in our nation on January 1, 2019, customers must pay a bag charge if they wish to use plastic bags while they purchase. The goal of this practice is to reduce the unintentional usage of plastic bags, which contribute significantly to environmental degradation. Many firms began offering cloth bags to customers with slogans like "Buy bags for life" and "Use them every time you go shopping" in an effort to boost the usage of cloth bags after plastic bags became subject to a fee. According to Benton (2015), we can break the habit of using disposable items if we can break the habit of using plastic bags.

The "Don't waste your bread" campaign was started to decrease food waste and increase awareness of this problem, in addition to lowering the usage of plastic bags. This campaign's primary goal is to educate and increase public awareness of the need to stop bread waste. With simple actions we can all do at home, the campaign seeks to guarantee that less food is wasted. By avoiding the unnecessary usage of resources, the ecosystem will gain from this.

2.3.1.2. Reuse

The 1970s saw the emergence of the environmental movement, which raised consumer awareness of environmental issues and the need for environmental preservation. The concept of reusing and recycling garbage started to take shape at the same period. Put another way, reuse refers to use a product repeatedly until its expiration date. In simple terms, it indicates that trash may be collected and cleaned, as with items in glass bottles or with deposits, and then utilized repeatedly until the end of its useful life.

Encouragement of "repairing or fixing" as opposed to "throwing away" as the initial conduct is the goal of reuse or repurpose behavior. Offering maintenance and repair services for electronics and home appliances at a lower cost than the cost of a new product, however, is the first step toward achieving this habit. Second, in addition to product recycling facilities, the circular economy should be fostered by reusing

different resources (Sleiman and Chahine, 2019). Using bought yogurt and cheese boxes as flower pots or storage containers rather than tossing them away is an example of reuse or reusing behavior. Manufacturers' usage of deposit packing is another illustration. The law on the amendment of certain articles in the Environmental Law, which was published in the official gazette on December 10, 2018, states as follows: "ADDITIONAL ARTICLE 12- The Ministry makes the deposit application mandatory as of 1.1.2021 for the packages it will determine in order to prevent environmental pollution." As a result, sales locations that provide packaged goods subject to the deposit must take part in the system for gathering deposit applications." In order to use resources more efficiently, deposit packing will be required as of 2021 due to the inclusion of the article (Güneş, 2019)

Different consumers see this activity in various ways. Purchasing rechargeable batteries and reusing them, for instance, or bringing toys and clothing to charitable organizations and making sure the needy receive them are a few examples. Reuse or reuse habit also includes avoiding single-use or throwaway products like napkins, razor blades, plastic cutlery, cameras, and batteries, and keeping items in lidded boxes rather than foil or cling film.

2.3.1.3. Recycle

Over the past thirty years, recycling systems have evolved significantly, particularly in the 1990s. Recycling has grown in significance as people have become more aware of environmental issues and worries about environmental degradation have started to appear, which is one of the causes for this growth. Recycling initiatives and recycling practices were initially seen in the actions of companies and private sellers of used goods. But as the recycling movement gained momentum in the late 1980s, efforts were made to raise public awareness of recycling by establishing the appropriate policies to encourage waste recycling, which lowers landfill costs and increases municipal garbage disposal services. Municipalities now handle the recycling duties. Recycling is provided by municipalities in conjunction with government incentives, preserving resources and generating revenue for them.

"The process by which previously used materials are collected, processed, remanufactured and reused" is the definition of recycling (Schultz, Oskamp and Mainieri, 1995). Recycling keeps resources from being wasted that otherwise would have been thrown away and makes it possible to acquire new goods by reusing them in the production process. Recycling-related wastes are processed by burial, refilling, and incineration. These procedures decrease quantities, save money, and increase the longevity of the items. Recycling has positive impacts on the environment in addition to being economically useful. Recycling helps us save energy, minimize pollution, slow down the rate of climate change, and lessen the strain on biodiversity by lowering the requirement for raw materials (EPA, 1999; Gündüzalp and Güven, 2016). Long-term national recycling initiatives also increase and preserve limited resources. If disposed of improperly, waste from consumption can provide significant health risks (Miller et al., 2000). For this reason, recycling is seen to be crucial to a successful solid waste management system.

By separating trash at its source, recycling aims to prevent wasteful resource usage and minimize rubbish output. Precious metals (iron, steel, copper, lead, etc.), paper, plastic, glass, and electronic wastes may all be recycled or reused to save energy and stop the depletion of natural resources. Reusing old paper in paper manufacture, for instance, decreases air pollution by 74–94%, water pollution by 35%, water consumption by 45%, and one ton of waste paper may be added to paper pulp to save chopping down a tree (Öztürk, 2010).

Examining recycling habits reveals a societal conundrum. This is an excellent illustration of how acting in one's personal interest and influencing the interests of the environment may clash. Participating in recycling programs allows community members to benefit the general welfare. When operating in one's own best interests, recycling won't occur. This is because, in terms of sorting and transporting garbage to the recycling station, recycling entails additional costs for the person (Von Borgstede and Biel, 2002: 1). Recycling is one of the environmental activities that the majority of customers practice (Pickett-Baker and Ozaki, 2008). The majority of customers may exhibit this environmental behavior because they are pro-environment and think that recycling current items is a more ecologically responsible option than using fresh raw materials to create new ones.

During the 1990s, Türkiye has achieved significant advancements in the recovery and recycling of solid waste. Public awareness has been effectively raised via the work of non-governmental organizations (NGOs) and municipal authorities. To separate the components of rubbish that are made of paper, plastic, metal, and glass, several initiatives have been started. Additionally, recycling facilities equipped with cutting-edge technology have been constructed. Paper (white office paper, cardboard, newspapers, etc.), plastics (plastic bags, containers, and other forms of packaging made of plastic), batteries, glass, metal, steel, and tires are among the resources that may be recycled (Bayraktar, 2006).

Marketers frequently employ reverse logistics, also known as a reverse distribution channel, in the recycling industry (Arnould et al., 2004). Reverse distribution, which is based on recycling waste materials, is a procedure that goes against the conventional physical flow of waste products and reusable packaging from the manufacturer to the consumer. Marketers need to persuade customers to perform this self-sorting. Additionally, by utilizing recycling initiatives as a component of their business plan, the organization may improve its brand and image in the environmental space. Recycling is an element of marketing's expanding social duty in the modern world as its influence on society grows (Zikmund and Stanton, 1971; Bayraktar, 2006).

Reducing the need for new resources, cutting manufacturing and transportation energy costs, and repurposing garbage are the three advantages of recycling as a waste minimization strategy (Tam and Tam, 2006).

Thapa (1999) investigated college students' environmentally conscious behavior. The study's findings show that between 56 and 71 percent of the participants recycle a lot of materials (glass bottles, jars, aluminum cans, and old newspapers) and separate their waste into recyclable and non-recyclable items. Approximately 46% of those surveyed said they don't purchase goods made of recycled materials, and 39% said they don't purchase goods packaged in aerosol cans. Furthermore, 29% of respondents said they purchase these goods because of the recyclable or reusable packaging.

Recycling is an issue for many scholars. First of all, recycling comes with unstated expenses. These expenses are associated with the energy and water consumed. Secondly, not all materials can be recycled endlessly. Fibers from

cardboard and paper can last six or seven times. With metals, however, things are not the same. Certain metals, like copper, have the potential to be recycled endlessly. In actuality, though, some copper is lost with each cycle. This also applies to cans made of aluminum. Nothing on the planet can be recycled in its entirety. As a matter of fact, the majority of materials—even those that we consider recyclable—are not. Certain goods are completely non-recyclable, such as touchscreens for iPhones. Recycling behavior is the greatest course of action for demonstrating green consumption behavior, which starts with minimizing consumption and reusing previously acquired items.

2.3.2. Sustainable Consumption Behavior in Developed Countries

Globally, people who live in industrialized nations are part of a consumer culture that provides them with a wide range of options and luxuries. The fundamental issue facing the modern economy is how to protect the environment, which is being quickly contaminated by human activity and is being depleted of its resources, so that future generations can continue to live in it. Consumption acts have a part in this conflict both directly and indirectly. People will always do harm to the environment through their product selections and consumption habits. The concept of sustainable consumption here refers to a movement that seeks to reduce these effects.

The concept of "sustainable consumption" is how the idea of sustainable development is reflected in consumer behavior. Natural resources are in danger of being depleted, which makes it necessary to question how consumption affects the environment. The need to change current consumption habits into sustainable ones has also been voiced frequently as a result of the continuous rise in consumption in recent years, especially in developed nations. Sustainable consumption, at least in developed countries, entails using less natural resources (Cooper, 2002). A shift from a linear to a circular economy should be made in order to utilize less energy and natural resources and to generate less trash.

By changing their consumption habits to more sustainable ones, individuals support the concept of sustainable consumption. The impact of individual consuming habits on environmental problems is evident when one considers that these behaviors

account for 30% to 40% of environmental problems in industrialized nations (Hirschl et al., 2003). Through product consumption and the deterioration of the natural environment, the consuming habits of the individuals that make up the society result in the use of natural resources (coal, oil, natural gas, etc.) either directly or indirectly (Munksgaard et al., 2002). For example, the process of directing items for human use (supply-production-distribution) accounts for 70–80% of energy consumption (Moll et al., 2005). Thus, in order to understand sustainable consumption, individual consumption patterns are investigated.

Unsustainable consumption, particularly by wealthy households, was identified as the primary driver of worldwide environmental degradation during the UN-organized Agenda 21-Rio Earth Summit. Furthermore, American homes led the world in carbon emissions to the climate, with 21 percent, according to OECD figures from 2008. In addition, families in industrialized nations are responsible for 35% of the global environmental harm brought on by unsustainable consumerism. (Başar, 2016)

Only 10–30% of the carbon emissions produced by EU member states may be directly linked to cooking, heating, and vehicle usage in homes. The production processes for goods and services are primarily responsible for the majority of carbon emissions from consumption. For instance, because the goods and services that developed nations consume are produced across a wide range of global locations, the environmental pressures brought on by these nations' consumption reach beyond national boundaries and harm the environment globally (EEA, 2010a). Because of this, input-output techniques that compute the ensuing environmental pressures show that consumption in industrialized nations accounts for 40% of global carbon emissions brought on by consumption. In industrialized nations like Belgium, Austria, the Netherlands, Denmark, and Sweden, this percentage exceeds 50%. According to Peters and Hertwich (2008), the consumption of goods imported from outside of Europe is responsible for at least half of the carbon emissions in member states of the European Union. For instance, between 1996 and 2004, the amount of imported materials used per person in Germany grew from 69 to 74 tons (EEA, 2010b).

2.3.3. Sustainable Consumption Behavior in Emerging Countries

In order to assess consumers' sustainable consumption behaviors, National Geographics and the research firm GlobeScan polled 14,000 people in 14 countries. The survey covered topics such as energy use, natural resource conservation, transportation preferences, food sources, and the use of environmentally friendly products in place of conventional ones. It also gauged respondents' attitudes toward sustainability and the environment as well as their level of knowledge about environmental issues. Based on the research findings, it was concluded that emerging nations had more effective consumption patterns. Compared to customers in wealthy nations, consumers in emerging countries feel more accountable for finding solutions to environmental issues. Compared to consumers in wealthy nations, consumers in six out of ten developing country populations claim that environmental concerns have a negative influence on their health. Furthermore, research has shown that people in developing nations tend to live in smaller homes, favor more eco-friendly products, spend less on pricey electronics, prefer to walk, cycle, or take public transportation, and prefer to live close to the distance they travel most frequently. In contrast, people in industrialized nations have been seen to live in larger homes, use air conditioning most of the time, use less ecologically friendly items, and utilize public transit seldom (Altıok and Babaoğul, 2008).

2.4. THEORIES TO EXPLAIN SUSTAINABLE CONSUMPTION BEHAVIOR

Certain "models" of what behavior is, what its antecedents are, and how it is influenced, shaped, and constrained are necessary to understand consumer behavior and policies that aim to impact it, either directly or implicitly. The causal linkages between the dependent and independent variables make up these models. Through the causal relationship between variables, theories explaining green consumption behavior aid in our understanding of the social and psychological influences on consumer behavior.

Regarding the kinds of variables that the models try to quantify, there are differences in how the behavior of green customers is modeled. Firstly, several techniques are available that analyze and simulate behaviors. These encompass beliefs, principles, routines, and individual standards. It is believed that they are a result of traits and processes that have an internal impact on the person. Alternative methodologies examine monetary and legal inducements, organizational limitations, and societal standards that are believed to impact the person outside. Endogenous and exogenous methods are the two categories into which theories that study green consumer behavior fall in this instance. It is crucial to distinguish between these two methods in the discussion of environmentally friendly consumption because every strategy suggests a completely new way to conceptualize society and individual transformation. The second method, the exogenous approach, views changes in external conditions as a crucial effect on human behavior, whereas the endogenous approach predicts that changes in consumption will arise from changes in individual beliefs, attitudes, and norms (Jackson, 2005b).

General considerations of environmental consumption behavior are addressed in conjunction with other behavioral models including the rational choice model, which is grounded on the conventional economic theory of consumer behavior. The literature contains criticisms and recommendations in relation to the constraints of rational choice theory. Adding expectancy-value models to the rational choice model is one way to address the paradigm's flaws. (Sparks and Shepherd, 2002) Furthermore, there have been several initiatives to approach the study of social behavior from other angles. The value-belief-norm theory created by Paul Stern and associates is one of these models. The purpose of this theory's development was to comprehend behavior related to environmental conservation.

The primary means of examining the variable influencing green consumption behavior is through demographic factors. However, because these traits are insufficient to fully explain environmental behavior, psychographic factors have begun to be used to study environmental consuming behavior. Theories to examine if particular characteristics may predict behavior were established in the late 1970s (Corbett, 2005). The theories of planned behavior (TPB) and reasoned action (TRA) are applied in this discipline.

2.4.1. Theory of Reasoned Action

One of the social behavior theories that is most frequently used is the Theory of Reasoned Action (TRA). It is a theory based on Dulany's (1968) "Theory of Propositional Control" that was created by Martin Fishbein and Icek Ajzen in the late 1970s in the field of social psychology. It is consistent with the instrumentalism hypothesis (Ryan and Bonfielt, 1975; Jackson, 2005b; Akbıyık, 2012). Fishbein and Ajzen created the very comprehensive theory of social behavior known as TRA, building on a lengthy history of social psychology research on the attitude-behavior link.

This theory's foundation is expectation value. Individuals act in ways that are determined by their values and beliefs on the implications of their actions. Fishbein and Ajzen (1975) suggest that attitudes toward the activity of assessing the outcomes are a function of beliefs about the outcomes. One of the two primary factors influencing people's intention to perform in a desired manner is their attitude toward conduct. The antecedent and primary determinant of conduct in the Fishbein-Ajzen model is the desire to behave.

Intention in TRA indicates a person's readiness to carry out a specific activity. Attitudes toward conduct and subjective standards are the variables that predict intention. Subjective norms have to do with how a person's social surroundings influence their conduct. An additional component is attitude, which refers to how one feels about carrying out the activity (Akbıyık, 2012).

There are significant differences between a basic expectancy-value theory and TRA. The subjective norm of the individual, according to Fishbein and Ajzen, has the second-largest impact on the intention variable in the model. Subjective norm refers to an individual's interpretation of what significant others in their immediate environment believe about the conduct that has to be displayed (Ajzen and Fishbein 1980). The opinions of others that hold significance for the individual should be construed as the subjective standard within this framework, rather than the individual's personal convictions regarding the morality of the activity. In the literature, this last construct is referred to as the subjective (personal) norm.

The idea has been used by Fishbein, Ajzen, and others in a wide range of situations to analyze many behaviors, including voting, family planning, food, women's occupational orientation, abstinence from alcohol, and mode of transportation (Ajzen, 1991). Additionally, it has been specifically applied to comprehend and forecast consumer purchasing behavior (Ajzen and Fishbein, 1980). In contrast to certain earlier models of consumer behavior (such the Howard and Sheth model), TRA enables in-depth investigation of particular facets of customer desire and action. One of the models that is most commonly used in the literature to study environmental behavior is TRA. What is frequently referred to as "green behavior," such as recycling habits, mode of transportation preferences, energy usage, water conservation, and dietary choices, has been understood, predicted, and explained by the model (Staats, 2003).

The fact that most empirical studies based on TRA are restricted to the information that may be gleaned via questionnaires and/or interviews is a significant drawback. People must be questioned about their attitudes (beliefs and assessments of results), subjective norms, and goals while participating in surveys. The capacity of the theory to link intention to its antecedents (personal standards and attitudes) is often seen as a sign of its effectiveness. Seldom have studies been conducted to examine intentions in addition to actual behaviors. Conversely, intentions are typically seen to be a reliable indicator of conduct. This is only true, though, in specific circumstances—that is, when the conduct in issue possesses a respectable level of volitional control. Because of this, Ajzen (1985) established the Theory of Planned Behavior (TPB) in response to TRA's inability to adequately explain people's entirely voluntary and uncontrollable activities (Akbıyık, 2012).

2.4.2. Theory of Planned Behavior

The theory of planned behavior (TPB) was created by making the case that an individual's conduct in TRA is shaped by a variety of external influences in addition to their own free will (Ajzen, 1991). Similar to TRA, TPB makes the assumption that a person's desire to carry out an action determines how well they execute it. The subjective norm, which measures how a person's social environment affects their

behavior, attitudes, which show a person's willingness to engage in a particular behavior, and the perceived behavioral control variable, which measures a person's ability to engage in a behavior correctly, all predict intention.

The theory of planned behavior (TPB) was created by making the case that an individual's conduct in TRA is shaped by a variety of external influences in addition to their own free will (Ajzen, 1991). Similar to TRA, TPB makes the assumption that a person's desire to carry out an action determines how well they execute it. The subjective norm, which measures how a person's social environment affects their behavior, attitudes, which show a person's willingness to engage in a particular behavior, and the perceived behavioral control variable, which measures a person's ability to engage in a behavior correctly, all predict intention. The concept of perceived behavioral control is a new addition to the TPB model. It is based on an individual's perception of their perceived availability of chances and resources (i.e., money, time, skills, prior experiences, partnerships, etc.) to carry out a behavior (Ajzen, 1991). As a result, behavior and perceived behavioral control may be directly correlated.

When more motivating components are incorporated into the theory of planned behavior, its predictive capacity rises. According to Harland et al. (1999), personal norms have a greater predictive power for environmental goals than other components. In environmental psychology, personal norms are a crucial component of the value-belief-norm theory and the norm activation model. These theories presuppose that environmental behavior is primarily determined by morality. People typically engage in environmental activity because they believe it is the right thing to do, even when it costs them more money and requires more work.

TPB is characterized by a person's perception of how simple or complex an activity is to carry out (Ajzen and Madden, 1986). Actual behavioral success may be predicted directly by combining perceived behavioral control and intention. Ajzen (1991) offers two explanations for this circumstance. First, he makes the case that our level of confidence in our capacity to carry out the behavior determines how successfully we are able to carry out the aim of retaining the intention fixed. A person may have a higher chance of success than someone who is unsure of their capacity to do a task, such as composting in the garden, if they are confident in their abilities to master it. Second, he contends that behavioral control that is thought to exist may be

inferred from real behavioral control. As long as it's not erroneous, a person's perceived behavioral control is likely to translate into actual conduct. It's likely that conduct and intention are strongly associated if the person can genuinely control their actions.

Green consumption behaviors, such as the use of green products (Vermeir and Verbeke, 2008), recycling (Chan and Bishop, 2013), green behaviors at work (Greaves, Zibarras and Stride, 2013), energy-saving and green consumption (De Leeuw, 2015), and consumption to reduce waste, reuse, and repair (Tonglet, Phillips and Bates, 2004), have all been studied using the theory of planned behavior.

2.4.3. Ecological Values Theory

The earliest and most basic normative model of environmental behavior, ecological values theory, contends that an individual's particular value orientations are what lead to environmental behavior. In its most basic form, it makes the case that ecological actions are a direct result of moral or social principles. The hypothesis states that people who have particular moral or altruistic beliefs are more likely to do environmental behavior (Jackson, 2005).

A large portion of the research on ecological values is based on actual data indicating that society is composed of three main value orientations. These three orientations to values include biospheric values, self-transcendence (altruistic), and self-actualization (egoistic). According to this theory, people who have self-actualization (egoistic) values are less likely than those who have self-transcendence (altruistic) values to participate in environmental activities (Jackson, 2005). Empirical evidence indicates the presence of a third value orientation centered on environmental assessment. It is believed that the "biospheric" value orientation differs from egoistic and altruistic value orientations, and that it evolved relatively recently in human history.

In the framework of the New Environmental Paradigm, Dunlap and Van Liere's 1978 study is the oldest known work on biospheric value orientation. Dunlap and Van Liere began with the premise that societal values, attitudes, and beliefs are the root cause of environmental issues. Dunlap and Van Liere (1978) identified the causes of the "environmental crisis" as "our attachment to abundance, science and technology, a

false economy, limited government planning, and private property rights" (Dunlap and Van Liere, 1978).

Numerous investigations have been carried out to verify the presence of the three distinct value orientations—biospheric, altruistic, and egoistic—since Dunlap and Van Liere's 1978 research. Furthermore, a number of research have been carried out to look at the connection between environmental behavior and these various value orientations. There is no direct correlation found in these research between ambient behavior and biospheric parameters. Altruism, biospheric values, and self-interest (egoism) are the three main drivers of environmental behavior. Research on environmental behavior often assumes that people who engage in such activities typically have some moral or altruistic motivations for doing so. Studies have revealed that this isn't always the case, though. Certain environmental behaviors may stem only from personal self-interest, or egoistic principles. Individual conduct as well as the behavior of others in a different location and time can have a direct impact on how today's activities affect environmental issues (Jackson, 2005b). Studies reveal that people with an altruistic or biospheric value orientation are more likely to participate in environmental activity than people with an egoistic value orientation (Stern, Dietz and Guagnano, 1995).

When considered as a whole, ecological values theory faces three major obstacles. The attitude-behavior gap is the first of these (Jackson, 2005). It is not the same to act in an altruistic or ecological manner just because you have an attitude of such principles. The finest example of this may be seen in Bickman's (1972) littering research. Ninety-four percent of the 500 participants in their study who completed a survey on littering behavior acknowledged responsibility. Nonetheless, 92% of the participants engaged in littering. This demonstrates that thoughts about environmental behavior may not always translate into actions.

Distinguishing the impacts on behavior from contextual or situational factors is a challenge that ecological values theory also addresses. Research on recycling practices, for instance, has shown that families in higher income brackets are more likely to recycle than those in lower income brackets. Nevertheless, these studies have several shortcomings: The failure to take into account contextual factors (like the ease of recycling) as a result of the necessity of low-income families-focused information

campaigns and the ignorance of the fact that low-income families reside in high-density residential areas without recycling facilities and where such a service is not offered (Jackson, 2005). According to Paraskevopoulous, Korfiatis, and Pantis (2003), social isolation and other contextual variables are significant predicators of people's views about the environment.

The instability of values in certain contexts across many contexts and circumstances is the final issue with value frameworks. For instance, the importance of environmental values varies throughout time or among age groups. Additionally, there is evidence that the values and beliefs that are relevant at any given moment—that is, crucial for making decisions—change depending on the environment or circumstance that people are in. The intensity of an individual's environmental values in a work setting might differ greatly from those in a personal setting, claim Nilsson, Von Borgstede and Biel (2004).

2.4.4. Norm Activation Theory

Norm Activation Theory (NAT), developed by Shalom Schwartz in 1977, is one of the most popular theories of moral conduct. The activation of personal moral norms is one of the major antecedents of environmental behavior, according to NAT. This activation happens whenever an individual perceives, or is aware of, an environmental circumstance that jeopardizes their values (be they nature, their own well-being, or the well-being of others). Individuals' general and environmental values form the basis of their personal norms, which are a moral responsibility that drives them to act in a way that protects the item that is endangered (Nordlund and Garvill, 2002). The theory's fundamental premise offers a framework for comprehending altruistic and social actions. NAT's application domain is limited to actions that are altruistic and social. The theory's central claim is that pro-social conduct can only be directly determined by one's own personal norms. According to Schwartz, people have a strong sense of moral duty to follow personal norms in order to act in a pro-social manner. He rejects the notion that intentions play a mediating role in this connection. It is evident that there are substantial differences between the TRA's subjective norm idea and Schwartz's theory's definition of personal norm. According to Schwartz,

certain actions taken by people are an outward manifestation of their internal ideals, expressed without consideration for the social or monetary supports that they may get (Schwartz, 1977).

According to NAT, acceptance of one's own personal responsibility for those consequences as well as understanding of such repercussions are the two direct psychological precursors of personal norms. Actions aimed at reducing environmental damage frequently concern shared resources, such land, water, and air. As a result, it is morally required of people to take into account other people as well as the outer world while assessing their environmental behavior. Norm activation theory appears as an explanation for altruistic conduct in this instance.

Three distinct factors are included in NAT to forecast environmental behavior. Among these factors, "personal norms" is the first one. It is the "moral obligation" to engage in or abstain from a specific activity. The second factor is "awareness of consequences", which is defined as "whether the individual is aware of a negative consequence that may arise for someone else or something that someone else attributes value to when he/she does not act in a pro-environmental manner". According to De Groot and Steg (2009), "feeling responsibility for the negative consequences of not acting in a pro-environmental manner" is the definition of the third variable, known as "responsibility attribution".

In addition to being the causal antecedents of personal norm, awareness of consequences and taking responsibility are the factors that establish the connection between action and personal norm. Put another way, the correlation between a person's conduct and personal norm shows that they are conscious of the drawbacks of not acting in a way that supports the environment and that they take responsibility for them. Nevertheless, in actuality, the investigation of the connections between psychological antecedents is constrained by the emphasis on personal norms in both norm activation theory and TPB. In this instance, it is thought that the conduct is sufficient to occur just because a personal norm exists. When modeling the link between conduct and personal norms, environmental restrictions and the strength or weakness of external events are typically taken into consideration (Jackson, 2005). The existence of external stimuli is the main component influencing personal norms in the explanation of environmental actions. This discovery is thought to be crucial for

comprehending behavior in the environment (Jackson, 2005b). It is believed that there are two distinct ways to understand the theory as a consequence of several investigations conducted on NAT. According to the first of these theories, pro-environmental conduct is influenced by personal norms, which in turn are antecedents of the variable "responsibility attribution," which is itself antecedent to "awareness of consequences." The alternative explanation is that commitment and consequence awareness reduce the impact of personal standards on pro-environmental activities. In this instance, it is believed that the variables of accountability and knowledge of consequences function as moderators (De Groot and Steg, 2009: 426).

According to Schwartz's (1977) Norm Activation Theory, two preset factors can trigger personal norms, such as inclinations to act in a pro-social manner. As previously stated, these two factors are the person's understanding of the repercussions of their acts and their sense of accountability for them. For instance, with regards to the issue of climate change, the theory states that an individual is more likely to establish a personal norm to lower their fuel use if they are aware of the effects of fuel consumption and are willing to take some responsibility for their fuel consumption behavior.

According to Schwartz's (1977) Norm Activation Theory, individuals behave in certain ways because they believe they are responsible for their actions and because they are aware that their acts may have an impact on other people's well-being. Research on environmental behavior has often employed NAT (Stern and Duckitt, 2010: 125). Accordingly, a variety of environmental consumption behaviors have been examined in environmental studies that have employed this theory. These behaviors include encouraging environmental protection (Stern, Dietz and Black, 1985), using household energy (Black, Stern and Elworth, 1985), recycling (Hopper and Nielsen, 1991; Vining and Ebreo, 1992), looking into alternatives to driving (Bamberg and Schmidt, 2003), and reducing consumption (Harland et al., 1999).

Rather than describing environmentalist activities, this theory was originally intended to explain altruistic behaviors, or actions that a person takes with the intention of making other people happy. According to Guagnano, Stern, and Dietz's (1995) interpretation of Schwartz's model, an individual must accept responsibility for choosing the right course of action and be aware of any potential negative effects

before acting altruistically. A sense of duty to take action to stop damage arises when these two ideas are held. Establishing personal norms for behavior modification is uncommon, nevertheless, when habits are costly, time-consuming, or difficult to carry out.

The Value-Belief-Norm Theory was created based on the realization that, when considering the norm-activation theory broadly, environmentalist behaviors are those that prioritize society good over individual advantage.

2.4.5. Value-Belief-Norm Theory

An expansion of the Norm-Activation Theory (Schwartz, 1977) to provide a more detailed explanation of environmental behaviors gave rise to the Value-Belief-Norm (VBN) Theory. Stern (2000) states that this theory contends that there is a causal link between environmentally important actions and attitude components, which include values, beliefs, and norms. On the basis of this notion, the best suitable framework for explaining how environmental values affect behavior is the VBN theory (Dietz, Stern and Guagnano, 1998; Stern, 2000). Values, beliefs, and norms are the three categories into which the components of VBN Theory are categorized in order to explain environmental actions.

The value theory (Schwartz, 1992), norm-activation theory (Schwartz, 1977), and New Ecological Paradigm-NEP (Dunlap et al., 2000) theories are incorporated into the model as fundamental building elements in the Value-Belief-Norm theory. According to the VBN hypothesis, attitudes specific to consuming are not the only elements that mediate the link between values and actual action. These are the individual's own moral standards and behavior-specific beliefs that direct their activities. Research utilizing the Value-Belief-Norm hypothesis is predicated on the idea that moral norms and attitudes play a significant role in determining environmental behavior (Stern et al., 1999).

Values are the first fundamental unit of the VBN Theory. The three value orientations Schwartz suggested are highlighted in the theory. According to Dervişoğlu et al. (2009), these qualities are classified as biospheric, altruistic, and

selfish (egocytic). Environmentally friendly activities have been found to be associated with these three value orientations (De Groot and Steg, 2008; Hansla et al., 2008).

Following the values phase in the theory, the following stage demonstrates how certain beliefs affect how environmental consumers behave. The New Environmental Paradigm is what makes up the beliefs part. It contends that acknowledging the implications of the normative model of activation and taking responsibility arises from adopting the New Ecological Paradigm (NEP) (Stern, 2000). As a result, a personal norm is created to either create actual behavior or modify existing behavior when an individual is aware of the environmental consequences of a particular course of action and accepts responsibility for taking action to prevent them (Stern, 2000; Bamberg and Schmidt, 2003). Research has demonstrated a positive relationship between responsibility and awareness of consequences and environmental consumer behaviors, including acceptance of energy policies (Steg, Dreijerink and Abrahamse, 2005), recycling behavior (Guagnano, Stern and Dietz, 1995), and a decrease in the use of vehicles.

Egoistic values are adversely correlated with environmental behavior, but biospheric and altruistic values—the three values that gave rise to the new environmental paradigm—are favorably correlated with it. People who have high altruistic or biospheric values are more inclined to take NEP in this situation. The degree to which people tolerate environmental actions decreases with the strength of their egoistic (selfish) ideals. Awareness of the (environmental) effects of one's activities is positively connected with acceptance of NEP. The person establishes a personal standard to conduct in a way that benefits the environment as a result.

People with a biospheric value orientation focus their environmental behavior on what they believe to be the advantages and disadvantages for the biosphere and ecosystem overall (De Groot and Steg, 2008). Altruistic, value-oriented persons base their actions on the advantages and disadvantages they believe others face. Research on the environmental behaviors of people with egoistic value orientation, however, has found that when people weigh the benefits and costs of their actions in relation to themselves, they will only engage in environmental behaviors if the benefits outweigh the costs (Jansson, Marell and Nordlund, 2011: 53). Accordingly, it may be concluded that consumer actions related to the environment are positively correlated with

altruistic and biospheric values and negatively correlated with selfish (egoistic) values (Nordlund and Garvill, 2002; De Groot and Steg, 2008).

Within this framework, the New Ecological Paradigm—a viewpoint on the interaction between humans and the environment—is influenced by the values of individuals, as per the VBN Theory. In this sense, awareness of the detrimental effects of the valued object is influenced by the acknowledged environmental problem. Personal norms are activated by knowledge of the consequences, the belief that one can lessen the bad effects, and the acceptance of responsibility in this matter. Environmental behavior then emerges as a result of personal norms. It is acknowledged that any variable in the theory can have a direct impact on both the element that comes after it and other distant elements (Dervişoğlu et al., 2009: 51).

As previously stated, the Norm Activation Theory for environmentalist behaviors was developed into the VBN Theory. Still, there are a lot of distinctions between it and NAT. To name a few of these distinctions, Value-Belief-Norm theory stresses threats to whatever object is at the center of the values underlying norms, whereas Norm Activation Theory suggests that awareness of the consequences of events and behaviors is related to "other people's happiness" based on altruistic values. Similar to this, the Value-Belief-Norm Theory stresses beliefs about removing threats to any valued object, whereas Schwartz's Norm Activation Theory is connected to the responsibility taken by the individual for undesirable consequences for others (attribution of responsibility), that is, the belief that the individual's actions contribute to the elimination or mitigation of these negative consequences (Stern et al., 1999: 83).

Numerous research have employed and evaluated the VBN Theory. Some researchers (Kaiser, Hübner and Bogner, 2005; Nordlund and Garville, 2003) evaluated only some parts of the model, while other researchers (Steg, Dreijerink and Abrahamse, 2005) tested the entire model. The higher the monetary cost of the behavior, the lower the explanatory power of the model. This is the case, for instance, when green products cost extra for customers. Furthermore, activities having temporal costs result in a decline in the model's explanatory capacity (Ibtissem, 2010: 130).

2.4.6. Identity Theory

One theory that addresses identities is identity theory, which views identity as roles that are connected to action, whereas social identity theory views identity as norms and values (Hogg, Terry and White, 1995). Identity-based theories emphasize the importance of both social and personal identity. While social identity theories concentrate on the social groups that people frequently claim membership in and their beliefs about belonging, personal identity theories emphasize characteristics and objectives that are shaped by an individual's character and are not connected to a social group or membership (Hogg, Terry and White, 1995; Oyserman, 2009a).

Numerous identities have an effect on consumers, according to study on the subject. This is evident when looking at how identities affect environmental consumer behavior. Customers choose depending on their identity and act in a multitude of situations and situations while making decisions (Oyserman, 2009b). As a result, customers' decisions in a given setting may differ or be comparable (Oyserman, 2009a). According to research on consumer behavior, identity has an impact on whether or not new goods are adopted (Grewal, Mehta and Kardes, 2000; Cook, Kerr and Moore, 2002).

The idea of self-identification is another topic that has been highlighted in identity research and is getting more attention (Gatersleben, Murtagh and Abrahamse, 2012). Different identities, hierarchical substructures, and processes make up self-identity (Kira, 2019). A person's self-identity has been proven to have a considerable impact on behavior in both sociological and psychological literature (Kira, 2019; Turner, 2010). The terminology has different meanings and applications in different areas (Gleason, 1983). "Self-identity" is defined as the motivation behind behavior like attitudes and norms in the studies of Biddle, Bank, and Slavings (1987) and Charng, Piliavin, and Callero (1988), who contend that self-identity contributes to the prediction of behavioral intentions independently of behaviors (Sparks and Shepherd, 1992). Additionally, according to the researchers, "a person's beliefs, values, and attitudes will reflect that person's self-identity" (Sparks and Shepherd, 1992: 390).

According to Van der Werff, Steg, and Keizer (2013), people who have a strong sense of environmental identity are more inclined to act in ways that protect the

environment. As a result, an individual's environmental identification indicates whether or not they view themselves as a part of nature, and their environmental self-identity indicates how they present themselves as environmentally sensitive. Understanding pro-environmental acts is believed to be particularly connected to one's environmental self-identity. Despite their relationship, environmental identity and environmental self-identification have different meanings.

Few research have looked at the relationship between self-identity and associated behaviors in the environmental literature. According to these research, self-identities are predictive of associated behaviors. Recycling activity and recycling self-identity are associated, according to research by Nigbur, Lyons and Uzzell (2010). Similarly, environmental activism is linked to environmental behavior self-identity according to Fielding, McDonald, and Louis (2008). Consumers may have a more universal environmental self-identity that is connected to their environmental choices, intentions, and behavior, according to recent studies on this subject. For instance, green purchasing, waste minimization, water conservation, and energy conservation are all linked to environmental self-identity (Whitmarsh and O'Neill, 2010). Purchasing fair trade goods, recycling, and engaging in environmentally beneficial activities are all associated with an environmental self-identity (Gatersleben et al., 2012). The concepts of values and self-identity are not the same. Values are broad, abstract ideals that you pursue in life, whereas self-identity is a reflection of your self-perception. When a customer understands that their garbage is recycled as a consequence of their purchase, for instance, they are more likely to consider themselves to be environmentally responsible.

According to Whitmarsh and O'neill (2010), waste, reduction, energy saving, and green buying are the categories of environmental identification behavior. It has been discovered that environmental behavior positively influences other environmental behaviors while investigating environmental identities (Truelove et al., 2014). Previous environmental behaviors reinforce environmental identities in addition to freshly learned environmental behaviors (Van der Werff, Steg and Keizer, 2013; Poortinga, Whitmarsh and Suffolk, 2013). According to this concept, in order for consumers to exhibit environmentalist behaviors, it is critical that they have environmentalist identities.

To meet the objectives of environmental research, future studies and environmental policies must consider every consumer identity in the battle against overconsumption and climate change. For a variety of reasons, people adopt the same behaviors that are compatible with their consumer identities. According to Gatersleben et al. (2019), fostering customers' identities as moral, frugal, and savers can be an effective means of encouraging more ecologically friendly behaviors. However, regardless of their prior behavior, persons who consider themselves to be "green consumers" are more likely to buy organic food, according to study by Sparks and Shepherd (1992) (Whitmarsh and O'neill, 2010).

CHAPTER THREE
METHODOLOGY AND FINDINGS

3.1. RESEARCH METHOD

This study uses a systematic literature review technique to investigate the present status of research on sustainable consumption behavior. Research findings on a given topic may be systematically gathered, reviewed, and synthesized using the systematic literature review strategy, which is acknowledged as a scientific and highly informative method (Paul et al., 2021). Stated differently, a systematic literature review is a methodical and planned strategy to examining previously conducted research that makes use of systematic and repeatable techniques to find, gather, assess, critically analyze, interpret, and present findings (Fisch & Block, 2018). A systematic review entails doing a thorough search to locate all published research on a subject, organizing the search findings systematically, and evaluating the volume, kind, and caliber of the evidence with respect to a particular research question. Good literature reviews facilitate understanding of potentially enormous volumes of scientific knowledge, point out gaps between what is known and what is needed to know, and are frequently highly referenced and influential. Because of their enormous potential to assist practice and public policy, they are ranked highest in the evidence hierarchy. Review papers that relate theory to evidence and evidence to theory are the best because they interpret, assess, develop, and expand upon theory. According to Siddaway, Wood, and Hedges (2019), literature reviews are a crucial technique for determining if and how significant study findings are reproduced. One benefit of systematic reviews is that they include all research within an area, allowing the reader to determine whether or not the body of evidence supports a certain concept. This data is gathered, examined for quality, and combined to create a comprehensive synopsis of the field's research. The results are frequently less vulnerable to selection, publication, and other biases than a traditional literature review or a "non-systematic" review because all available evidence on a given topic is included in the systematic review, and rejected evidence and the reasons for rejection are explicitly stated (Torgerson, 2003).

The systematic literature review methodological steps (Tranfield et al., 2003; Becheikh et al., 2006; Karaçam, 2013) were employed to collect data and, content analysis was utilized to examine topic patterns and provide a summary and description of the material that was provided (Seuring and Gold, 2012). In order to prevent systematic errors and bias and to reach more reliable results, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standards were followed. PRISMA guidelines are a minimal set of evidence-based suggestions that researchers should adhere to in order to promote thorough and honest reporting of systematic reviews. (Toker, 2022) The guidelines, which have been revised over time, serve as a guide to help authors properly report various knowledge synthesis techniques, such as scoping and systematic reviews, and to guarantee that all facets of this type of research are reported honestly and transparently.

After the data collection process, a database was created in Microsoft Excel programme. The title, keywords, institution, year of publication, type, characteristics, sample characteristics, region and industry of focus, variables used of each study were entered into the database. Quality assessment and content analyses were performed in Excel. Based on the research questions, the results are analysed and presented in thematic order.

3.2. STEP I: PLANNING

To plan the review process, the study objectives were refined into specific research questions. The databases, keywords, search strings, inclusion/exclusion criteria, and quality assessment criteria for the extracted studies were outlined. Further details are provided in the following sections.

3.2.1. Research Questions

The relevance of concerns like economic inequality, global warming, resource depletion, and other challenges that are directly tied to the future of the planet has led to a recent increase and diversification in sustainability studies both globally and in

Türkiye. Increasing sustainable consumption practices can significantly advance global sustainability goals, especially in light of developing countries' potential for economic growth (Shiel et al., 2020; Sesini et al., 2020; Saari et al., 2021). The significance and input of research conducted in developing countries is critical to comprehending and pinpointing the particular circumstances of sustainable consumption behavior in these countries. This type of research aids in determining the factors that have an impact and how emerging economies may contribute to sustainability goals in terms of the economy, society, and environment. Furthermore, this kind of research contributes significantly to global collaboration and knowledge exchange. However, not enough effort has been made to assess sustainable consumption behavior research from the perspective of Turkish consumers (Atrek and Madran, 2017). In light of this circumstance, it is critical to take a comprehensive approach to the problem and assess the conclusions drawn from the research in order to provide guidance for future investigations. Therefore, the purpose of this study is to apply the systematic review approach to analyze, categorize, and synthesize the research on "sustainable consumption behavior" in Türkiye. By disclosing the variables employed in applied research on "sustainable consumption behaviors" in Türkiye, this study seeks to assess the conclusion drawn from the country's literature on the topic, comprehend the extent and trajectory of the field's research, and inform future investigations. In this regard, the following research questions have been developed:

1) Where and at which institutions were the research carried out?

2) How has the subject been generally researched? What are the study approaches and methods?

3) What are the factors that affect sustainable consumption behavior in Türkiye?

4) Which behavioral theories were utilized in sustainable consumption behavior studies?

5) What are the patterns in the variables examined in the applied research carried out in Türkiye from the "consumer perspective" in relation to "sustainable consumption"?

3.2.2. Databases

The planning stage involved first determining the goals and inquiries of the research. Accordingly, 5 internationally recognized and respected comprehensive databases were selected: Scopus, Web of Science, Proquest, Harman Turkish Academic Archive and TR Index. Their wide and comprehensive range of data makes it easy to access all the articles published in peer-reviewed journals available online. Filtering features enable specific searches based on inclusion and exclusion criteria.

3.3. STEP II: CONDUCTING THE REVIEW

As depicted in Table 1, the keywords “green purchase intention”, “sustainable purchase intention”, “green purchase behavior”, “sustainable purchase behavior”, “sustainable consumption behavior”, “green consumption behavior”, “sustainable consumption intention”, “green consumption intention”, “green buying behavior” and “sustainable buying behavior” were searched through Scopus, Web of Science, Proquest, Harman Turkish Academic Archive ve TR Index databases at the end of 2023. In addition, “yeşil satın alma niyeti”, “sürdürülebilir satın alma niyeti”, “yeşil satın alma davranışı”, “sürdürülebilir satın alma davranışı”, “sürdürülebilir tüketim davranışı”, “yeşil tüketim davranışı”, “sürdürülebilir tüketim niyeti” and “yeşil tüketim niyeti” keywords were also searched in TR Index database. Intention is the antecedent of behavior. Sometimes instead of measuring behavior, studies measure intention. For this reason, intention was also included in the research scope. As a result of the search, a total of 17963 articles with the expressions “green purchase intention”, “sustainable purchase intention”, “green purchase behavior”, “sustainable purchase behavior”, “sustainable consumption behavior”, “green consumption behavior”, “sustainable consumption intention”, “green consumption intention”, “green buying behavior”, “sustainable buying behavior”, “yeşil satın alma niyeti”, “sürdürülebilir satın alma niyeti”, “yeşil satın alma davranışı”, “sürdürülebilir satın alma davranışı”, “sürdürülebilir tüketim davranışı”, “yeşil tüketim davranışı”, “sürdürülebilir tüketim niyeti” and “yeşil tüketim niyeti” in their titles, abstracts and keywords were accessed.

Of these 17963 articles, 13892 belong to Scopus, 737 to Web of Science, 3161 to Proquest, 105 to Harman Turkish Academic Archive, 35 to TR Index English and 33 to TR Index Turkish databases.

Articles were chosen by first screening their titles to see if there were any clear indicators that they should be disqualified. The abstract was read, unless it seemed evident right away that the piece should not be included. The demographic and the scope of the study were ascertained by screening the abstract. The paper was scanned, paying particular attention to the techniques section to make sure the pertinent criteria were included or deleted, in case it was still unclear if it should be included. The whole texts of the publications were transcribed, chronologically arranged, and thereafter assessed in terms of the study's goal, methodology, conclusions, and outcomes. This research falls within the category of studies for which an ethical committee report is not necessary since the data utilized in it were taken from publically available sources.

Table 1: Keywords and Search Commands

Keywords	**Search Command Examples**
green purchase intention sustainable purchase intention green purchase behavior sustainable purchase behavior sustainable consumption behavior green consumption behavior sustainable consumption intention green consumption intention green buying behavior sustainable buying behavior	Scopus TITLE-ABS-KEY (“sustainable consumption behavior”) AND PUBYEAR > 2000 AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English", “Turkish”)) AND (LIMIT-TO (SRCTYPE , "j"))
	WoS ((TI=("sustainable consumption behavior")) AND AB=("sustainable consumption behavior")) AND (DT==("ARTICLE") AND LA==("ENGLISH")) AND LA==("TURKISH")) AND PY>2000)
	Proquest title("sustainable consumption behavior") AND abstract("sustainable consumption behavior")
	Harman TR Akademik Arşiv title("sustainable consumption behavior") AND abstract("sustainable consumption behavior")
	TR Dizin Turkish Title: (("sustainable AND consumption AND behavior")) Abstract: (("sustainable AND consumption AND behavior")) Year: ([2000 TO 2024]) Publication Language: ((turkish))
	TR Dizin English Title: (("sustainable AND consumption AND behavior")) Abstract: (("sustainable AND consumption AND behavior")) Year: ([2000 TO 2024]) Publication Language: ((english))

Source: Created by the author.

3.3.1. Inclusion Criteria

The retrospective time limit was set as the year 2000. Only Turkish and English articles published in peer-reviewed scientific journals for which the full text was available were included in the scope of the study. Only articles empirically addressing the sustainable consumption behavior of Turkish consumers were included in the analysis. Only general business and marketing disciplines were included in the scope of the study.

3.3.2. Exclusion Criteria

Articles published before 2000 were not included in the study due to the fact that the awareness of sustainability, sustainable consumption and sustainable consumption behaviors had been established in Türkiye by that year. It was concluded that articles published before 2000 would be incomplete in terms of content quality since the birth of the concept of sustainable consumption in Türkiye is considered to be in the early 2000s. As depicted in Table 2, the articles published before the year 2000 were excluded, a total of 17953 articles remained as can be seen in Figure 1. Of these 17953 articles, 13885 belong to Scopus (77%), 737 to Web of Science (4%), 3158 to Proquest (18%), 105 to Harman Turkish Academic Archive (0.6%), 35 to TR Index English (0.2%) and 33 to TR Index Turkish (0.2%) databases. After extracting books, book chapters, bibliometric analysis, conference papers, and other non-peer-reviewed publications from the research, there were 15380 articles left. Of these 15380 articles, 12122 belong to Scopus (79%), 659 to Web of Science (4%), 2452 to Proquest (16%), 82 to Harman Turkish Academic Archive (0.5%), 34 to TR Index English (0.2%) and 31 to TR Index Turkish (0.2%) databases. When articles outside the English and Turkish languages were eliminated, 15179 articles remained. Of these 15179 articles, 11981 articles belong to Scopus (79%), 657 to Web of Science (4%), 2394 to Proquest (16%), 82 to Harman Turkish Academic Archive (0.5%), 34 to TR Index English (0.2%) and 31 to TR Index Turkish (0.2%) databases. Since only studies involving Turkish consumers will be considered, the articles were examined carefully and in detail, and 312 articles were left as a result of the excluded articles. Of these 312 articles, 110 belong to Scopus (35%), 20 to Web of Science (6%), 43 to Proquest

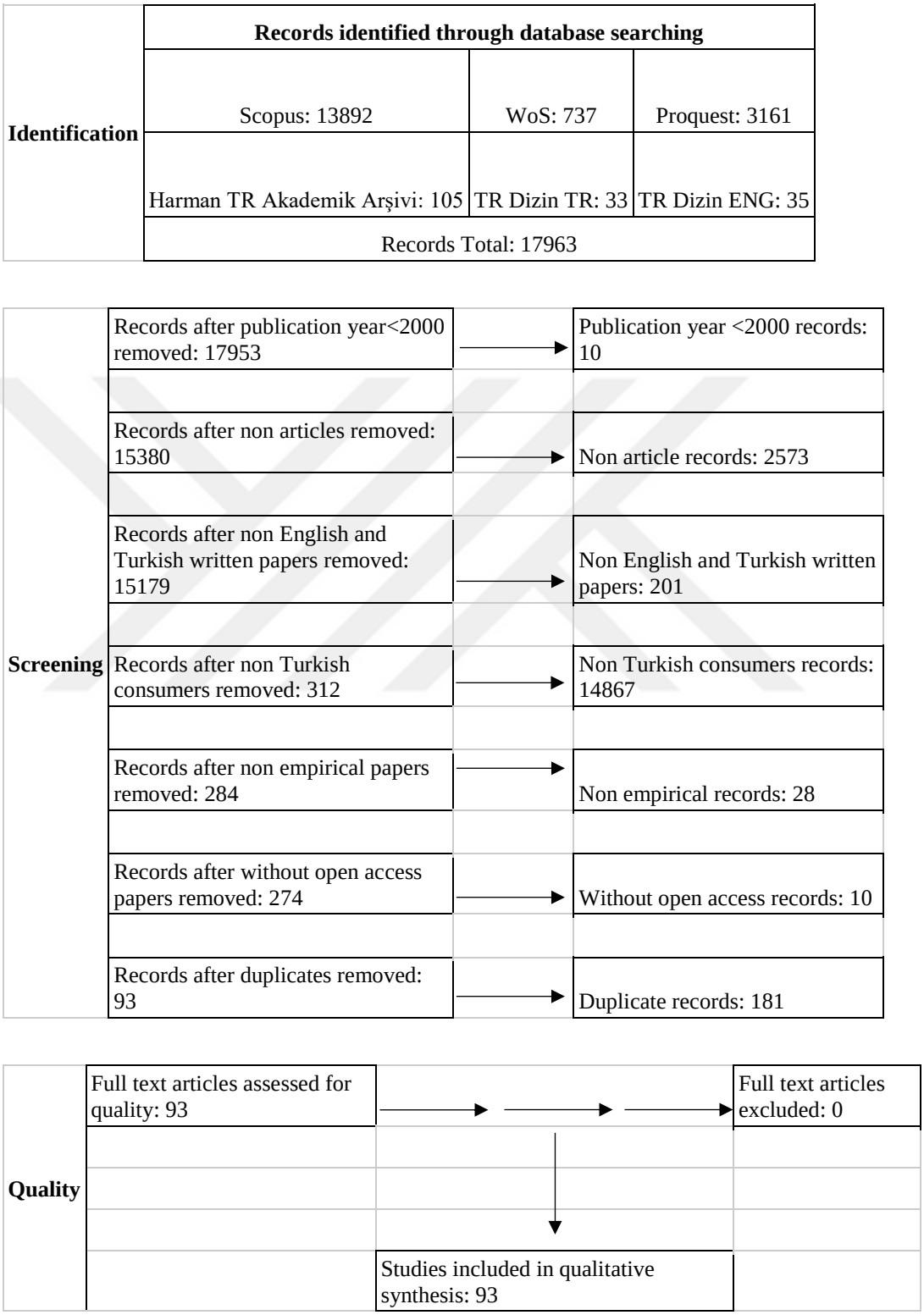
(14%), 75 to Harman Turkish Academic Archive (24%), 34 to TR Index English (11%) and 30 to TR Index Turkish (10%) databases. When non-empirical studies were excluded, 284 articles remained. Of these 284 articles, 95 belong to Scopus (33%), 20 to Web of Science (7%), 42 to Proquest (15%), 68 to Harman Turkish Academic Archives (24%), 30 to TR Index English (11%) and 29 to TR Index Turkish (10%) databases. Some articles could not be accessed due to technical failures, access restrictions and/or other reasons. When the inaccessible articles are removed, we are left with a total of 274 articles. Of these 274 articles, 88 belong to Scopus (32%), 20 to Web of Science (7%), 42 to Proquest (15%), 65 to Harman Turkish Academic Archives (24%), 30 to TR Index English (11%) and 29 to TR Index Turkish (11%) databases. There were articles accessed more than once within the same database. In order to avoid duplication, overlaps were checked after each recorded article. After removing duplicate articles within the same database, 209 articles remained. Of these 209 articles, 60 belong to Scopus (29%), 19 to Web of Science (9%), 30 to Proquest (14%), 43 to Harman Turkish Academic Archive (21%), 29 to TR Index English (14%) and 28 to TR Index Turkish (13%). After removing duplicate articles within the same databases, the same process was performed for duplicate articles encountered in different databases. After the overlaps check to avoid duplication, 136 articles remained. These 136 articles were examined and read in detail, both abstract and full text, and studies that were not addressed in terms of sustainable consumption behaviors were excluded, leaving 93 articles as a result.

Table 2: Exclusion Criterion

Exclusion Criterion
Pub year<2000
Non articles
Non English and Turkish written papers
Non Turkish consumers
Non empirical
No access
Overlaps (same database)
Overlaps (different database)

Source: Created by the author.

Figure 1: Flow chart. The flow of the selected items according to the indicated criteria



Source: Created by the author.

3.3.3. Quality Assessment

After the exclusion and inclusion criteria were applied, a detailed quality assessment was performed for the remaining 93 articles. 7 quality assessment criteria were applied to all articles and the criteria for meeting or not meeting each criterion were 0, 0.5, and 1. 0 indicates “not meeting the criteria at all”; 0.5 stands for “somehow meeting the criteria”; and 1 means “completely meeting the criteria”, each article was analyzed and scored individually by the two reviewers. The scores for each article were summed and the arithmetic mean of the scores assigned by both reviewers is taken to obtain the total quality score of each article. The average score needed to be eligible to pass the quality assessment was 0.5 and above. (Kassab, DeFranco and Laplante, 2020) The criteria that determine whether an article can be considered quality and valid are as follows from the study of Kassab, DeFranco and Laplante (2020):

- Is the research aim/objective clearly defined?
- Was a questionnaire the most appropriate research design for this question?
- What was the sampling frame and was it sufficiently large and representative?
- What claims for reliability and validity have been made, and are these justified?
- Was a pilot version administered to participants representative of those in the sampling frame, and the instrument modified accordingly?
- Are the findings clearly stated?
- Based on the findings, how valuable is the research?

As a result of the evaluation, all articles scored 0.5 and above, proving that they met the quality standards, and 93 articles were deemed valid for further review.

3.3.4. Independent Reviewer

Examining and mitigating the possibility of bias in article selection is one of the PRISMA Model's objectives (Page et al., 2021). Using a second reviewer is one

approach to avoid bias. According to Jahan et al. (2016), using an independent reviewer can boost the study's dependability by lowering the possibility of inaccuracy. A second reviewer was used in this systematic literature review. The supervisor of the thesis was the second reviewer in the content analysis and quality assessment processes. In order to ensure the objectivity of the results during data entry, the evaluation of the first 15 articles was carried out independently by the two researchers to determine the inter-coder reliability. The inter-coder reliability rate was determined as 90% for mediating and moderator variables category. 100% for other categories. The researchers then came together to discuss the different evaluations and reached a consensus. In addition, before the data collection process, the items of the PRISMA Declaration were tested by the researchers through pilot evaluations in terms of comprehensibility. All in all, the two reviewers conducted a parallel independent quality assessment by reading the entire text and thoroughly evaluating each study against the quality criteria.

The methods and procedures followed in the study are presented in a clear and detailed manner, and the sequence of research design, data collection and analysis are given. Thus, it is ensured that the data in the study could be analyzed by different researchers and the data collection and methodology were clearly stated in order to ensure the reliability of the study.

3.4. STEP III: REPORTING OF FINDINGS

3.4.1. Findings

As depicted in Table 3, although the 93 articles were published in many different journals, statistically, three articles from each of Dokuz Eylül University Journal of the Institute of Social Sciences and Journal of Business Research-Turk were analyzed and these journals came out on top in terms of the number of articles. European Journal of Sustainable Development, Journal of Fashion Marketing and Management: An International Journal, Journal of Marketing and Marketing Research, Sustainability and Third Sector Social Economic Review were examined 2 articles each and these journals ranked second in terms of the number of articles, following

Dokuz Eylül University Journal of the Institute of Social Sciences and Journal of Business Research-Turk. One article from each of the remaining 76 journals was analyzed. The full table is available in the Appendix 1.

Table 3: Distribution of Journals

Journals	F
Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi	3
Journal of Business Research-Turk	3
European Journal of Sustainable Development	2
Journal of Fashion Marketing and Management: An International Journal	2
Pazarlama ve Pazarlama Araştırmaları Dergisi	2
Sustainability	2
Third Sector Social Economic Review	2
Others	76

Source: Created by the author.

While examining sustainable consumption behaviors and intentions, as can be seen in Table 4, the most frequently used theory in the articles was the Theory of Planned Behavior (TPB), which was used in 16 articles. Following this, Theory of Reasoned Action (TRA) was used in 5 articles, Extended Theory of Planned Behavior (ETPB) in 3 articles, Consumer Socialization in 2 articles and Norm Activation Theory in 2 articles. The remaining 12 theories, namely KAP, KAIP, Schwartz's Value Theory, Social Cognitive Theory, Social Exchange Theory, The Value Basis Theory, TPR, Theory of Consumption Values, VBN, YEP and CEVT, have been examined very rarely in 1 article each.

Table 4: Theories Used

Theories	F	Theories	F
TPB	16	Schwartz's value theory	1
TRA	5	Social cognitive theory	1
ETPB	3	Social exchange theory	1
Consumer socialization	2	The value basis theory	1
Norm Activation Theory	2	TPR	1
Attitude-behavior-context theory	1	Theory of consumption values	1
KAP	1	VBN	1
KAIP	1	YEP	1
		YSDT	1

Source: Created by the author.

When we look at the distribution of the studies in the articles according to the provinces, as depicted in Table 5, Istanbul ranks first as the city examined by 9 articles. Following Istanbul, Ankara was the the place where the research was conducted of 8 articles, Izmir and Kastamonu of 5 articles, Burdur of 3 articles, Aydın, Çorum, Düzce, Samsun and Sivas of 2 articles each. The remaining 21 provinces were rarely used as the city where the research is conducted in 1 article each.

Table 5: Distribution of Provinces

Provinces	F	Provinces	F	Provinces	F
İstanbul	9	Aksaray	1	Karabük	1
Ankara	8	Alanya	1	Kırklareli	1
İzmir	5	Bodrum	1	Kocaeli	1
Kastamonu	5	Bolu	1	Kütahya	1
Burdur	3	Bursa	1	Manisa	1
Aydın	2	Edirne	1	Nazilli	1
Çorum	2	Erzurum	1	Niğde	1
Düzce	2	Eskişehir	1	North Cyprus	1
Samsun	2	Girne	1	Safranbolu	1
Sivas	2	Gümüşhane	1	Tekirdağ	1
Adana	1	Hatay	1	Van	1

Source: Created by the author.

In the distribution according to the industries in which sustainable consumption behaviors and intentions were examined, studies and findings in general without a specific sector ranked first with 72 articles, as depicted in Table 6. The organic food sector was analyzed in 6 articles and the green clothing sector in 2 articles, while sectors such as automotive, food and beverage and renewable energy were the subject of only one article each and thus lagged behind in terms of the number of articles.

Table 6: Distribution of Industries

Industries	F	Industries	F
General	72	Forestry	1
Organic food	6	Green hotels	1
Green clothing	2	Guerilla marketing	1
Automotive	1	Organic products	1
C2C electronic commerce	1	Renewable energy	1
Ecorecreation	1	Sports	1
Food and beverage	1	Sustainable fashion	1
Forest products	1	Yoga	1

Source: Created by the author.

When the articles are analyzed in terms of the unit of analysis, it is seen in Table 7 that the unit of analysis is not given specifically in 30 articles and the analysis is made in general. While there are 7 articles where adults over 18 years of age are used as the unit of analysis, Generation Z consumers have been the focal point of the analysis in exactly 4 articles. Considering that generations and generational differences are an effective and distinctive unit of analysis for sustainable consumption behaviors, it is not surprising that Generation Y consumers are the subject of 3 articles. Generations are followed by green product consumers and undergraduate students, who are the unit of analysis in 3 articles each, and adults over the age of 20, female consumers and green hotel consumers, who are the subject of 2 articles each. Full table is available in Appendix 2.

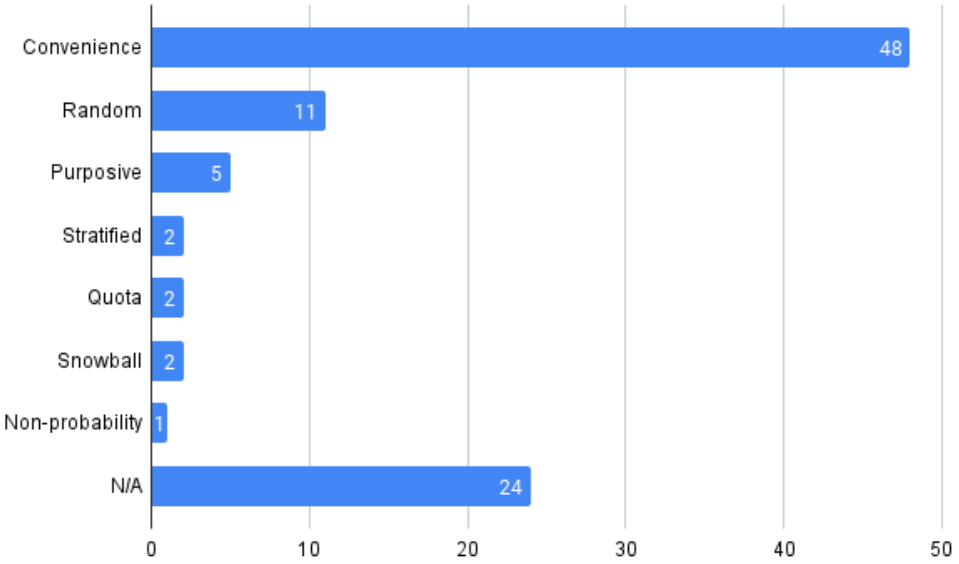
Table 7: Distribution of Unit of Analysis

Unit of Analysis	F
N/A	30
Adults over 18 years of age	7
Generation Z consumers	4
Generation Y consumers	3
Green product consumers	3
Undergraduate students	3
Adults over 20 years of age	2
Female consumers	2
Green hotel customers	2
Others	37

Source: Created by the author.

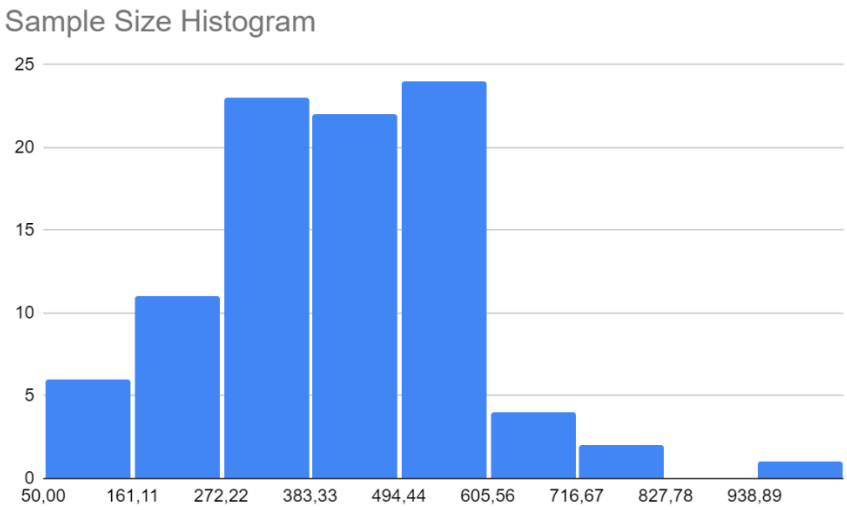
As pinpointed in Figure 2, it is seen that convenience sampling is used in 52% of the articles. After convenience sampling, random sampling (12%), purposive sampling (5%), stratified sampling (2%), quota sampling (2%) and snowball sampling (2%) were used the most. At least non-probability sampling (1%) was used in the studies. There are 24 articles for which the sampling method was not specified. It was determined that the smallest population size was 40 for a qualitative study and the largest population size was 84.680.273. There are 74 articles with unknown population size. It was determined that the smallest sample size was 62 for a qualitative research and the largest sample size was 1024.

Figure 2: Sampling Methods Distribution



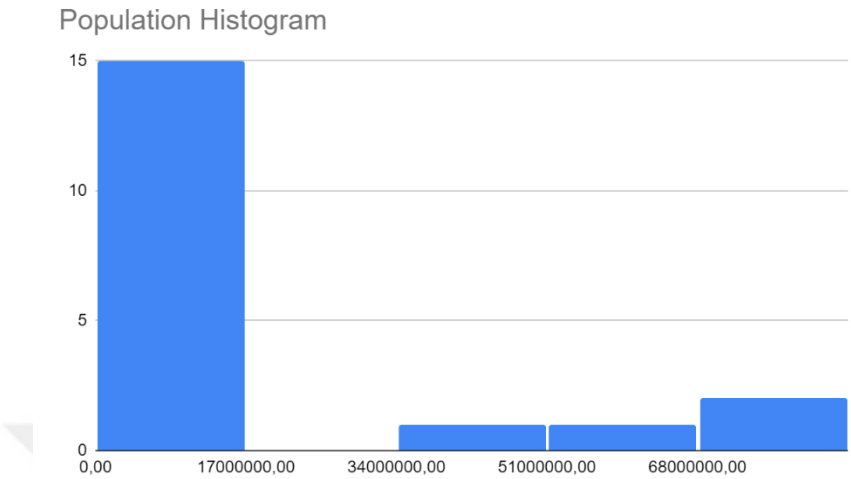
Source: Created by the author.

Figure 3: Sample Size Distribution



Source: Created by the author.

Figure 4: Population Distribution



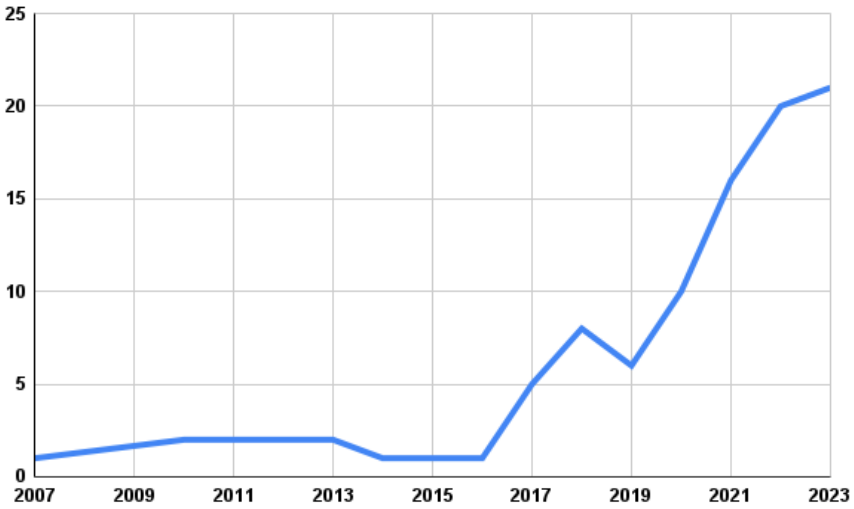
Source: Created by the author.

The number of studies that were analyzed over the course of the years is shown in Figure 5 and Table 8. In 2007, the first study on the subject of sustainable consumption behavior was published. There were seven research publications in total between 2007 and 2016. Still, in 2017 there was a modest rise in the number of studies. The quantity of studies released between 2017 and 2023 varies. Study published up until January 2024 is consolidated in the systematic literature review. Therefore, the research that was released after January 2024 and before January 2000 is not covered by this investigation.

The UN adopted the Sustainable Development Goals (SDGs) in January 2016. The 17 primary goals of the SDGs include combating climate change, ensuring gender equality, ending world hunger and poverty, promoting quality education, and responsible production and consumption. The SDGs aim to address social, cultural, and ecological issues. Building on the achievements of the Millennium Development Goals, the Sustainable Development Goals (SDGs), commonly referred to as the Global Goals, address additional issues such economic inequality, climate change, innovation, sustainable consumption, peace, and justice. The big jump in the number

of articles after 2016, as can be seen in Figure 5, can be explained by the increasing awareness of people about sustainability as a result of the UN Sustainable Development Goals.

Figure 5: Distribution of Conceptual Studies by Year



Source: Created by the author.

Table 8: Distribution of Conceptual Studies by Year

Year	F	Year	F
2007	1	2018	8
2010	2	2019	6
2013	2	2020	10
2014	1	2021	16
2016	1	2022	20
2017	5	2023	21
		Total	93

Source: Created by the author.

When looking at the distribution of the universities to which the article authors work, it is seen in Table 9 that Karabük University, which hosts 11 articles, ranks first. Following Gumushane University with 10 articles, Izmir University of Economics with 8 articles, Dokuz Eylul University and Kastamonu University with 7 articles, Bingöl University, Hacettepe University, Istanbul University, Niğde Ömer Halisdemir University and Trakya University with 6 articles each, Central European University, Istanbul Aydın University, ITU, Mehmet Akif Ersoy University and Muğla Sıtkı Koçman University with 4 articles each, Ankara University, Başkent University, Bursa Uludağ University, Düzce University, Eskişehir Technical University and Kırıkkale University, METU and Sivas Cumhuriyet University contributed 3 articles each and finally Nişantaşı University, Ondokuz Mayıs University, Selçuk University, Yeditepe University, Aydın Adnan Menderes University, Bayburt University, Çankırı Karatekin University, Erciyes University, Galatasaray University, Gebze Technical University, Hasan Kalyoncu University, Hitit University, Iğdır University, Istanbul Sabahattin Zaim University and Kyrgyzstan Turkey Manas University contributed to the literature on sustainable consumption behaviors with 2 articles each. Each of the remaining 30 universities published 1 article related to the relevant literature. Full table is available in Appendix 3.

Table 9: University Distribution of Authors

Authors' Universities	F	Authors' Universities	F
Karabük Üniversitesi	11	Eskişehir Teknik Üniversitesi	3
Gümüşhane Üniversitesi	10	Kırıkkale Üniversitesi	3
İzmir Ekonomi Üniversitesi	8	ODTÜ	3
Dokuz Eylül Üniversitesi	7	Sivas Cumhuriyet Üniversitesi	3
Kastamonu Üniversitesi	7	Aydın Adnan Menderes Üniversitesi	2
Bingöl Üniversitesi	6	Bayburt Üniversitesi	2
Hacettepe Üniversitesi	6	Çankırı Karatekin Üniversitesi	2
İstanbul Üniversitesi	6	Erciyes Üniversitesi	2
Niğde Ömer Halisdemir Üniversitesi	6	Galatasaray Üniversitesi	2
Trakya Üniversitesi	6	Gebze Teknik Üniversitesi	2
Central European University	4	Hasan Kalyoncu Üniversitesi	2
İstanbul Aydın Üniversitesi	4	Hitit Üniversitesi	2
İTÜ	4	Iğdır Üniversitesi	2
Mehmet Akif Ersoy Üniversitesi	4	İstanbul Sabahattin Zaim Üniversitesi	2
Muğla Sıtkı Koçman Üniversitesi	4	Kyrgyzstan Turkey Manas University	2
Yaşar Üniversitesi	4	Nişantaşı Üniversitesi	2
Ankara Üniversitesi	3	Ondokuz Mayıs Üniversitesi	2
Başkent Üniversitesi	3	Selçuk Üniversitesi	2
Bursa Uludağ Üniversitesi	3	Yeditepe Üniversitesi	2
Düzce Üniversitesi	3	Others	30

Source: Created by the author.

The word cloud shown in the Figure 6 was prepared from the website www.wordclouds.com and was created from keywords in articles on sustainable consumption behaviors and intentions published between 2007 and 2023. In fact, the literature that was intended to be examined between 2000-2023 had to be updated as

2007-2023 since there were no articles in the 2000-2007 period that met the criteria required by this systematic literature review. Except for the words such as consumption, environmetal, purchase, green and behavior,which fully reflect the main theme, some of the theories that help to explain sustainable consumption behaviors, such as theory of planned behavior, and auxiliary words such as brand and consumer, are some of the most prominent words used in these articles.

Figure 6: 2007-2023 Concepts



Source: Created by the author.

In all 93 articles, the authors measured different sustainable consumption behaviors. As depicted in Table 10, 51 articles tried to measure general sustainable consumption behavior and did not focus on a specific type. 6 articles focused on the "eco-friendly product purchasing behavior" aspect of sustainable consumption

behavior and 5 articles dealt with organic food purchasing behavior. In addition, environmental activism behavior, responsibility in purchasing green products, sustainable fashion consumption behavior and sustainable water consumption behavior with 2 articles on each topic respectively, were also the other types of sustainable consumption behavior used in the articles. The remaining 7 specific behaviors were used 1 time each in each article.

Table 10: Which Sustainable Consumption Behaviors were Measured (as a dependent variable)

Sustainable Consumption Behaviors	F	Sustainable Consumption Behaviors	F
Sustainable consumption behavior in general	51	Economic factors in purchasing green products	1
Eco-friendly product purchasing behavior	6	Energy conservation	1
Organic food purchasing behavior	5	Food waste aversion	1
Environmental activism behavior	2	Good citizenship behavior	1
Responsibility in purchasing green products	2	Re-buying decision	1
Sustainable fashion consumption behavior	2	Recycling	1
Sustainable water consumption behavior	2	Sustainable sports consumer behavior	1

Source: Created by the author.

Sustainable consumption intention, which is another topic examined in this systematic literature review, as can be seen in Table 11, has been measured in a general framework in 28 articles, with 3 articles focusing on organic food purchase intention and 2 articles focusing on sustainable fashion purchase intention. The remaining 2 specific sustainable consumption intentions were analyzed in 1 article each.

Table 11: Which Sustainable Consumption Intentions were Measured (as a dependent variable)

Sustainable Consumption Intentions	F
Sustainable consumption intention in general	28
Organic food purchase intention	3
Sustainable fashion purchase intention	2
Online repurchase intention	1
Second-hand product purchase intention	1

Source: Created by the author.

Among the hypotesized independent variables that have been tested and thought to affect sustainable consumption behavior, as depicted in Table 12, gender was the subject of 19 articles, age of 15 articles, education level of 14 articles, environmental concern of 13 articles, income level and sustainable consumption intention of 12 articles. Among the remaining behavior triggers, marital status was mentioned in 8 articles, attitude toward green consumption behavior and occupation in 7 articles each, environmental consciousness in 6 articles, environmental information, perceived behavioral control, perceived consumer effectiveness and personal norm in 5 articles each, environmental friendliness of organic products in 4 articles, generation, green product information and lifestyle were examined in 3 articles each and altruism, grade level, green brand image, green brand loyalty, green price, greenwashing, membership of environmental institutes, narcissism, perceived environmental responsibilities, religiosity and water saving behavior were examined in 2 articles each. Whether the remaining 69 independent variables affect sustainable consumption behaviors was studied in 1 article each. Full table is available in Appendix 4.

Table 12: Hypotesized Indepent Variables that Affect Sustainable Consumption Behavior

Hypothesized Independent Variables of Sustainable Consumption Behaviors	F	Hypothesized Independent Variables of Sustainable Consumption Behaviors	F
Gender	19	Generation	3
Age	15	Green product information	3
Education level	14	Lifestyle	3
Environmental concern	13	Altruism	2
Income level	12	Grade level	2
Sustainable consumption intention	12	Green brand image	2
Marital status	8	Green brand loyalty	2
Attitude toward green consumption behavior	7	Green price	2
Occupation	7	Greenwashing	2
Environmental consciousness	6	Membership of environmental institutes	2
Environmental information	5	Narcissism	2
Perceived behavioral control	5	Perceived environmental responsibilities	2
Perceived consumer effectiveness	5	Religiosity	2
Personal norm	5	Water saving behavior	2
Environmental friendliness of organic products	4	Others	69

Source: Created by the author.

Among the hypothesized independent variables thought to affect sustainable consumption intention, as shown in Table 13, attitude ranks first since it is the subject of 15 articles. Following attitude, subjective norm was studied in 8 articles, environmental concern in 7 articles, perceived behavioral control in 6 articles, environmental awareness and green trust in 5 articles each, green perceived value in 4 articles, environmental knowledge, green perceived quality and green word-of-mouth in 3 articles each, education status, environmental responsibility, gender, green perceived risk, income level, perceived consumer effectiveness, saving behavior,

social media marketing, the advertisement perception of the Y generation and whether the family has children or not in 2 articles each. The remaining 28 independent variables that trigger sustainable consumption intention are analyzed in 1 article each. Full table is available in Appendix 5.

Table 13: Hypotesized Independent Variables of Sustainable Consumption Intentions

Hypothesized Independent Variables of Sustainable Consumption Intentions	F	Hypothesized Independent Variables of Sustainable Consumption Intentions	F
Attitude	15	Environmental responsibility	2
Subjective norm	8	Gender	2
Environmental concern	7	Green perceived risk	2
Perceived behavioral control	6	Income level	2
Environmental awareness	5	Perceived consumer effectiveness	2
Green trust	5	Saving behavior	2
Green perceived value	4	Social media marketing	2
Environmental knowledge	3	The advertisement perception of the Y generation	2
Green perceived quality	3	Whether the family has children or not	2
Green word-of-mouth	3	Others	28
Education status	2		

Source: Created by the author.

Apart from the hypotisized independent variables affecting sustainable consumption behaviors and intentions, there are some moderators and mediators studied in the articles. Among these, as depicted in Table 14, environmental attitude was examined in 7 articles, environmental concern in 4 articles and green consumption intention in 2 articles.

Table 14: Mediator Variables that are Hypothesized to Mediate the Relationship between Hypothesized Independent Variables and Sustainable Consumption Behaviors

Mediator Variables	F	Mediator Variables	F
Environmental attitude	7	Perceived consumer effectiveness	1
Environmental concern	4	Environmental responsibility	1
Green consumption intention	2	Green brand loyalty	1
Certification in forestry	1	Green brand image	1
Consumer engagement	1	Price perception	1
Consumers' attitudes toward green clothing	1	Trust	1
Control beliefs	1	Voluntary simplicity (cautious attitudes in shopping, self-sufficiency)	1
E-Womm	1	Water saving	1

Source: Created by the author.

Table 15 shows that price sensitivity is studied in 2 articles as a moderator variable. The remaining mediators, such as consumer engagement and green brand loyalty, and moderators, such as age and gender, have been studied in 1 article each.

Table 15: Moderator Variables that are Hypothesized to Moderate the Relationship between Hypothesized Independent Variables and Sustainable Consumption Behaviors

Moderator Variables	F
Price sensitivity	2
Age	1
Consumer mindset	1
Gender	1
General risk aversion	1
Green subjective knowledge	1
Generational cohort	1
Greenwashing perceptions of post-millennials	1
Motherhood	1
Trust	1

Source: Created by the author.

Table 16 presents the independent variables of sustainable consumption behaviors in the tested hypotheses. Among these variables, sustainable consumption intention, education level and gender were the most tested and confirmed variables in the articles. Full table is available in Appendix 6.

Table 16: Independent Variables of Sustainable Consumption Behaviors

Independent Variables of Sustainable Consumption Behaviors	F
Sustainable consumption intention	9
Education level	5
Gender	5
Environmental concern	5
Income level	4
Attitude toward green consumption behavior	4
Occupation	3
Age	3
Perceived consumer effectiveness	3
Marital status	2
Environmental consciousness	2
Lifestyle	2
Perceived behavioral control	2
Environmental values	2
Greenwashing	2
Green brand image	2
Green brand loyalty	2
Green product information	2
Others	41

Source: Created by the author.

Table 17 shows the independent variables whose hypotheses have been tested and approved within the scope of sustainable consumption intention. Among these sustainable consumption intentions, attitude, subjective norms and environmental concern stand out as the most tested and confirmed variables. Full table is available in Appendix 7.

Table 17: Independent Variables of Sustainable Consumption Intention

Independent Variables of Sustainable Consumption Intention	F
Attitude	15
Subjective norms	7
Environmental concern	6
Perceived behavioral control	5
Environmental awareness	4
Green trust	3
Saving behavior	2
Green perceived value	2
Others	18

Source: Created by the author.

Tables 18 and 19 show the mediator and moderator variables that were tested and validated in the hypothesized state.

Table 18: Mediator Variables that have been Tested and Approved to Mediate the Relationship between Independent Variables and Sustainable Consumption Behaviors

Mediator Variables	F
Environmental concern	3
Green brand image	2
Green brand loyalty	2
Certification in forestry	1
Consumer engagement	1
E-Womm behavior related to second hand products	1
Environmental attitude	1
Green brand love	1
Green consumption intention	1
Green trust	1
Perceived consumer effectiveness	1
Price perception	1
Water saving	1

Source: Created by the author.

Table 19: Moderator Variables that have been Tested and Approved to Moderate the Relationship between Independent Variables and Sustainable Consumption Behaviors

Moderator Variables	**F**
Price sensitivity	2
Gender	1

Source: Created by the author.

Among these variables, environmental concern, green brand image and green brand loyalty were the most tested and confirmed mediator variables, while only

price sensitivity and gender were moderator variables whose hypotheses were confirmed as moderator variables and had an impact on sustainable consumption behaviors and intentions.

CONCLUSION AND DISCUSSION

Since consumers are the most essential players in sustainable consumption and have an active part in guaranteeing sustainability, current study aims to offer insights into how consumers might be directed towards sustainability.

Research and studies from a transformative viewpoint are necessary to comprehend sustainability, particularly in the social sciences. To expedite this transition and provide insight for future research, the literature on sustainable consumption in Türkiye has been examined in this study. In order to undertake a systematic review, 93 papers from the national literature on sustainable consumption behavior that offered fresh and updated ideas, approaches, concepts, methodologies, and frameworks from the viewpoint of the consumer were examined. The purpose of this review is to present the distribution of research design and methodology, the distribution of institutions and regions where studies in the field have been carried out, and the variables found significant on sustainable consumption behavior in the applied studies carried out in this field on Turkish consumers thus far.

It is evident that since 2007, research on consumer-oriented sustainable consumption has accelerated. There are more studies, particularly in 2017–2020–2021. In the provinces of Istanbul, Ankara, Izmir, and Kastamonu, academics from Karabük University, Gümüşhane University, Izmir University of Economics, and Dokuz Eylül University, respectively, conducted the majority of the research. It was found that the convenience sampling technique was primarily applied in the researches, the majority of which were descriptive in character. Upon examination of the units of analysis, it becomes evident that 4% of the research were carried out on teenagers belonging to Generation Z, and 7.5% of the studies involved people over the age of 18. Based on the results, further research should be done on consumers from all societal groups who have the ability to change household consumption through their purchasing power.

Following the investigation, it was established that the following themes were covered: purchasing behavior, purchase intention, environmental awareness, green marketing, and green brand. But when research on the topic picked up steam in 2007, ideas like green advertising, sustainability, environmental values, recycling, green theories, and voluntary simplicity have spread and made their way into the national

literature. One paradigm for sustainable consumption is taking a comprehensive approach. Because of this, any topic that appeals to consumers should be investigated from a sustainability standpoint and suggestions that will advance practice should be made. One essential sign of the changes in the intellectual sphere is the quantity, variety, and originality of the concepts being examined in Türkiye. It is obvious that every area and idea where current marketing is used has to reexamine this diversity. Furthermore, new research ought to examine theories and methods that haven't been examined previously, such sharing-based consumption models.

The content analysis produced two categories out of which the dependent variables in the applied studies were categorized. "Sustainable consumption behaviors," and "sustainable consumption intention" are the names of these categories. The dependent variables under the "behavior" category that have been researched the most include, in order, the purchase and consumption patterns of organic, green, and ecological products, as well as sustainable consumption patterns. Gender, age, income, education, and intention to engage in sustainable consumption are the characteristics that have the strongest correlation with behavior, ranked in order of frequency of usage. The most studied dependent variables under the "intention" category are sustainable consumption intention, organic food purchase intention and sustainable fashion purchase intention, respectively. The intention to buy sustainable items, the dependent variable of the "intention" category, was most commonly studied together with attitude, subjective norm, and environmental concern.

Theoretical and Managerial Implications

The significance of the topic and the ideas and conclusions that direct research on sustainable consumption become evident when one considers the state of the globe in the future. Despite the results of this investigation, behavior and intention are still often studied at the individual level in research. It is advised to carry out study on a social scale, such as masses, organizations, families, groups, local governments, etc., in order to actualize the reform of society into sustainability.

Upon reviewing the condensed results, it becomes evident that a growing number of diverse notions related to the topic have been included into our literature.

Nonetheless, this review research reveals that the national literature contains a dearth of studies on the factors influencing consumers' intentions and purchasing behavior for sustainable products. Future research on the topic of sustainable consumption behavior modification in consumers should take a multifaceted approach, given the significance of influencing consumer behavior towards sustainable consumption. It is specifically believed that adopting experimental designs in the studies would be acceptable to discover cause and effect linkages. Academic studies and its associated academicians bear an increased duty due to the potential for the results to be utilized in the establishment of sustainable policies and strategies in enterprises and government processes.

Limitations and Future Research Directions

It is taken into consideration a very short time constraint in order to incorporate as many research as could on the issue in the review study. In the late 1990s, the idea of sustainable consumption made its way into the literature on national marketing. Therefore, research on consumption behavior published in the 1990s under the themes of ecology, green, environment, etc., were not included in our analysis. An attempt was made to lessen this restriction by looking through the bibliographies of the relevant papers. Future review research, nevertheless, have to carry out thorough investigations utilizing keywords that include periodic patterns.

The present study's findings demonstrate how diverse interest in sustainability is still changing throughout time. This can be significant for marketers and businesses that can view sustainable consumption from a wider angle, in addition to scholars. For instance, examining less-explored aspects of sustainable consumption, adjusting service and product offerings to current patterns of customers' sustainable behavior, and further exploring how consumers perceive the emphasis on the three pillars of sustainability may all be pertinent.

Research on consumers and sustainability is robust and diverse at the moment. But other topics are coming to light that require more research. Future studies should focus on less-studied frameworks and examine the social and economic facets of sustainability in a range of contexts. However, research that focuses on consumers

should also include their sustainable behavior in its whole and analyze its effects from the viewpoints of profit, people, and the environment.

Subsequent research can undertake a thorough analysis of the variables included in consumer-oriented sustainable consumption studies, and a conceptual map can be utilized to describe the links between ideas. In further research, the conceptual framework to be developed might be compared with studies in the global literature to identify areas of advancement in the domestic literature. Though comparable research on consumer-oriented sustainable consumption were evaluated in the worldwide literature, a thorough review study was not discovered. Review studies like this one show a gap in our knowledge of the aspects of global theory in this subject. This research's contribution to the literature may be attributed to its status as one of the first national review studies on the topic and its endeavor to present it in an all-encompassing manner. Thus, it is envisaged that this study would serve as a resource for information on sustainable consumption in Türkiye.

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APPENDICES

APPENDIX 1: Table 3. Distribution of Journals

Journals	F
Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi	3
Journal of Business Research-Turk	3
European Journal of Sustainable Development	2
Journal of Fashion Marketing and Management: An International Journal	2
Pazarlama ve Pazarlama Araştırmaları Dergisi	2
Sustainability	2
Third Sector Social Economic Review	2
Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi	1
Baltic Journal of Management	1
Bilge Uluslararası Sosyal Araştırmalar Dergisi	1
Bingol University Journal of Economics and Administrative Sciences	1
BMIJ	1
Brazilian Journal of Marketing	1
Business and Economics Research Journal	1
Business strategy and the environment	1
Cankırı Karatekin University Journal of the Faculty of Economics and Administrative Sciences	1
EJOSTIMTECH International Electronic Journal of OSTIMTECH	1
Electronic Green Journal	1
Emerging Markets Journal	1
Environment, Development and Sustainability	1
Environmental Science and Pollution Research	1
ERCİYES AKADEMİ	1

Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi	1
Eskişehir Osmangazi Üniversitesi İİBF Dergisi	1
EURASIA Journal of Mathematics Science and Technology Education	1
Food Quality and Preference	1
Food Science and Technology	1
Forestist	1
Gaziantep University Journal of Social Sciences	1
Global Journal of Economics and Business Studies	1
Gümüşhane Üniversitesi Sosyal Bilimler Enstitüsü Elektronik Dergisi	1
Güncel Turizm Araştırmaları Dergisi	1
H.Ü. İktisadi ve İdari Bilimler Fakültesi Dergisi	1
Hacettepe University Journal of Education	1
Hitit University Journal of Social Sciences Institute	1
Innovative Marketing	1
Int. Journal of Management Economics and Business	1
International Journal of Consumer Studies	1
International Journal of Contemporary Economics and Administrative Sciences	1
International Journal of Economics, Business and Politics	1
International Journal of Environmental & Science Education	1
International Journal of Management and Administration	1
International Journal of Marketing, Communication and New Media	1
International Social Sciences Studies Journal	1
Journal pf Aksaray University Faculty of Economics and Administrative Sciences	1
Journal of Animal & Plant Sciences	1
Journal of Business, Economics and Finance	1

Journal of Consumer Marketing	1
Journal of Enterprising Communities: People and Places in the Global Economy	1
Journal of Global Marketing	1
Journal of History School	1
Journal of International Food & Agribusiness Marketing	1
Journal of the American Nutrition Association	1
Journal of the Human and the Social Science Researches	1
Journal of Tourism and Gastronomy Studies	1
Kastamonu İletişim Araştırmaları Dergisi	1
KAÜİİBFD	1
KMU Journal of Social and Economic Research	1
Malatya Turgut Ozal University Journal of Business and Management Science	1
MANAS Journal of Social Studies	1
Marketing Intelligence & Planning	1
ODÜSOBİAD	1
Online Academic Journal of Information Technology	1
Pamukkale University Journal of Social Sciences Institute	1
PressAcademia	1
Psychol Mark	1
SAGE Open	1
Social Marketing Quarterly	1
SPORMETRE	1
Suleyman Demirel University The Journal of Faculty of Economics and Administrative Sciences	1
Sustainability and Climate Change	1

Sustainable Development	1
Süleyman Demirel University Visionary Journal	1
The Academic Elegance	1
The Journal of Academic Social Science Studies	1
The Journal of Operations Research, Statistics, Econometrics and Management Information Systems	1
The Journal of Turkish Sport Sciences	1
To & Re	1
Trend Bus Econ	1
TUJOM	1
Turkish Journal of Forestry	1
Water and environment journal	1
YOUNG CONSUMERS	1

APPENDIX 2: Table 7. Distribution of Unit of Analysis

Unit of Analysis	F	Unit of Analysis	F
N/A	30	Green ready-to-wear product consumers over 18 years of age	1
Adults over 18 years of age	7	Licensed outdoor athletes	1
Generation Z consumers	4	Local people	1
Generation Y consumers	3	Members and volunteers of environmentalist organizations (TEMA, Greenpeace, DOĞDER, DOĞAÇEV and TÜRÇEK)	1
Green product consumers	3	Mothers and college-age daughters	1
Undergraduate students	3	Network-marketing customers	1
Adults over 20 years of age	2	People who are familiar with guerilla marketing tactics	1
Female consumers	2	Pre-service teachers	1
Green hotel customers	2	Pre-service teachers attending the Department of Science Education in the Faculty of Education of Aksaray University	1
Academic personnels in a foundation university	1	Retail food consumers	1
Adults between 18-55 years of age	1	Statistics, mechanical, industrial and mining engineering students	1
Adults between 20-65 years of age	1	Students from 5 different universities	1
Adults over 25 years of age	1	Students from social sciences, science and fine arts faculties	1

Civil servant	1	Students of Dumlupınar University Faculty of Economics and Administrative Sciences	1
Consumers aged between 15 and 70	1	Students, who were engaged in sports in different branches of sports and non-sports students of a university	1
Consumers over 15 years of age	1	Teacher candidates at Faculty of Education	1
Consumers who buy used goods on the Internet	1	Traditional vehicle consumers	1
Consumers with experience in environmentally friendly products	1	Trakya University students	1
Customers of a well-known local farm	1	University of Kocaeli undergraduate and graduate students	1
Çamkoru Youth Camp, Yol Konak Youth Camp, Ondokuz Mayıs Youth Camp participants	1	University staff and students	1
Eco-friendly electronic product consumers	1	Visitors of Bolu Yedigöller National Park	1
Elementary school parents	1	White-collar people working in a private company operating in Manisa Organized Industrial Zone	1
Forest Products Industry employees	1	Yoga practitioners	1

APPENDIX 3: Table 9. University Distribution of Authors

Authors' Universities	F	Authors' Universities	F
Karabük Üniversitesi	11	Nişantaşı Üniversitesi	2
Gümüşhane Üniversitesi	10	Ondokuz Mayıs Üniversitesi	2
İzmir Ekonomi Üniversitesi	8	Selçuk Üniversitesi	2
Dokuz Eylül Üniversitesi	7	Yeditepe Üniversitesi	2
Kastamonu Üniversitesi	7	Adana Bilim ve Teknoloji Üniversitesi	1
Bingöl Üniversitesi	6	Akdeniz Karpaz Üniversitesi	1
Hacettepe Üniversitesi	6	Aksaray Üniversitesi	1
İstanbul Üniversitesi	6	Al Akhawayn University	1
Niğde Ömer Halisdemir Üniversitesi	6	American University	1
Trakya Üniversitesi	6	Ankara Haci Bayram Veli Üniversitesi	1
Central European University	4	Bandırma Onyedi Eylül Üniversitesi	1
İstanbul Aydın Üniversitesi	4	Burdur Mehmet Akif Ersoy Üniversitesi	1
İTÜ	4	Eskişehir Osmangazi Üniversitesi	1
Mehmet Akif Ersoy Üniversitesi	4	Gaziantep Üniversitesi	1
Muğla Sıtkı Koçman Üniversitesi	4	Giresun Üniversitesi	1
Yaşar Üniversitesi	4	Isparta Uygulamalı Bilimler Üniversitesi	1
Ankara Üniversitesi	3	İstanbul Gelişim Üniversitesi	1

Başkent Üniversitesi	3	İstanbul Ticaret Üniversitesi	1
Bursa Uludağ Üniversitesi	3	İstinye Üniversitesi	1
Düzce Üniversitesi	3	İzmir Demokrasi Üniversitesi	1
Eskişehir Teknik Üniversitesi	3	İzzet Baysal Üniversitesi	1
Kırıkkale Üniversitesi	3	Kayseri Üniversitesi	1
ODTÜ	3	Max van der Stoel Institute	1
Sivas Cumhuriyet Üniversitesi	3	Mustafa Kemal Üniversitesi	1
Aydın Adnan Menderes Üniversitesi	2	Nuh Naci Yazgan Üniversitesi	1
Bayburt Üniversitesi	2	OSTİM Teknik Üniversitesi	1
Çankırı Karatekin Üniversitesi	2	Sakarya Üniversitesi	1
Erciyes Üniversitesi	2	Samsun Üniversitesi	1
Galatasaray Üniversitesi	2	Tekirdağ Namık Kemal Üniversitesi	1
Gebze Teknik Üniversitesi	2	Ufuk Üniversitesi	1
Hasan Kalyoncu Üniversitesi	2	Universiti Malaysia Perlis	1
Hitit Üniversitesi	2	University Canada West	1
Iğdır Üniversitesi	2	Uşak Üniversitesi	1
İstanbul Sabahattin Zaim Üniversitesi	2	Yozgat Bozok Üniversitesi	1
Kyrgyzstan Turkey Manas University	2		

APPENDIX 4: Table 12. Hypothesized Indepent Variables that Affect Sustainable Consumption Behavior

Hypothesized Independent Variables of Sustainable Consumption Behaviors	F
Gender	19
Age	15
Education level	14
Environmental concern	13
Income level	12
Sustainable consumption intention	12
Marital status	8
Attitude toward green consumption behavior	7
Occupation	7
Environmental consciousness	6
Environmental information	5
Perceived behavioral control	5
Perceived consumer effectiveness	5
Personal norm	5
Environmental friendliness of organic products	4
Generation	3
Green product information	3
Lifestyle	3
Altruism	2
Grade level	2
Green brand image	2

Green brand loyalty	2
Green price	2
Greenwashing	2
Membership of environmental institutes	2
Narcissism	2
Perceived environmental responsibilities	2
Religiosity	2
Water saving behavior	2
Anthropocentric attitude	1
Anthropometric measurements	1
Ascribed responsibility	1
Awareness of consequences	1
Certification in forestry	1
Certified sportsmanship	1
Collectivism	1
Compulsary use of recycling bins	1
Conspicuous consumption tendency	1
Consumer level of conscientiousness	1
Convenience motivations	1
Department	1
Dependence on settlement	1
Desire to do the profession	1
Desire to pursue graduate education	1
E-Womm behavior related to second-hand products	1
Economic concerns	1
Economic motivations	1
Environmental values	1

Father education level	1
Feeling guilty	1
Frugality	1
Fuel saving	1
General risk aversion	1
Green advertising	1
Green brand awareness	1
Green brand love	1
Helping attitude	1
High nutritional value of organic products	1
Household energy saving	1
Ideological motivations	1
Indoor sportsmanship	1
Informative effects of reference groups	1
Level of corporate social responsibility perception	1
Level of fear and feeling uncertainty	1
Level of legal responsibility perception	1
Level of perception of responsibility towards employees	1
Life satisfaction	1
Machiavellianism	1
Materialism	1
Mother education status	1
New Environmental Paradigm	1
No. of children	1
Non-sportsmanship	1
Number of residents in the household	1
Nutritional literacy levels (SPFL scale)	1

Outdoor sportsmanship	1
Parent-child communication	1
Peer influence	1
Personality types (extroverted, accommodating, self-controlled, neuroticism, openness to experience)	1
Pet ownership	1
Place of home town	1
Pocket money amount	1
Protecting animal welfare in the cultivation of organic products	1
Psychopathy	1
Recreative sportsmanship	1
Responsive food choice	1
Schwartz's value dimensions of self-transcendence and self-enhancement (Universalism, Benevolence, Power, Achievement Hedonism)	1
Social appreciation	1
Staying type in Kütahya	1
Universal values (biospheric, altruistic, egoistic)	1
Utilitarian effects of reference groups	1
VALS types (innovators, thinkers, believers, achievers, strivers, experiencers, makers, survivors)	1
Value-expressive effects of reference groups	1
Volunteer tax compliance level	1
Waste reduction and recycling	1
Working period in the institution	1
Yoga experience	1
Youth center membership	1

APPENDIX 5: Table 13. Hypothesized Indepent Variables that Affect Sustainable Consumption Intentions

Independent Variables of Sustainable Consumption Intentions	F
Attitude	15
Subjective norm	8
Environmental concern	7
Perceived behavioral control	6
Environmental awareness	5
Green trust	5
Green perceived value	4
Environmental knowledge	3
Green perceived quality	3
Green word-of-mouth	3
Education status	2
Environmental responsibility	2
Gender	2
Green perceived risk	2
Income level	2
Perceived consumer effectiveness	2
Saving behavior	2
Social media marketing	2
The advertisement perception of the Y generation	2
Whether the family has children or not	2
Age	1
Altruistic values	1

Cognitive-affective responses towards green advertising	1
Collective self esteem	1
Consumer’s response to companies and products	1
Control beliefs	1
Convenience motivations	1
Country image	1
Economic motivations	1
Extroversion	1
Green advertising	1
Green Brand Equity	1
Green brand image	1
Guerilla marketing (ambient marketing, ambush marketing, stealth marketing and viral marketing)	1
Health consciousness	1
Ideological motivations	1
Individual environmental literacy	1
Marital status	1
Materialism (non-generosity, envy, preservation)	1
Organic product specifications	1
Perceived environmental impact	1
Personal image	1
Price sensitivity	1
Pro-environmental behaviour	1
Search for new tastes	1
Social influence	1
Social media usage	1
Social responsibility awareness	1

APPENDIX 6: Table 16. Independent Variables of Sustainable Consumption Behaviors

Independent Variables of Sustainable Consumption Behaviors	F
Sustainable consumption intention	9
Education level	5
Gender	5
Environmental concern	5
Income level	4
Attitude toward green consumption behavior	4
Occupation	3
Age	3
Perceived consumer effectiveness	3
Marital status	2
Environmental consciousness	2
Lifestyle	2
Perceived behavioral control	2
Environmental values	2
Greenwashing	2
Green brand image	2
Green brand loyalty	2
Green product information	2
Altruism	1
Anthropocentric attitude	1
Certification in forestry	1
Collectivism	1
Consumer engagement	1
Consumer level of conscientiousness	1
Dependence on settlement	1
E-Womm behavior related to second hand products	1
Ecocentric attitude	1
Economic concerns	1

Economic motivations	1
Environmental friendliness of organic products	1
Frugality	1
Green advertising	1
Green brand awareness	1
Green brand love	1
Green product quality	1
Health consciousness	1
Helping attitude	1
Ideological motivations	1
Informative effects of reference groups	1
Level of corporate social responsibility perception	1
Level of legal responsibility perception	1
Level of perception of responsibility towards employees	1
Machiavellianism	1
Materialism (non-generosity, envy, preservation)	1
Peer influence	1
Perceived environmental responsibilities	1
Personal norm	1
Pet ownership	1
Place of home town	1
Pocket money amount	1
Psychopathy	1
Religiosity	1
Social appreciation	1
Utilitarian effects of reference groups	1
VALS types (innovators, thinkers, believers, achievers, strivers, experiencers, makers, survivors)	1
Value-expressive effects of reference groups	1
Voluntary simple life style	1
Volunteer tax compliance level	1
Water saving behavior	1

APPENDIX 7: Table 17. Independent Variables of Sustainable Consumption Intention

Independent Variables of Sustainable Consumption Intention	F
Attitude	15
Subjective norms	7
Environmental concern	6
Perceived behavioral control	5
Environmental awareness	4
Green trust	3
Saving behavior	2
Green perceived value	2
Altruistic values	1
Collective self-esteem	1
Consumer's response to companies and products	1
E-Womm behavior related to second hand products	1
Environmental responsibility	1
Environmental values	1
Green advertising	1
Green brand equity	1
Green brand image	1
Green perceived quality	1
Guerilla marketing (ambient marketing, ambush marketing, stealth marketing and viral marketing)	1
Materialism (non-generosity, envy, preservation)	1
Perceived consumer effectiveness	1
Perceived environmental impact	1
Pro-environmental behavior	1
Social influence	1
Social media marketing	1
Social media usage	1

APPENDIX 8: Table 20. Publications Included in the Study

No	Article
1	Akdeniz, P.C., Leblebici Koçer, L. (2022) Yeşil Satın Alma Niyetinde Yeşil Reklam, Yeşil Güven ve Yeşil Marka İmajının Rolü. KMÜ Sosyal ve Ekonomik Araştırmalar Dergisi, 24(42), 12-31.
2	Akdoğan, L., Durmaz, Y. (2023) Exploring the Impact of Consumers' Attitudes towards Green Advertisements on the Intention to Purchase Green Products: The Mediating Role of Environmental Responsibility. Electronic Green Journal, 1(48)
3	Akturan, U. (2018) How Does Greenwashing Affect Green Branding Equity and Purchase Intention? An Empirical Research. Marketing Intelligence & Planning, 36(7), 809-824.
4	Alhamad, A., Ahmed, E., Akyürek, M., Baadhem, A., Alsheyab, E., Daw, A., Ibrahim, A. (2023) The Impact of Environmental Awareness and Attitude on Green purchase intention: An Empirical Study of Turkish Consumers of Green Product. Malatya Turgut Ozal University Journal of Business and Management Science, 4(1), 22-36.
5	Altuğ, N., Özhan, Ş., Meco, S. (2020) Dışa Dönüklük ve Yeşil Reklama Yönelik Tutumların Yeşil Satın Alma Niyetine Etkisi. Uluslararası Yönetim İktisat ve İşletme Dergisi, 16(1), 186-198.
6	Armutçu, B., Züferi, R., Tan, A. (2023) Green Product Consumption Behaviour, Green Economic Growth and Sustainable Development: Unveiling the Main Determinants. Journal of Enterprising Communities: People and Places in the Global Economy, Vol. ahead-of-print No. ahead-of-print
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8	Avcı, İ. (2022) How Pro-environmental and Saving Behaviours Determine Organic Product and Second-hand Product Purchase Intentions: A Study in Turkey. *Drustvena istrazivanja*, 32(3), 427-448.
9	Avcı, İ. (2023) Sustainable Water Consumption and Water-saving Behaviours: A Review of Consumers' Environmental and Economic Concerns in Turkey. Water and Environment Journal, 37(3), 616-627.
10	Avcı, İ., Yıldız, S. (2023) The Effects of Online Second-hand Product Purchase Motivatıons on Sustainable Consumption Behavior and Online Repurchase Intention in Consumer-to-consumer Electronic Commerce (c2c) and the Mediatıng Role of Electronic Word-of-mouth Marketing. Pazarlama ve Pazarlama Araştırmaları Dergisi, 16(1), 137-164.
11	Ayar, İ., Gürbüz, A. (2021) Sustainable Consumption Intentions of Consumers in Turkey: A Research Within the Theory of Planned Behavior. SAGE Open, 11(3), 1-16.
12	Aydıner Boylu, A., Günay, G. (2017) Do Families Attitudes and Behaviors Support Sustainable Water Consumption. European Journal of Sustainable Development, 6(4), 115-125.
13	Bakış, S., Kitapçı, H. (2023) Why Do Consumers Purchase Green Clothing? Investigating Symbolic Meanings Beyond Social Status and the Role of Consumer Mindset. Journal of Fashion Marketing and Management: An International Journal, 27(4), 710-738.
14	Baydaş, A, Ata, S, Duru, A. (2021). A Study on Green Purchasing Attitudes of Public Employees: Sample of Düzce Province. İnsan ve Toplum Bilimleri Araştırmaları Dergisi, 10 (1), 187-206.
15	Beyaz, R. (2022) Gerilla Pazarlamanın Yeşil Satın Alma Niyetine Etkisinde Çevre Kaygısının Aracılık Rolü. İşletme Araştırmaları Dergisi, 14(4), 3066-3080.
16	Biner Uysal, N., Küçükkancabaş Esen, S. (2017) Yeşil Satınalma Davranışının İncelenmesi: Çevresel Kaygının, Algılanan Tüketici Etkinliğinin ve Demografik Faktörlerin Etkileri. Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 19(2), 205-229.

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19	Bulut, Ç., Nazlı, M. (2020) Environmentalist Predispositions and Recycled Product Preferences. International Journal of Contemporary Economics and Administrative Sciences, 10(1), 173-196.
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