



## How can Retailers Help Consumers to Recycle? Exploratory Views on the Romanian Market

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**Abstract:** In recent years, sustainability has become a concept brought more and more frequently to the attention of consumers. European directives and legislation in force regulate the sustainable behavior of retailers, mentioning the changes they must include in the company's vision, respectively the facilities they must implement to encourage consumers to recycle. Starting from these considerations, the article focuses on the importance of the 3 R's – Reuse, Recycle, Reduce and how these concepts are implemented in consumer behavior. From a practical perspective, the research analyzes the sustainable behavior of Generation Z, starting from the premise that this cohort shows a greater interest in protecting the environment. The results of the research provide information regarding the interest in the recycling process undertaken by young people, as well as aspects related to the motivations underlying this action or the places where it takes place. Thus, we will be able to observe whether the workplace, college, or reference group exerts a greater influence on recycling behavior. At the same time, the article aims to identify the measures that retailers adopt to encourage consumers to recycle. The research results allow the identification of solutions that can be adopted by retailers to optimize the recycling process.

**Keywords:** sustainable behavior; generation Z; generational theory; recycling; waste-reducing.

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## 1. INTRODUCTION

Sustainability has become an increasingly important concept in today's world as we grapple with the challenges of climate change and environmental degradation. It encompasses the principles of responsible resource management, social equity, and economic prosperity for present and future generations. When discussing sustainability, it is important not only to define this concept but also to consider the three pillars that make up the components of this paradigm. These three pillars of sustainability “3 R's - Recycle, Reduce, Reuse” have the potential to create a more sustainable future.

To carry out this study, we started from the definition provided by [Wced \(1987\)](#) according to this sustainability aims to satisfy the needs and desires of people, without compromising the future of the next generations. Thus, taking into account the definition we started, not only the needs and desires that we manifest in the present are important. Sustainability aims at a long-term projection that also takes into consideration the needs of future generations.

Recycling plays a crucial role in promoting sustainable waste management practices and mitigating the environmental impact of excessive waste generation. It involves the process of converting waste materials into reusable resources, thus reducing the strain on natural resources, conserving energy, and minimizing pollution. The mounting waste crisis poses significant challenges to the environment, economy, and public health, necessitating urgent measures to curb waste generation and promote sustainable practices. Reducing waste is a fundamental strategy for achieving a more sustainable future, conserving resources, mitigating pollution, and fostering a circular economy. Reusing, as an essential element of the circular economy, plays a vital role in promoting sustainability by extending the lifespan of products, reducing energy consumption, and minimizing waste generation.

Sustainability has emerged as a critical paradigm in our modern world, addressing the urgent need to balance environmental preservation, social responsibility, and economic prosperity. When we talk about sustainability it is mandatory to analyze the multifaceted benefits of sustainability across various domains, shedding light on its positive impacts on the environment, society, and the economy. Drawing upon authoritative research, we delve into the advantages that sustainability brings, highlighting its potential to pave the way toward a resilient future. From this perspective, we analyze the benefits of sustainability based on three directions: environmental impact, social implications, and economic benefits.

**Environmental Impact of Sustainability:** Sustainability plays a crucial role in addressing environmental challenges such as climate change, deforestation, and pollution. Research indicates that adopting sustainable practices can mitigate the adverse effects of these issues ([Neacșu and Georgescu, 2023](#)). According to [Smith \*et al.\* \(2020\)](#), sustainable land management practices, such as reforestation and afforestation, can significantly reduce carbon dioxide levels in the atmosphere. Additionally, implementing renewable energy sources, such as solar and wind power, helps reduce greenhouse gas emissions and dependence on fossil fuels ([Brown and Sovacool, 2021](#)). For instance, renewable energy sources, including solar and wind power, not only reduce greenhouse gas emissions but also contribute to long-term energy security ([Brown and Sovacool, 2021](#)). Furthermore, sustainable land and water management practices, such as conservation agriculture and water recycling, help protect ecosystems, preserve biodiversity, and safeguard natural resources ([Carpenter \*et al.\*, 2020](#)).

**Social Implications of Sustainability:** Sustainability also encompasses social dimensions, emphasizing the importance of social equity, community well-being, and inclusivity. Scholars argue that sustainable development should address social inequalities and ensure equal access to resources and opportunities (Bolay, 2022). By promoting fair labor practices, providing education and healthcare services, and fostering gender equality, sustainability can contribute to building more resilient and cohesive societies (Myers *et al.*, 2000). Research highlights that sustainable initiatives contribute to poverty alleviation, improved access to education and healthcare, and the empowerment of marginalized communities (Bolay, 2022). Sustainable urban planning, for example, can create livable and resilient cities, offering better housing, transportation, and social infrastructure (Carmona, 2021). Additionally, sustainable businesses that prioritize fair labor practices and promote diversity and inclusion help create equitable and just societies (Figge *et al.*, 2022).

**Economic Benefits of Sustainability:** Contrary to the perception that sustainability hinders economic growth, numerous studies suggest that sustainable practices can lead to economic benefits in the long run. According to Galli *et al.* (2020), adopting sustainable business models can improve resource efficiency, reduce waste, and enhance competitiveness. In addition, sustainable investments in green technologies and infrastructure can stimulate job creation and foster economic development (Liu *et al.*, 2022). Such investments not only create employment opportunities but also drive innovation and technological advancements. Research suggests that adopting sustainable business models can drive innovation, improve efficiency, and enhance competitiveness (Eccles and Saltzman, 2011). Sustainable investments in renewable energy, green technologies, and sustainable infrastructure can stimulate economic development, generate employment opportunities, and foster long-term economic resilience (Liu *et al.*, 2022). Additionally, sustainable practices, such as resource optimization and waste reduction, can lead to cost savings for businesses (Elkington, 2020).

Promoting sustainable lifestyles is a key component of achieving a greener future. Educating individuals about sustainable consumption patterns and encouraging them to adopt eco-friendly habits can have a significant impact. Research shows that raising awareness and providing information about the environmental consequences of consumer behavior can lead to changes in consumption patterns (Thøgersen and Olander, 2003). Moreover, governments, businesses, and civil society organizations can collaborate to develop policies and initiatives that promote sustainable practices, such as recycling programs and renewable energy subsidies.

Sustainability provides a pathway to long-term resilience and opens doors to future opportunities (Del Baldo and Baldarelli, 2017). By integrating sustainability principles into decision-making processes, organizations and governments can build adaptive capacity and prepare for future uncertainties, including climate change impacts and resource scarcity (Dangelico and Pujari, 2010). Furthermore, embracing sustainable practices can drive innovation and the development of new industries and markets. For instance, the transition to a circular economy, which emphasizes resource efficiency and closed-loop systems, presents significant economic and environmental opportunities (Kirchherr *et al.*, 2023). In the face of global environmental challenges, the concept of sustainability has gained significant traction in recent years. As individuals, communities, and nations strive to protect and preserve the planet, adopting sustainable practices has become essential. The “3 R’s” of sustainability – Recycle, Reduce, Reuse – offer a practical framework for individuals and societies to promote environmental conservation.

## 2. LITERATURE REVIEW

### 2.1 Recycling – the importance in consumer behaviour

Recycling plays a crucial role in minimizing waste and conserving natural resources. By diverting materials from landfills and incinerators, recycling reduces the extraction of raw materials, energy consumption, and greenhouse gas emissions. Recycling processes involve converting waste materials into new products, reducing the need for virgin resources, and mitigating environmental degradation (Johnson *et al.*, 2019). For example, recycling one ton of aluminum saves approximately 14,000 kilowatt-hours of energy, equivalent to 10 metric tons of greenhouse gas emissions (EPA, 2020).

Recycling is a systematic approach to waste management that involves collecting, sorting, processing, and transforming discarded materials into new products or raw materials for manufacturing. It goes beyond traditional waste disposal methods, such as landfilling or incineration, by focusing on the recovery and reuse of valuable resources.

The recycling process typically involves several stages as collecting, sorting, processing, and manufacturing. Collection means that waste materials, such as paper, plastics, glass, and metals, are collected from households, businesses, and public spaces through curbside collection programs, drop-off centers, or recycling bins. Sorting assumes that collected materials are sorted based on their material types, such as plastic, metal, or paper, to ensure proper recycling. Forwards, the sorted materials undergo processing, which may include cleaning, shredding, melting, or breaking them down into smaller components. In the end, by manufacturing, the processed materials are then transformed into new products or used as raw materials for manufacturing industries (Geyer *et al.*, 2017).

Recycling is important because helps with resource conservation by reducing the need for extracting and processing raw materials. By recycling materials like paper, plastic, and metals, we can minimize deforestation, conserve energy, and preserve biodiversity. Also, it helps with energy and emission reduction because the recycling process consumes less energy compared to the extraction and production of new materials. It also reduces greenhouse gas emissions associated with resource extraction, manufacturing, and waste disposal, contributing to mitigating climate change. Recycling diverts waste from landfills, reducing the environmental and health risks associated with waste accumulation. It also promotes a circular economy, where materials are reused and repurposed instead of being discarded. In the end, recycling generates also economic benefits. Recycling creates economic opportunities by supporting industries that rely on recycled materials. It generates jobs in the collection, sorting, processing, and manufacturing sectors, contributing to local economies.

Nowadays, is important not only to know the recycling benefits, but also to know how to promote this concept and to convince others to put it into practice. The most important step is public education. Raising awareness about the importance of recycling through educational campaigns, community outreach programs, and school initiatives can instill recycling habits and knowledge from an early age. Also, we can't adopt sustainable principles if we don't have the infrastructure. We need to establish accessible recycling facilities, including recycling bins in public spaces, residential areas, schools, and workplaces, to encourage convenient and widespread recycling. All these measures need to have policy support. Governments can enact legislation and provide incentives to promote recycling. This includes implementing recycling

targets, offering tax incentives to recycling businesses, and enforcing regulations on waste management.

The significance of recycling is not limited to the act itself. The location where recycling takes place also holds great importance. So, it is important the proximity to waste Generation. The location of recycling facilities is critical because it affects the efficiency of recycling processes. According to [Jones and Garbutt \(2018\)](#), placing recycling centers near areas with high waste generation reduces transportation costs and minimizes carbon emissions associated with long-distance hauling. By reducing the distance between waste generation and recycling facilities, we can achieve greater resource efficiency and reduce the environmental impact of recycling operations.

Another crucial factor in successful recycling programs is the accessibility and convenience of recycling facilities. Research by [Smith \*et al.\* \(2019\)](#) reveals that individuals are more likely to participate in recycling initiatives if recycling centers are conveniently located near their homes or workplaces. The availability of easily accessible recycling locations encourages greater participation and decreases the likelihood of recyclable materials being discarded in regular waste streams. The location of recycling centers can also play a pivotal role in fostering community engagement and education. According to [Houghton and Gifford \(2020\)](#), strategically locating recycling facilities in visible areas encourages public awareness and interest in recycling practices. Such facilities can serve as educational hubs, providing information on recycling guidelines, materials accepted, and the environmental benefits of recycling. By raising awareness and educating the community, recycling locations become catalysts for broader environmental stewardship.

Recycling facilities located in the right places can have significant economic benefits. [World Bank \(2021\)](#) points out that proximity to recycling markets and industries enables efficient transportation and reduces costs associated with long-distance shipping of recyclable materials. Moreover, the establishment of recycling facilities can create local job opportunities, contributing to economic growth and community development. The location of recycling facilities should also consider principles of environmental justice. Studies by [Bullard \*et al.\* \(2019\)](#) indicate that marginalized communities often face higher exposure to environmental hazards, including waste facilities. By carefully selecting the location of recycling centers, policymakers can avoid further burdening already disadvantaged communities, ensuring fair access to recycling services and promoting equitable distribution of environmental benefits.

## 2.2 Reducing waste – a sustainable behaviour

The second “R” of sustainability, “Reduce,” emphasizes the importance of minimizing consumption and waste generation. By practicing conscious consumption habits, individuals can reduce their ecological footprint and contribute to a more sustainable future. This involves thoughtful decision-making, such as purchasing durable products, avoiding single-use items, and adopting a minimalist lifestyle. The principle of the Three Rs – reduce, reuse, recycle – serves as the cornerstone of waste reduction efforts. According to the Environmental Protection Agency ([EPA, 2019](#)), reducing waste at its source should be the primary focus. By consuming less, individuals and businesses can significantly reduce their environmental impact. [APA \(2017\)](#) suggests that waste reduction strategies should be integrated into behavioral change campaigns to foster sustainable habits among the population.

According to [Lundgren \(2018\)](#), reducing waste generation at its source is more effective in addressing environmental challenges compared to solely relying on waste management practices. Implementing strategies like designing products with longer lifespans, promoting repair and refurbishment, and encouraging responsible consumption can significantly contribute to waste reduction.

When we analyze the “reduce” as a component of the Three Rs is important to mention the Extended Producer Responsibility (EPR). This is a policy approach that holds manufacturers accountable for the entire lifecycle of their products, including the management of post-consumer waste. Under EPR schemes, producers are incentivized to design products that are easier to recycle or repair, thus minimizing waste generation ([APA, 2017](#)). [APA \(2019\)](#) highlights the importance of government intervention in implementing and enforcing EPR policies to drive systemic change. Diverting organic waste from landfills through composting is another effective waste reduction strategy. Composting not only reduces greenhouse gas emissions but also produces nutrient-rich soil amendments ([APA, 2017](#)). [APA \(2019\)](#) emphasizes the role of educational programs in promoting composting practices among households and communities, empowering them to participate in waste reduction efforts.

In the last few years, we heard more frequently about the “Zero Waste Initiatives”. The concept of “zero waste” aims to eliminate waste generation by redesigning products, systems, and processes to follow circular principles. Zero waste initiatives, such as bulk shopping, reusable packaging, and repair and sharing economies, are gaining momentum worldwide ([APA, 2017](#)). [APA \(2019\)](#) emphasizes the need for policy support and collaboration among stakeholders to create an enabling environment for zero-waste practices. Plastic pollution has emerged as a critical global issue. Reducing plastic waste involves various strategies, including promoting the use of alternatives, improving recycling infrastructure, and implementing plastic bag bans or fees ([APA, 2017](#)). [APA \(2019\)](#) recommends public awareness campaigns to educate consumers about the adverse impacts of plastic waste and to encourage behavior change towards more sustainable options.

Reducing consumption lies at the core of sustainable behavior. As individuals, our choices regarding what and how much we consume directly impact the environment. By embracing conscious consumerism, we can contribute to a more sustainable future. This involves making informed decisions to reduce our ecological footprint and prioritize sustainable alternatives. Research conducted by [Jackson \(2016\)](#) highlights the critical role of reducing consumption in achieving environmental sustainability. The study suggests that transitioning from a culture of materialism and overconsumption to one that values sufficiency and quality of life can significantly reduce resource depletion and waste generation.

Waste prevention is a crucial aspect of sustainable behavior, closely linked to the reduction principle. By preventing waste generation at its source, we can effectively address environmental challenges and conserve resources. This approach emphasizes the importance of reducing packaging, opting for durable products, and avoiding single-use items. According to [Schanes \*et al.\* \(2018\)](#), waste prevention strategies play a central role in sustainable waste management. The study demonstrates that focusing on waste prevention, such as reducing food waste and promoting circular economy practices, is more effective in reducing environmental impact compared to solely relying on waste treatment and disposal methods.

Embracing responsible consumption is a vital component of sustainable behavior. It involves making informed choices about the products and services we use, considering their environmental impact throughout their lifecycle. By selecting sustainable options, such as

energy-efficient appliances or eco-friendly products, we contribute to reducing our ecological footprint. Research by [Vermeir and Verbeke \(2006\)](#) emphasizes the significance of responsible consumption in sustainable behavior. The study suggests that individuals who are aware of the environmental impact of their choices are more likely to engage in pro-environmental behaviors, including reducing consumption and selecting sustainable alternatives.

Reducing consumption and promoting sustainable behavior are not solely individual efforts but require collective action within communities. Collaborative initiatives such as sharing economies, community gardens, and local exchange systems can foster sustainable practices and reduce overall consumption. By sharing resources and promoting localized production, communities can achieve greater self-sufficiency and reduce environmental impact. [Bocken et al. \(2014\)](#) highlight the importance of collaborative initiatives in promoting sustainable behavior. The study emphasizes the role of circular economy business models, where the focus shifts from product ownership to sharing, leasing, and regenerative practices. Such models enable communities to reduce consumption, minimize waste, and create more sustainable socio-economic systems.

### **2.3 Reusing – role in promoting sustainability**

The third “R” of sustainability, “Reuse” advocates for extending the lifespan of products and materials. Reusing items instead of disposing of them after a single use not only conserves resources but also reduces the environmental impact of production and waste management processes. By embracing the concept of circular economy, where materials flow within closed loops, we can minimize waste and maximize resource efficiency.

Research by [Chartrand et al. \(2019\)](#) highlights the importance of reusing items in achieving sustainable consumption patterns. The study found that extending the lifespan of clothing through reuse and second-hand markets significantly reduces carbon emissions compared to the production of new garments. Similarly, initiatives such as sharing economy platforms, where people lend or rent items instead of owning them individually, promote resource sharing and reduce overall consumption. One of the primary ways reusing promotes sustainability is by extending the lifespan of products, thus reducing the need for new production and associated resource extraction. By repairing, refurbishing, or repurposing items, individuals and businesses can prevent the premature disposal of goods, thereby conserving raw materials and energy. According to [Ahmed et al. \(2020\)](#), extending the lifespan of products by just 10% could result in a 20% reduction in carbon dioxide emissions and a 30% decrease in resource use.

Reusing also contributes to sustainability by conserving energy throughout the product lifecycle. The production of new goods requires substantial amounts of energy, including extraction, manufacturing, and transportation. By reusing items, energy-intensive processes associated with production and distribution can be minimized. A study by [Despotović et al. \(2019\)](#) found that reusing electronic devices instead of manufacturing new ones reduced energy use by 70% for smartphones and 85% for laptops. One of the most visible benefits of reusing is the significant reduction in waste generation. The linear “take-make-dispose” model, which dominates many industries, contributes to the mounting waste problem. However, reusing diverts items from the waste stream, preventing them from ending up in landfills or incinerators. A study by [Zhang et al. \(2021\)](#) estimated that if 50% of discarded textiles were reused, it could save 3.3 million tons of waste from landfills annually.

Promoting reusing practices requires a shift in consumer behavior and increased awareness of the environmental impact of our choices. Educational campaigns, product labeling, and information dissemination are crucial to fostering a culture of reusing. According to [De Massis \*et al.\* \(2020\)](#), consumers who are aware of the environmental benefits of reusing are more likely to engage in such behaviors, emphasizing the importance of education and communication in driving sustainable choices.

Analyzing the “reuse” concept it is important to take into account the reuse packaging. Packaging plays a significant role in our daily lives, protecting and preserving products during transportation and storage. However, the excessive use of packaging materials contributes to waste generation and environmental degradation. To address this issue, the concept of reusing packaging has emerged as a sustainable solution that promotes resource conservation and waste reduction throughout the supply chain. By adopting reusable packaging systems, such as crates, pallets, and containers, businesses can eliminate the need for single-use packaging materials. A study by [Poovarodom \*et al.\* \(2017\)](#) found that implementing reusable packaging in a retail distribution system reduced packaging waste by 85% compared to traditional disposable packaging methods. This waste reduction not only conserves resources but also decreases the burden on landfills and waste management systems.

Reusing packaging materials helps conserve valuable resources, including raw materials, energy, and water. The production of packaging materials, such as plastic, paper, and metal, requires significant amounts of energy and resources. By reusing packaging, these resources can be saved by extending the lifespan of materials. A study by [Lindhqvist \*et al.\* \(2018\)](#) demonstrated that reusing cardboard packaging over multiple cycles resulted in a 50% reduction in energy consumption compared to the production of new packaging. Implementing packaging reuse systems can yield economic benefits for businesses. Reusable packaging reduces costs associated with purchasing new packaging materials, disposal fees, and waste management. A report by the [World Economic Forum \(2020\)](#) highlighted that implementing a circular packaging model, including reusing packaging, could save businesses up to \$10 billion annually in packaging costs.

Reusing packaging also aligns with consumer demands for sustainable practices. A survey conducted by [Det Udomsap and Hallinger \(2020\)](#) revealed that a majority of consumers perceive reusable packaging as more environmentally friendly than single-use alternatives. Consumers are increasingly willing to support brands that embrace sustainable packaging practices, including reuse initiatives. By providing reusable packaging options, businesses can meet consumer expectations, enhance brand reputation, and foster long-term customer loyalty.

## 2.4 Generation Z

Generation Z, also known as Gen Z, is the demographic cohort following Millennials and represents the cohort born between the mid-1990s and early 2010s. As the first generation to grow up entirely in the digital era, Generation Z exhibits distinctive characteristics shaped by their experiences with technology and the evolving social landscape ([Dabija \*et al.\*, 2019](#)).

Generation Z has grown up immersed in a technologically advanced world. From an early age, they have embraced digital devices and platforms, seamlessly integrating them into their daily lives. According to a study by [GfK MRI \(2018\)](#), 95% of Gen Z individuals aged 13 to 17 own a smartphone, making them the most digitally connected generation to date. This familiarity

with technology has resulted in a high level of technological proficiency and adaptability among Gen Z individuals. Coined as “digital natives,” Generation Z individuals possess an inherent understanding of digital tools and platforms. They have grown up navigating social media, online platforms, and search engines, leading to an unparalleled ability to find information and engage with technology. [Prensky \(2001\)](#) explains that digital natives are comfortable multitasking and prefer interactive, visual, and multimedia-rich learning environments. This characteristic has profound implications for education and the workplace, where Gen Z's digital fluency can be harnessed for collaborative and innovative efforts.

Generation Z displays a strong commitment to diversity and inclusivity. Growing up in an era of increased social awareness, Gen Z individuals have embraced progressive attitudes toward race, gender, sexuality, and other forms of identity. A survey conducted by the [Pew Research Center \(2019\)](#) found that Gen Z is the most racially and ethnically diverse generation in the United States, with 48% being non-white. This diversity has fostered a generation that values inclusivity, equality, and social justice, advocating for change and challenging traditional norms. Generation Z exhibits a notable entrepreneurial spirit. The proliferation of digital platforms and the gig economy have empowered Gen Z individuals to monetize their skills and pursue entrepreneurial endeavors at an early age. With access to online marketplaces, crowdfunding platforms, and social media, Gen Z has embraced self-employment and side hustles. A study by [Upwork & Freelancers Union \(2019\)](#) revealed that 53% of Gen Z individuals freelance, highlighting their resourcefulness, self-motivation, and desire for autonomy.

Generation Z is characterized by a heightened awareness of environmental issues, particularly climate change. Growing up in a time of increased environmental activism and the global climate movement, Gen Z individuals are more likely to understand the urgency of the climate crisis. A study conducted by [Cone Communications \(2017\)](#) found that 89% of Gen Z respondents believe that companies should take action to help solve environmental and social issues. This climate consciousness is driving Gen Z's commitment to sustainable behaviors. Generation Z exhibits a preference for eco-friendly and sustainable products. Research conducted by [Nielsen \(2020\)](#) revealed that Gen Z consumers are more willing to pay extra for sustainable and environmentally friendly goods compared to previous generations. This inclination toward eco-conscious consumerism has spurred the growth of sustainable brands and influenced companies to adopt environmentally friendly practices. Gen Z's emphasis on sustainability is reshaping market dynamics and encouraging businesses to adopt more sustainable practices throughout their supply chains.

Generation Z is embracing minimalism and waste reduction as part of their sustainable lifestyle. They are keen on reducing waste and adopting practices such as recycling, composting, and reusing. So, Gen Z individuals are more likely to engage in sustainable behaviors such as reducing single-use plastic consumption and embracing a circular economy ([Dabija et al., 2019](#)). This commitment to waste reduction is driven by a desire to minimize its environmental impact and create a more sustainable future. Generation Z is leveraging social media and digital platforms to drive environmental activism. They are vocal advocates for sustainability and are using their collective voices to raise awareness, influence policy changes, and promote sustainable practices. A study by [Jagers \(2017\)](#) found that Gen Z is more likely to participate in collective action for the environment, such as signing petitions or participating in protests. The digital connectivity of Gen Z enables them to mobilize quickly and amplify their environmental messages to a broader audience, driving positive change.

Generation Z is demonstrating a preference for careers that align with their values and contribute to sustainable development. A survey by [Deloitte \(2020\)](#) revealed that 77% of Gen Z respondents considered a company's sustainability practices when choosing where to work. Gen Z individuals are seeking careers in renewable energy, sustainable agriculture, environmental advocacy, and green technology. Their ambition to make a positive impact on the environment extends beyond personal actions, with a focus on driving systemic change through their professional pursuits.

### 3. METHODOLOGY

For this study, we undertook two types of research. In the first stage, a desk-research was carried out which aimed to gather information about the retailers under consideration. For this scientific approach, we focused on some companies in the fast-moving consumer goods (FMCG) field. The decision is motivated by the fact that the FMCG industry has long been a cornerstone of global economies, encompassing a wide range of frequently purchased products. From everyday household items to personal care products and food and beverages, FMCG goods play an essential role in our daily lives.

Fast-moving consumer goods are products that have a relatively short shelf life and are consumed or replaced frequently. They are typically low-cost items that are in high demand and are purchased without much deliberation. Examples of FMCG products include toiletries, packaged foods, beverages, cleaning products, and over-the-counter medications. Consumer demand plays a vital role in shaping the FMCG industry. Rapid urbanization and the expansion of the middle-class population have led to increased consumer spending power, driving the demand for FMCG products. Consumers' growing awareness of health and wellness has also influenced their purchasing decisions, leading to a surge in demand for organic, natural, and healthy FMCG products ([Nielsen, 2021](#))

Among the existing retailers on the market, to carry out this research, we analyzed the sustainable behavior of the companies Kaufland, Profi Romania, and Lidl. According to available statistical data, in 2022, the retailer Lidl was the market leader, followed by Kaufland - part of the Schwartz group. Thus, we turned our attention to the Profi Romania group (a company located in fourth place in the ranking) ([Nicolae, 2023](#)).

For the retailers considered we analyzed the packaging storage spaces they have at the entrance to the stores or in the parking lot. It should be noted that this measure was taken as a result of ordinance no. 1074/2021 which assumes that every retailer that has an area of more than 200 sqm must have special machines (GRS) or other forms of selective collection to help customers in the packaging recycling process.

In the second stage, we carried out a quantitative research among people from Generation Z. The research instrument was represented by a questionnaire consisting of 14 questions regarding the motivation for recycling plastic packaging and aluminum cans, the place where they recycle, the attitude towards recycling, and future intentions. The items are part of validated scales, having support in specialized literature, some of these items are mentioned in [Table no. 1](#).

**Table no. 1 – Items used for the questionnaire**

Source	Items
<i>Smeesters et al. (2003)</i>	I recycle with care for the environment. I recycle because it is a social duty. I recycle because that's what the legislative regulations require. I recycle because it is an easy/easy process. I recycle because it's healthy for me. I recycle for economic reasons (I receive vouchers, rewards, etc.).
<i>Vining and Ebreo (1989)</i>	I recycle because in this way I contribute to the conservation of resources. I recycle because that way I reduce the amount of waste produced. I recycle because the people around me do.
<i>Hage et al. (2009)</i>	I recycle because it's a moral duty.
<i>Aarli et al. (2020)</i>	Recycling substantially reduces the use of landfills. Recycling protects natural resources. Recycling will make a difference to the quality of the environment. I will try to recycle my waste at home every day for the next month.

The final part of the questionnaire included the segmentation variables: background, gender, level of education, etc. The questionnaire was applied in the spring of 2023 (February - April 2023), and the sample consisted of 500 persons. The respondents were represented by young people who are part of Generation Z, aged between 18 and 24 years. For the sample, we aimed to maintain a gender ratio, with the distribution being 57% female and 43% male. Regarding the area of origin, the majority of respondents (83%) come from the urban area.

From a statistical perspective, for this research, having in view the resulting database, we ran descriptive statistics, which show us the generational profile, and consumption preferences. Following the analyses carried out, it could be observed that 89.6% of respondents recycle plastic packaging, their percentage being higher than those who opt for recycling aluminum cans (62.4%). Equally, most respondents mention that they recycle plastic packaging or aluminum cans with a frequency of two to five times a week, the preferred location for this process being their own home.

## 4. FINDINGS

### 4.1 The findings of the documentary research

As part of the documentary research carried out, we analyzed the spaces intended for selective collection, taking into account the previously mentioned retailers.

According to [Figure no. 1](#), the selective collection action includes plastic and glass packaging, as well as aluminum cans. Thus, when customers go shopping, they have the opportunity to bring the packaging and get rid of it in an organized way, using the containers located in the store's parking lot.

In [Figure no. 2](#), the poster promoting the campaign carried out by Kaufland Romania is visible. Similar to the program developed by Lidl and in the case of the Kaufland retailer, plastic packaging, and glass or aluminum cans are targeted. The major difference compared to the competing company is that, if at least 3 packages (of the same or different categories) are recycled, the customer can receive a voucher based on which they benefit from different discounts on distinct product ranges. Discounts are mentioned both on the website and in the app.



Figure no. 1 – Lidl Romania – Packaging collective selection

Source: Lidl Romania (2021)



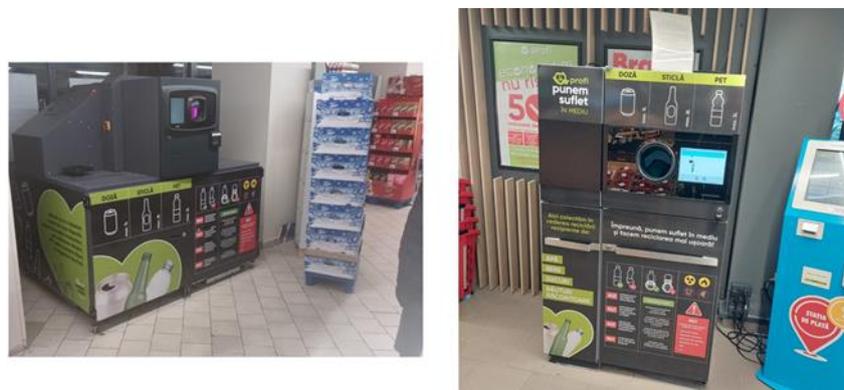
Figure no. 2 – Kaufland Romania – packaging collective selection

Source: Kaufland (2022)

Unlike Kaufland and Lidl, Profi Romania (Figure no. 3) was the first retailer to bring GRS machines to support customers. As part of a pilot program, some stores in Timisoara, Cluj-Napoca, and Bucharest were equipped with this equipment, so that customers could recycle plastic packaging and aluminum cans before the legislative regulations appeared. Because they believe that rewards are important in the process of educating consumers, Profi representatives offered vouchers to consumers based on the number of recycled packaging, and these could be used on subsequent store visits.

So, whether it is the retailers' initiative or the legislative regulations that compel them to equip their stores with this equipment, at present, every retailer in the FMCG sector has a space dedicated to selective collection. Individuals must become aware of the importance of recycling and contribute to a cleaner environment by storing packaging in specially designed spaces.

Regarding the promotional actions of the considered retailers, their advertising spots are based on some key concepts such as "recycling", "sustainability", "packaging", and "environment". We believe that the use of these phrases helps to fix the message in the consumers' minds, in the end, they remain with the idea that retailers are actively involved in protecting the environment and implementing sustainable principles, by carrying out the recycling process.



**Figure no. 3 – Profi Romania – Packaging collective selection**

Source: made by the authors

At the same time, analyzing the campaigns carried out, it is important to refer to the company of which the organizations are a part. For example, Lidl and Kaufland are companies that are part of the Schwartz group. The motto under which they have defined their sustainability report is “Be a part of our sustainable future”, conveying to their customers that, in reality, they are part of the change. At the group level, in Germany, they launched the REset Plastic initiative, which is a recycling program that encourages consumers to continue this process. Unlike Romania, which is an emerging market even from this point of view, in Germany, the packaging recycling process represents an aspect deeply rooted in the citizens' consciousness, being a habit they practice continuously. Through the REset Plastic program, Schwartz representatives aim to create their own-brand packaging as recyclable as possible by 2025, reducing the amount of plastic used by approximately 20%. Also, in the next two years, they aim to use an average of 25% recycled material in their private label packaging made of plastic (Schwartz Group, 2021).

Sustainable behavior is increasingly being implemented by large groups operating in the retail sector. The Ahold Delhaize Group, under the slogan “Grounded in Goodness”, aims at three directions: “Healthier People and Healthier Planet”, “Partners” and “Environmental, Social and Governance performance”. Practically, through the axes on which it acts, it aims to protect the environment, combat climate change, and food shortages, and establish relations with local producers, who have the opportunity to supply healthy products, thus contributing to the development of the local economy (Ahold, 2023a).

Equally, they pay more attention to aspects related to waste management. Starting from the premise that a very large amount (millions of tons) of plastic is found thrown into nature, polluting the seas and oceans, the group is actively involved in the process of eliminating plastic waste. Thus, they try to reduce the plastic packaging they use, thus, the materials used are 100% reusable, recyclable, or compostable (Ahold, 2023b).

Thus, recycling behavior, which we consider an element of novelty, is already implemented in developed countries, being adopted by consumers. Although it is at the beginning of the road in terms of the new process, Romania benefits from the existing legislative framework, and the retailers in the market provide the necessary infrastructure to encourage consumers to recycle.

## 4.2 The findings of quantitative research

Before conducting the quantitative research, we analyzed the behavior of Generation Z globally through a documentary research. The collected data are presented in [Table no. 2](#).

**Table no. 2 – Generation Z behaviour around the World**

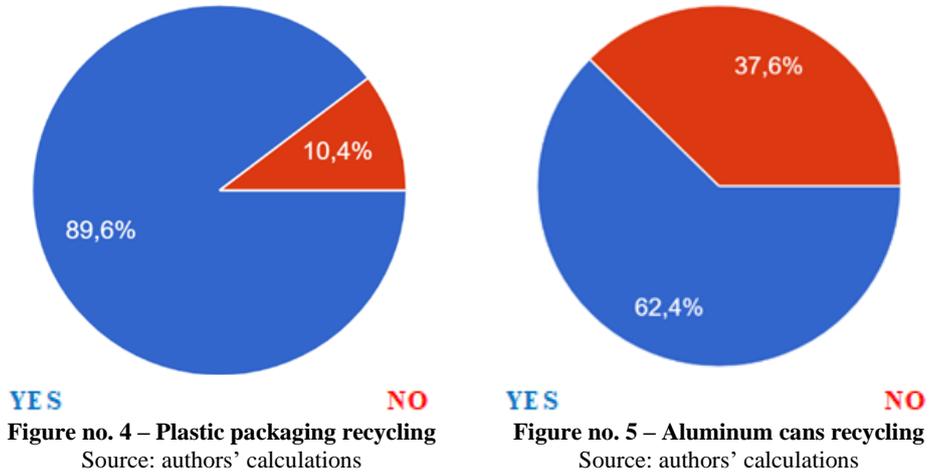
	<b>Generation Z</b>	<b>Source</b>
<b>Australia</b>	60% of respondents from Gen Z are willing to pay more for brands that try to have a positive impact on society and brands that treat employees and suppliers fairly.	Statista Research Department (2023b)
<b>France</b>	Nearly two-thirds of respondents from Generation Z were willing to pay at least five percent extra for a carbon-neutral delivery when shopping online.	Beyrouthy (2022)
<b>United Kingdom</b>	Over 80% of Generation Z consumers stated they would be willing to pay at least ten percent more for products if the items in question were considered sustainable.	Tighe (2022)
<b>United States and Canada</b>	Almost 60% of Gen Z consumers stated that they prefer purchasing environmentally sustainable products.	Tighe (2020)
<b>United States</b>	37% of surveyed Gen Z consumers are willing to pay a premium for environmentally sustainable products.	Tighe (2020)
<b>Canada</b>	31% of Gen Z consumers are willing to pay a premium for environmentally sustainable products.	Tighe (2020)
<b>China</b>	87 % of the respondents stated they would pay more for a brand that supported the issues they care about.	Ganbold (2022)
<b>Japan</b>	44 % of Gen Z consumers said they would pay more if a brand supported the issues they cared about	Ganbold (2022)

Also, we analyzed waste recycling around the world. The results are presented in [Table no. 3](#).

**Table no. 3 – Waste recycling around the World**

<b>Country</b>	<b>Waste recycling around the World</b>	<b>Source</b>
<b>Spain</b>	Generated over 3.8 million metric tons of paper and cardboard packaging waste (the largest packaging waste stream in the Mediterranean country, followed by plastic and glass).	Alves (2023)
<b>Spain</b>	The amount of plastic packaging waste generated surpassed 1.7 million tons that year.	Alves (2023)
<b>Hungary</b>	47 kilograms of plastic packaging waste produced per capita.	Statista Research Department (2023a)
<b>United Kingdom</b>	The recycling rate from waste from households was 44.4% in 2020 - a decrease from 46 percent in 2019.	Statista Research Department (2023a)
<b>Wales</b>	The highest recycling rate for household waste in the UK (56.5%).	Alves (2023)
<b>Scotland</b>	The lowest recycling rate (41%).	Alves (2023)
<b>Ireland</b>	The biggest producer of plastic packaging waste per capita in the European Union in 2020 (61.52 kilograms per person).	Alves (2023)

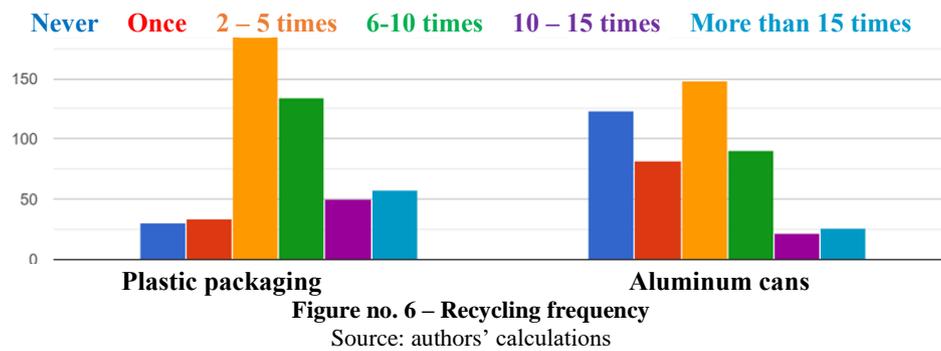
According to our research, carried out on the sample considered, 89.6% of respondents mention that they recycle plastic packaging (Figure no. 4), and 62.4% recycle aluminum cans (Figure no. 5).



As we can see, fewer respondents state that they recycle aluminum cans, a possible reason being the fact that quite a few products we consume/use have plastic packaging.

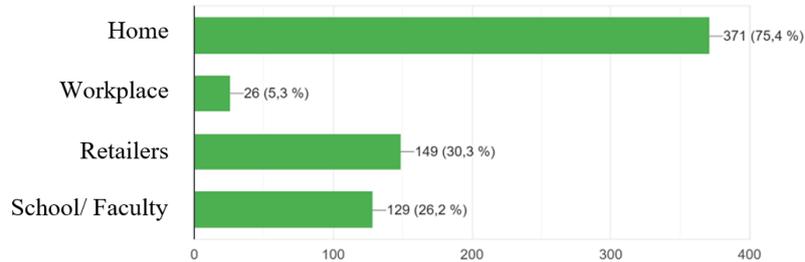
Another important aspect that was captured by the research carried out concerns the frequency of recycling plastic packaging or aluminum cans.

Figure no. 6 shows that, for the sample considered, in the last three months, most consumers have recycled plastic packaging or aluminum cans two to five times. Considering the rather long interval we considered – three months, the recycling frequency is quite low. Thus, we can conclude that the habit of recycling packaging is not yet rooted in the usual behavior of consumers.



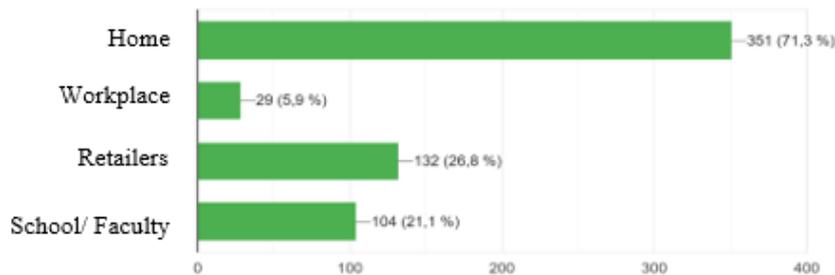
One of the most important aspects we looked at in conducting this research was related to where consumers recycle. In the case of plastic packaging, most of the respondents mentioned that they carry out this action at home, later storing them in specially arranged

spaces (Figure no. 7). The second option mentioned was at the big stores. Starting from these considerations, we can conclude that the retailer's installation of devices that allow selective collection is a beneficial and important aspect for consumers.



**Figure no. 7 – Recycling plastic packaging location**

Source: authors' calculations



**Figure no. 8 – Recycling aluminum cans location**

Source: authors' calculations

With small differences related to the number of respondents, the previously established hierarchy is also preserved in the case of recycling aluminum cans (Figure no. 8).

## 5. DISCUSSION

Sustainability is a powerful tool to address the pressing environmental, social, and economic challenges of our time. By adopting sustainable practices, we can reduce our ecological footprint, promote social equity, and unlock economic opportunities. The integration of sustainability into all aspects of our lives, from individual choices to government policies, is essential for creating a greener and more sustainable future. Recycling is a fundamental component of sustainable waste management, enabling the conservation of resources, energy reduction, waste reduction, and economic benefits. By actively participating in recycling practices and supporting initiatives that promote recycling, individuals, communities, and governments can contribute to a more sustainable future. The integration of education, infrastructure development, and policy support will pave the way for a circular economy where resources are utilized efficiently, waste is minimized, and the environment is protected for future generations. Also, recycling creates jobs and promotes economic growth.

In the pursuit of environmental sustainability, the principle of reduction plays a central role. By minimizing consumption, preventing waste, embracing responsible consumption, and fostering collaborative initiatives, individuals and communities can contribute to a more sustainable future. The importance of reduction as a part of sustainable behavior is supported by research highlighting its positive impact on resource conservation, waste reduction, and the overall well-being of our planet. By adopting reduced practices, we can make a meaningful difference and create a more sustainable world for future generations. Reusing plays a pivotal role in promoting sustainability by extending the lifespan of products, conserving energy, reducing waste, creating jobs, and encouraging a shift towards more sustainable consumption patterns. The benefits of reusing extend to both the environment and the economy, making it a crucial element in the transition towards a circular economy. By recognizing the value of reusing and adopting practices that support it, individuals, businesses, and policymakers can collectively contribute to a more sustainable future.

In the recycling process, we have to consider that there are at least two parties involved: on the one hand the retailers and on the other hand the customers. Of course, for retailers to help consumers recycle, public education is necessary. Practically, the recycling infrastructure exists in the market, and retailers have adapted to the existing legislative framework. Thus, the question arises of how we can convince customers to recycle, using devices available on the market. Through public education campaigns, retailers can bring the existence of recycling infrastructure to the attention of customers. Also, the guarantee-recycling systems (GRS) can be brought closer to the consumer, through their positioning.

Equally, we must not omit the fact that Romania is an emerging market. In our case, there is the legislative framework that informs us what measures retailers must take, and how consumers must be involved in this process, but usually due to ignorance, the legislation is more difficult to implement. In this case, to support customers, retailers have implemented GRS machines, which allow offering direct rewards in the process of stimulating recycling.

Another direction that can be followed for retailers to encourage customers to recycle would be through campaigns with public authorities and town halls, with school units, as well as with companies with a large number of employees. In addition to running educational programs in schools, to introduce the concept of recycling in the minds of potential customers from a young age, they could also run these campaigns for organizations that have a large number of employees. Last but not least, through collaboration with public authorities, depending on the recycled packaging, customers could receive vouchers that can be used at the retailers considered.

In the theoretical part of this paper, we mentioned some statistics related to the recycling process carried out in other states and the level at which it is located. Speaking of more developed markets, public education is more advanced, so the involvement in the recycling process is also more extensive. Thus, we must also take into account the experience that developed countries have in the sphere of sustainability. For example, Wales has the highest recycling rate (56.5%), but they are more than 15 years old in the recycling process, which means that citizens already treat this aspect as a habit.

## 6. CONCLUSION

While recycling as a practice is undoubtedly crucial for environmental sustainability, the location where recycling takes place holds equal significance. Proximity to waste generation,

accessibility and convenience, community engagement and education, economic considerations, and environmental justice are all factors that underscore the importance of the place where we recycle. By recognizing and addressing these factors, we can optimize recycling systems and foster a more sustainable future. As we can see from the research carried out, most consumers prefer to recycle packaging from the comfort of their own homes or at large stores. For this reason, we believe that retailers, even in the absence of legislation to this effect, should pay more attention to collective selection spaces and encourage consumers in the recycling process.

Efforts to reduce waste play a pivotal role in creating a sustainable future. By embracing strategies such as the Three Rs, extended producer responsibility, composting, zero waste initiatives, and plastic waste reduction, we can minimize the environmental and social consequences of waste generation. Governments, businesses, communities, and individuals must collaborate to drive systemic change and foster a waste-conscious society. Through education, policy support, and collective action, we can create a world where waste is minimized, resources are conserved, and a sustainable future is secured.

Generation Z represents a unique cohort shaped by the digital age and its accompanying dynamics. Their characteristics, such as technological savviness, digital nativism, diversity and inclusion advocacy, entrepreneurial spirit, and mental health awareness, set them apart from previous generations. Understanding these distinctive traits is essential for educators, employers, marketers, and policymakers, as they shape strategies and approaches to effectively engage and cater to the needs of Generation Z. By embracing their strengths and leveraging their digital fluency, society can unlock the immense potential of this generation. Moreover, retailers should try to benefit from the expertise and willingness of young people to be involved, as they respond in a positive way to the social responsibility actions initiated by companies.

## 7. RESEARCH LIMITS AND FUTURE RESEARCH DIRECTIONS

When discussing the limitations of the research, the first important aspect to mention is that we only considered three retailers: Profi Romania, Lidl, and Kaufland. Of course, sustainable behavior can be different depending on the retailer's size, financial resources, and market experience. Thus, for an overview of the retail market in Romania, there is the possibility of expanding this analysis by taking into account a larger number of companies (Auchan, Carrefour, Penny, etc.).

Another possible limitation of the research may be given by the selected sample. For this study, we only considered members of Generation Z, based on the premise that they are more involved in social responsibility campaigns and environmental protection actions, and have a sustainable behaviour. In the future, we consider expanding the research by analyzing the behavior of Generation Y and Generation X.

Also, another limitation of this research may be the sampling method we selected. In this case, we opted for convenience sampling, without considering aspects related to consumer preferences. Changing the sampling method and adopting a probabilistic method is likely to generate distinct results.

Another future research direction is the analysis of sustainable behavior towards other materials such as glass and paper. In this research, we only analyzed the sustainable impact of recycling plastic packaging and aluminum cans.

In the future, we aim to continue this research by considering retailers in other domains. For example, we thought of companies active in the Do-IT-Yourself (DIY) or fast-fashion sector. Thus, we aim to see how these retailers motivate consumers to recycle, respectively to follow what measures these organizations adopt.

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