

WHAT MOTIVATES CUSTOMERS TO RECYCLE? SUSTAINABLE CONSUMER BEHAVIOUR

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Abstract: *Pollution is a problem that humanity faces more and more frequently. Every day we generate increasing amounts of waste and consume more and more exhaustible resources. In this sense, recycling can be considered the response of consumers to the appearance of pollution, being a mediatized concept in the public space. Both through these sources and through the lens of companies, the concept of "recycling" is brought to the attention of consumers. Starting from these considerations, this research aims to identify the best ways to motivate people, as well as analyze recycling behaviour in case of offering a reward. Thus, the research questions are "Do rewards motivate consumers to recycle?" "Do consumers only recycle in the presence of incentives for recycling?" To provide answers to these questions, we started a research together with the retailer Profi Romania. Thus, as part of a pilot project, SGR machines were installed that allow the recycling of plastic packaging and aluminum cans, with customers receiving a reward in the form of a voucher for the recycled packaging. The data provided by the retailer include information on the number of recycled packaging, its type, and weight, as well as the number of vouchers issued and their value. In this case, it was possible to observe the recycling behaviour of consumers under the conditions of offering vouchers, respectively how this behaviour evolves in the absence of incentives for recycling. Most of the studies carried out and presented in the literature analyze aspects related to the importance of recycling, the pillars on which it is based, respectively the types of materials that we should recycle, and under what conditions. The element of novelty that this research brings to the specialized literature is represented by the consideration of motivations (intrinsic, but also extrinsic), considering the recycling behaviour of consumers as a consequence of the motivations that the customer experiences. The results obtained can be generalized for the Fast-moving consumer goods (FMCG) field, the information showing interest for the entire retail field.*

Keywords: *sustainable behaviour; recycling; fast-moving consumer goods; incentives for recycling; retail; Profi Romania*

JEL Classification: *Q01; Q56; L81*

1. Introduction

Recycling has become an integral part of the modern lifestyle, with people realizing the importance of reducing waste and conserving resources. Recycling involves the process of collecting and reprocessing materials that would otherwise be discarded as waste and turning them into new products. This helps to conserve natural resources, reduce pollution, and save energy.

Plastic packaging is one of the most ubiquitous materials in modern life, found in everything from food containers to consumer products. However, plastic packaging is also a major contributor to the waste stream, with millions of tons ending up in landfills each year. Recycling plastic packaging is an essential step toward reducing waste and promoting sustainability.

Recycling has become a crucial element in our efforts towards a more sustainable future. However, despite the clear benefits of recycling, many individuals still do not recycle regularly. One of the key factors in encouraging behaviour change toward recycling is motivation. Also, incentives can be a powerful motivator to encourage recycling behaviour.

2. Literature review

Recycling helps to conserve natural resources by reducing the need for raw materials. For instance, paper can be recycled and made into new paper products, which reduces the need to cut down trees for pulp production. The same goes for other materials like metal, plastic, and glass, which can be recycled and turned into new products instead of extracting virgin resources. According to the United States Environmental Protection Agency (EPA), recycling 1 ton of paper can save 17 mature trees, 7,000 gallons of water, and 3 cubic yards of landfill space (EPA, 2021a).

Recycling also helps to reduce pollution by diverting waste from landfills and incinerators, which can release harmful gases and chemicals into the environment. When organic waste like food scraps and yard waste decompose in landfills, they produce methane, a potent greenhouse gas that contributes to climate change (EPA, 2021a). Recycling these materials reduces the amount of waste sent to landfills and reduces the amount of methane produced. Recycling also reduces the energy required to extract, transport, and process raw materials, which reduces the amount of greenhouse gas emissions from these activities.

Recycling also saves energy by reducing the need for energy-intensive processes like mining, refining, and manufacturing. According to the EPA, recycling

aluminum cans can save up to 95% of the energy required to produce new cans from virgin materials (EPA, 2021a). Recycling also saves energy by reducing the amount of waste that needs to be transported and processed. For instance, recycling plastic bottles can save up to 80% of the energy required to produce new bottles from virgin materials (EPA, 2021a).

2.1. Recycling Plastic Packaging

Recycling plastic packaging offers several environmental benefits, including reducing the amount of waste sent to landfills and conserving natural resources. According to the Environmental Protection Agency (EPA), recycling 1 ton of plastic packaging can save up to 5,774 kWh of energy and reduce greenhouse gas emissions by 1.6 metric tons of carbon dioxide equivalent (EPA, 2021a). Recycling plastic packaging also reduces the amount of virgin plastic needed for new products, which conserves natural resources and reduces the energy required for extraction and processing.

While there are numerous benefits to recycling plastic packaging, there are also significant challenges in implementing effective recycling programs. One of the biggest challenges is the complexity of plastic packaging itself. Plastic packaging is often made up of multiple layers of different materials, which can make it difficult to separate and recycle effectively. In addition, different types of plastic packaging require different recycling processes, which can be confusing for consumers and municipalities.

Another challenge is the lack of infrastructure for recycling plastic packaging. Many communities do not have the necessary facilities or programs to recycle plastic packaging effectively. This can result in plastic packaging being sent to landfills or incinerated, which is not a sustainable solution.

Despite the environmental benefits of recycling plastic packaging, recycling rates are still relatively low. One reason for this is that not all plastic packaging is recyclable, and some recycling programs only accept certain types of plastic. To increase recycling rates, it is essential to educate consumers about what types of plastic packaging can be recycled and how to properly prepare them for recycling. Another way to increase recycling rates is to improve access to recycling programs. Many communities do not have access to curbside recycling programs, and even when programs are available, they may not be convenient or accessible to all residents. To address this issue, some companies have implemented take-back programs that allow consumers to return used packaging to the manufacturer for recycling.

In addition, some companies are exploring new technologies to improve the recyclability of plastic packaging. For example, some companies are developing plastic packaging that can be easily recycled using existing recycling infrastructure, while others are exploring new recycling technologies like chemical recycling that can convert used plastic into new products.

2.2. Motivation to Recycle

Motivation refers to the internal and external factors that drive individuals to act in a particular way. In the context of recycling, motivation can be classified into intrinsic and extrinsic motivation. Intrinsic motivation refers to the inherent desire to recycle, driven by a personal sense of responsibility towards the environment. Extrinsic motivation, on the other hand, refers to the external factors that encourage individuals to recycle, such as financial incentives or social norms (Chen et al., 2021).

Studies have shown that intrinsic motivation is a more effective driver of behaviour change in recycling compared to extrinsic motivation. For instance, a study conducted by Chen and colleagues (2021) found that individuals who were motivated by intrinsic factors such as environmental concern and personal values were more likely to engage in recycling behaviour compared to those who were motivated by extrinsic factors such as financial incentives.

To encourage recycling behaviour, it is essential to understand the factors that motivate individuals to recycle. One effective strategy is to appeal to intrinsic motivation by promoting environmental awareness and the benefits of recycling. For example, educational campaigns that emphasize the positive impact of recycling on the environment and community can inspire individuals to act more sustainably. Another effective strategy is to make recycling more convenient and accessible. This can include providing easily accessible recycling bins, ensuring that recycling information is readily available, and implementing curbside recycling programs. By making recycling more convenient, individuals are more likely to incorporate recycling into their daily routines.

Finally, social norms can be a powerful motivator for recycling behaviour. By highlighting the prevalence of recycling in the community and the positive impact it has on the environment, individuals are more likely to perceive recycling as a social norm and engage in recycling behaviour as a result.

Several factors influence people's decision to recycle, including attitudes, social norms, convenience, and knowledge. Attitudes towards recycling are a key driver of recycling behaviour. People who believe that recycling is important for the environment and that their actions can make a difference are more likely to recycle

(Schultz et al., 2007). Social norms, or the perceived expectations of others, can also influence recycling behavior. People are more likely to recycle when they believe that their peers and community members value recycling (Dietz et al., 2002). Convenience is another factor that influences recycling behavior. People are more likely to recycle when recycling programs are easily accessible and convenient. For example, curbside recycling programs are more effective than drop-off programs because they require less effort on the part of the consumer (Gleim et al., 2016). Finally, knowledge and awareness of recycling programs and their benefits can also motivate recycling behaviour. People who are informed about the environmental and economic benefits of recycling are more likely to participate in recycling programs (Steg & Vlek, 2009).

2.3. Incentives for recycling

Incentives can take many forms, including rewards and punishments. Rewards are positive incentives that are given to people who recycle. Rewards can include financial incentives, such as rebates, discounts, and tax credits, or non-financial incentives, such as public recognition and social approval. Punishments are negative incentives that are given to people who do not recycle. Punishments can include fines, fees, and other penalties (Hopper & Nielsen, 1991).

Research has shown that incentives can be effective in promoting recycling behaviour. A study conducted by the Environmental Protection Agency (EPA) found that offering financial incentives, such as discounts on garbage fees, can increase recycling rates by up to 30% (EPA, 2019). Another study found that offering non-financial incentives, such as social recognition, can also be effective in promoting recycling behaviour (Hopper & Nielsen, 1991).

The effectiveness of incentives can be influenced by several factors, including the type of incentive, the amount of the incentive, and the target audience. Financial incentives are generally more effective for people who are motivated by financial gain, while non-financial incentives are more effective for people who are motivated by social approval (Schultz et al., 2007). The amount of the incentive can also influence its effectiveness, with larger incentives generally being more effective than smaller ones (Gächter & Renner, 2010).

In addition, the target audience can influence the effectiveness of incentives. Different incentives may be more effective for different age groups, income levels, and educational backgrounds. For example, a study found that financial incentives were more effective in promoting recycling behaviour among low-income households, while social recognition was more effective among high-income households (Lokhorst et al., 2013).

Financial incentives are one of the most common strategies used to encourage recycling behaviour. These incentives can include monetary rewards, such as cash payments or tax credits, for recycling certain materials. Studies have shown that financial incentives can be effective in increasing recycling rates, particularly for materials that are difficult to recycle or have low market value (Kinnaman & Fullerton, 1998). However, financial incentives may not be effective for all types of recyclable materials and may be costly to implement on a large scale.

Non-financial incentives can also be effective in encouraging recycling behaviour. These incentives can include rewards such as discounts, coupons, or other benefits that are not monetary. For example, some recycling programs offer incentives such as free compost or energy-efficient light bulbs to participants. These types of incentives can be more cost-effective than financial incentives and may be more appealing to individuals who are motivated by environmental or social goals (Van Houten et al., 1989).

3. Methodology

To carry out this research, we took into account one of the most important retailers in Romania, active in the field of fast-moving consumer goods (FMCG), PROFI Romania.

Fast-moving consumer goods (FMCG) are a type of consumer product that is in high demand and have a rapid turnover rate. These products are typically low-priced and are sold in large quantities, making them an important part of the global economy. FMCG products include everyday items such as food, beverages, personal care products, and household cleaning products. The FMCG industry is a critical part of the consumer goods sector, and its growth has significant impacts on the global economy.

As part of a partnership with this company, we set out to track the recycling behaviour of consumers regarding plastic packaging or aluminum cans. Thus, through a pilot project, the PROFI retailer has installed SGR machines that allow the recycling of these packaging in some stores in Timisoara, Cluj-Napoca, and Bucharest. For recycled packaging, customers received a voucher that could be used in stores during subsequent visits. The information presented was collected between November 2022 – March 2023.

4. Results and discussions

Studies show that at the level of our country, the consumer segment that is most involved in the recycling process is represented by members of Generation Z.

According to statistics, four out of ten Gen Z representatives reused plastic packaging, and one in fifth avoided buying it to fight climate change. So, by analyzing the behaviour of young people, we can mention that they adopt different measures to combat climate change (Figure 1).

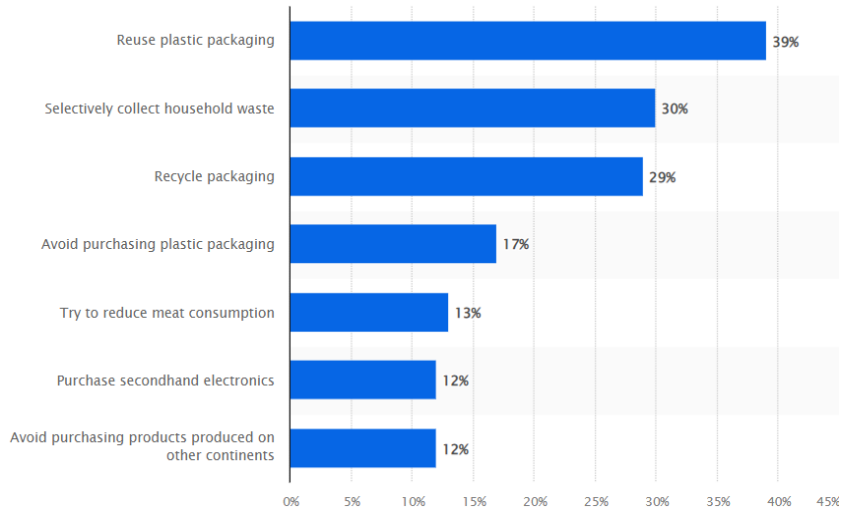


Figure 1: Top five actions against climate change
Source: (Statista.com, 2022)

The data collected with retailer PROFI reflects the recycling behaviour not only for members of Generation Z but for the entire segment of consumers that the retailer has. Thus, there was no customer segmentation according to demographic variables (age, gender, income, education, etc.) or psychographic variables (personality, lifestyle, etc.). Considering the territorial distribution of the stores, the locations included in the pilot project were Timisoara (one store), Bucharest (4 stores), and Cluj-Napoca (one store). Recycled packaging consisted of aluminum cans, plastic PET, and bottles.

Figure 2 reflects the recycled packaging in December. During that period, most vouchers were issued, and the number of recycled packaging is shown in the image below.

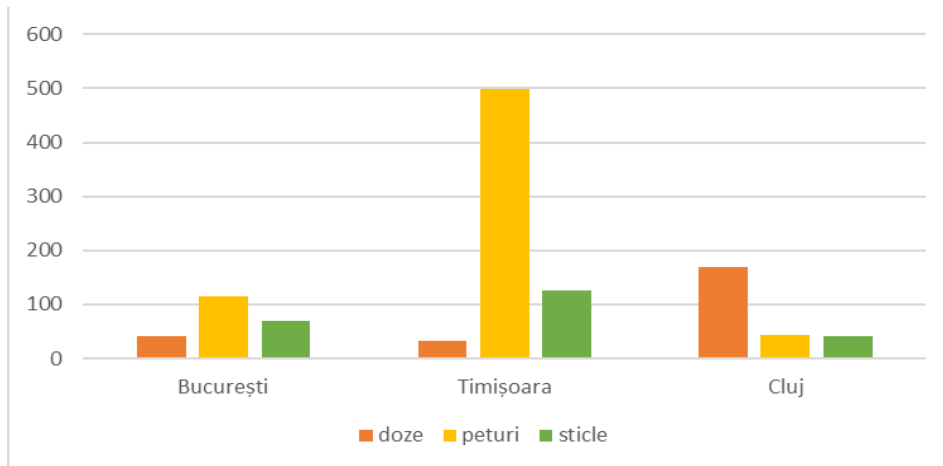


Figure 2: Recycled packaging in December 2022

Source: made by the authors

According to the graph, the most recycled packaging was plastic bottles, this aspect being also because most products are sold in this packaging.

For January, the packaging recycling situation is presented in Figure No. 3.

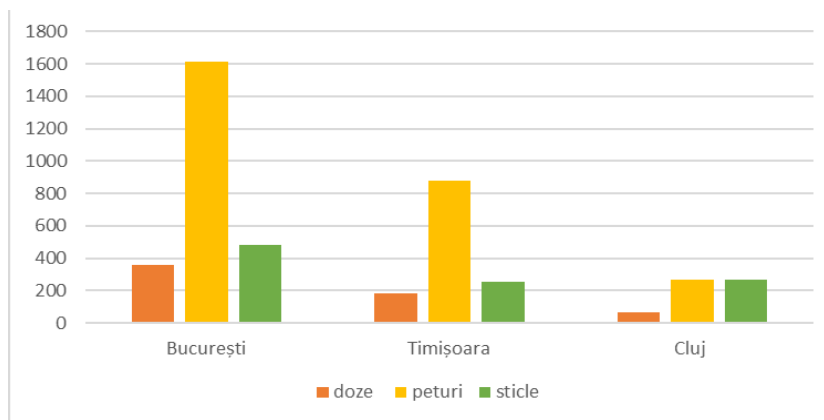


Figure 3: Recycled packaging in January 2023

Source: made by the authors

According to the results of profi Romania, a significantly lower number of vouchers were issued in January compared to December. However, the number of recycled packaging has increased for most stores, which indicates the desire of customers to get involved in the recycling process and protect the environment, to have a cleaner community and a healthier environment, not only because of the material rewards they would receive as a result of the recycling process.

Of course, it is important to remember that the collected data is obtained considering a very small number of stores, from the largest cities of the country. Thus, there is a

possibility that by expanding the sample and installing recycling machines also in stores in smaller towns or rural areas, the results may not be as gratifying or the motivation to recycle may be material.

For example, regarding the circular material use rate, at the level of the European Union, Romania is the only country that recorded a decrease at the level of 2020, compared to 10 years ago (Figure 4).

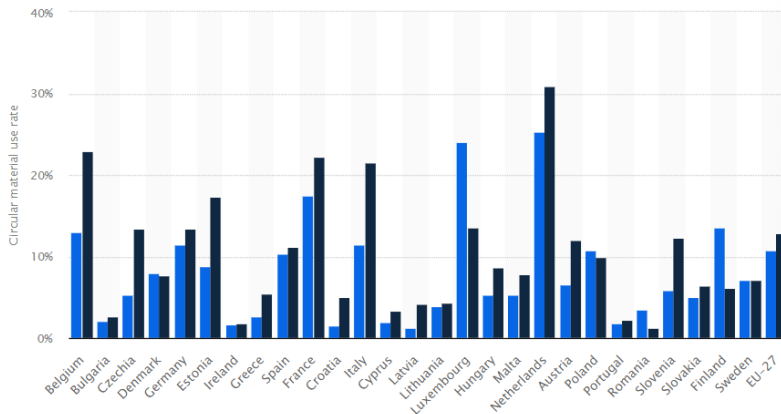


Figure 4: Circular material use rate in the European Union, by country
 Source: (Alves, 2023)

5. In conclusion

Recycling is a critical step toward achieving sustainable development. By conserving natural resources, reducing pollution, and saving energy, recycling helps to create a more sustainable and resilient society. However, recycling alone is not enough to address the environmental challenges we face. It is essential to reduce consumption, reuse materials, and design products that are easier to recycle. By working together to reduce waste and promote sustainable practices, we can create a healthier and more sustainable world for future generations.

Recycling plastic packaging is an important step towards reducing waste and promoting sustainability. By reducing the amount of plastic sent to landfills, conserving natural resources, and reducing greenhouse gas emissions, recycling can help to create a more sustainable and resilient society. To increase recycling rates, it is essential to educate consumers, improve access to recycling programs, and explore new technologies to improve the recyclability of plastic packaging.

Motivation plays a crucial role in promoting recycling behaviour. By understanding the factors that drive behaviour change and implementing effective strategies, we can encourage individuals to recycle and contribute to a more sustainable future. By appealing to intrinsic motivation, making recycling more convenient and accessible,

and highlighting social norms, we can inspire individuals to act more sustainably and promote a more sustainable society for future generations.

Incentives can be a powerful tool to promote recycling behaviour. Financial and non-financial incentives, such as discounts, tax credits, public recognition, and social approval, can all be effective in motivating people to recycle. However, the effectiveness of incentives can be influenced by several factors, including the type of incentive, the amount of the incentive, and the target audience. By tailoring incentives to the needs and preferences of different groups, we can create more effective and sustainable recycling programs.

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