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## What do Consumers Think About Disposal Recyclable Waste in Montreal? A Study on Discard Behavior

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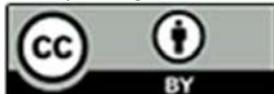
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### ABSTRACT

Nowadays, we live in a context of social and economic crises, declining in non-renewable resources and environmental pollution. On the other hand, we can see the growing awareness of social responsibility, sustainability practice increasing and concern for the environment. But, to have success and develop sustainable processes, it is necessary that all involved actors contribute by working collaboratively in the supply chain. In this sense, it is important to understand what the consumers think about recyclable disposal waste in the supermarkets. In this way, this study aimed to verify the perception of the consumers from the city of Montreal in Canada to dispose of their recyclable waste in supermarkets in Montreal. Qualitative research was carried out and the data were collected through seven personal interviews with consumers from Montreal' supermarkets, selected by convenience. As results, it was possible to identify consumers being aware of the importance of conscious disposal to reduce pollution in the environment, despite they don't practice. They emphasize that supermarkets and grocery stores do not incentivize the recycling process. The results also show that, in general, consumers think that it's not practical and convenient to dispose of their recyclable waste in the supermarket in Montreal. Finally, consumers agree that it will be positive if the supermarkets encourage their consumers to dispose of the recyclable waste by offering financial benefits. They also believe that this action could incentivize people to recycle more. These results are important for the sustainable development, for the establishment of strategies towards sustainability by the supermarkets. The supermarkets can develop sustainable practices working together with their consumers, promoting gains to supermarkets, consumers and the environment.

*Keywords:* Supermarket; Consumer; Disposal; Recyclable Waste



## **Introduction**

We live in a context of social and economic crises, environmental pollution, growing awareness of sustainability and concern for the environment (Fibl & Ifoam, 2021). The continuous decrease in non-renewable resources, along with the continuous increase in the global population, puts pressure on scholars and entrepreneurs to find new approaches to production and consumption (Lakatos et al., 2016). From the construction of the perception that consumption patterns are part of the roots of the environmental crisis, the criticism of consumerism came to be seen as a contribution to the construction of a sustainable society (Portilho, 2010).

As a reinforcement of the importance of creating alternatives to the problem, the United Nations brought it as one of the objectives of the 2030 Agenda. The need to ensure sustainable production and consumption patterns is part of the 12th objective of sustainable development addressed in the 2030 Agenda (2015) mobilized by the United Nations.

However, to succeed in the development of sustainability, it is necessary to involve actors in the supply chain working collaboratively. According to Maitre-Ekern and Dalhammar (2019) consumers can be seen at the center of the value chain, being considered the main target of the product supply chain and the starting point of the reverse supply chain. Furthermore, the consumer plays an important role in the waste management process (Kuah & Wang, 2020; Sijtsema et al., 2020) and can be seen as an important agent in the change towards more sustainable consumption practices (Cassol & Schneider, 2015).

As the supermarkets can be considered one of the principal points of sales for convenience products, they can help the consumers in the discard process, helping consequently to solve the problem in recycling and waste management. Supermarkets can be considered an educational agent for the community, mobilizing the entire chain (Aligleri, 2009).

In this sense, it is important to understand what the consumers think about recyclable disposal waste in the supermarkets. In this way, this study aimed to verify the perception of consumers from the city of Montreal in Canada to dispose of their recyclable waste in supermarkets in Montreal (Aligleri, 2009; de Menezes & Dapper, 2013).

The result of this study is important for the establishment of strategies walking forward sustainability by the supermarkets. The supermarkets can develop sustainable practices working together with their consumers, promoting gains to supermarkets, consumers and the environment.

## **Literature review**

The discussion of waste disposal in supermarkets, a retail environment that sells many of the products that become garbage, is a relevant theme regarding sustainability. This chapter weaves together concepts and past studies of the main constructs to discuss the topic. Sustainable Consumer Behavior, as a stakeholder, being one of the first to participate in the disposal system; Consumer and Disposal; and Supermarket as a Disposal Point are the main topics for the present work.

### *Sustainable consumer behavior*

The sustainable consumer is the agent responsible for enabling sustainable consumption. In 1994, the Norwegian Ministry of the Environment (1994) defined that sustainable consumption is the use

of products that, besides minimizing the use of natural resources in their manufacture and reducing the emission of toxic gasses to the planet, meet the needs of consumers and have no implications for future generations.

Individually or organized into associations, consumers came to be seen as one of the main actors for sustainable consumption (Portilho, 2010). Seen at the center of the value chain, consumers can be considered the main target of the product supply chain and the starting point of the reverse supply chain (Maitre-Ekern & Dalhammar, 2019). Furthermore, the consumer plays an important role in the waste management process (Kuah & Wang, 2020; Sijtsema et al., 2020) and can be seen as an important agent in the change towards more sustainable consumption practices (Cassol & Schneider, 2015).

To select sustainable consumers, it is necessary to explore the idea that consumers are influenced by their particular characteristics, interacting with the product in the particular environment and in more external environments, in addition to macro environmental factors, with the involvement of political, financial and economic sectors. (Hoek et al., 2021). Attitudes, values, demographic characteristics, and other variables can affect decision making in the individual context and the context in which the consumer is inserted can affect their choice, positively or negatively (Peattie, 1995; Kostadinova, 2016). Still, it can be said that the retail environment works as a filter for sustainable consumption, when it comes to green products, because in these spaces several reliable brands can be found, in the eyes of consumers (Quelch et al., 1996). Sustainable consumption, when we talk about food, occurs according to several drivers “(...) More sustainable and ethical consumption of food can be stimulated through increased involvement, perceived effectiveness by the consumer, certainty, social norms and perceived availability” (Vermeir & Verbeke, 2006).

According to Fonte (2016), the transition to a sustainable consumption model demands a behavioral transformation on the part of the consumer. The study by Matte and Preiss (2019) recognizes the role of the involvement of different actors in food networks, and points to the need for the active involvement of producers and consumers, who, through their reflexivity and action, position themselves as building agents of the food chain. food system. In addition, experts, authorities, politicians and environmentalists began to demand direct environmental co-responsibility from all social actors, both individual and collective (Portilho, 2010).

### *Consumer and dispose*

Regarding sustainable consumer behavior, we can see an aspect focused on post-purchase/use behavior, which is how the consumer will discard their products. The first studies related to disposal start from an idea of discussion about sustainability and the negative impacts of incorrect disposal on the environment. In this context, we can say that all consumers need to discard products and packaging consumed correctly to avoid further aggression to the environment, thus increasingly participating in a circular system (Ellen MacArthur Foundation, 2019).

The importance of waste management and disposal is highlighted, as well as their reintroduction into the production process, which can be carried out in several sustainable ways. Lakatos et al. (2016) address waste separation and selective collection in their study. The results showed that

96.01% of respondents consider that selective waste collection is important in order to avoid the depletion of natural resources (Lakatos et al., 2016).

Studies show that the problem of incorrect disposal is global, countries like Russia, suffer from unauthorized landfills, even with government control by this point, failing to protect the constitutional rights of citizens to a safe environment (Kovalenko & Kovalenko, 2018). There are studies that show the importance of regulating disposal, as mentioned by Swayamprakash (2020, p. 361): “how garbage became a local, federal, and transboundary issue, all at once thus exposing the interstitial space that garbage occupies. In so doing, expands our understanding of garbage, pollution, and their evolution as binational issues”.

Several articles work with the idea of creating a new method for waste disposal, with the creation of new processes and schedules (Li & Huang, 2012; Kong et al, 2016). Mahajan and Gupta (2020) use, in their model, an applicable without waste segregation at source methodology. We know, however, that these new practices will only be able to be incorporated with the help of consumers, who are stakeholders in the process and responsible for the correct disposal of waste.

Consumers can contribute significantly to the circular process by purchasing more durable goods, willing to repair items and proper disposal of waste (Maitre-Ekern & Dalhammar, 2019). In the circular food system, for example, the consumer carries out waste processing, consumption and disposal activities and reintroduction into productive use (looping) (Ellen MacArthur Foundation, 2019). When we work with the food chain, we still have to count on the food waste generated by inappropriate disposal, implying the need to work with all stakeholders (governments and regulators, competitors and sector entities, environment, consumers, NGOs and shareholders) in more sustainable alternatives to the problem (de Moraes et al., 2020).

Reusing packaging, whether for own use or returning to the supplier, was an action observed in the study by Pasqualotto and Sampaio (2022), as a way of minimizing the extraction of natural resources. It makes sense to extract resources from nature to transform them into a product or service that can be used not just once, but many times, thus reducing the need for virgin input extraction and waste production (Korhonen, 2018). In this sense, Maitre-Ekern and Dalhammar (2019) comment on avoiding putting items that can be reused in the trash. Waste reuse is also identified as a legal concern by the European Commission (2015). Reducing waste generation through prevention, reduction, recycling and reuse, and achieving sustainable management and efficient use of natural resources are some goals of the 12th sustainable development objective addressed in the 2030 Agenda (2015). In the study by Sijtsema et al. (2020) consumers avoid buying plastic bags, as they take their own bags to shop. In the study by Pasqualotto and De Menezes (2021) it was also mentioned that consumers arrive at the fair with their ecological bags. Borrello et al. (2017) developed a survey with Italian housewives where it was identified that a large part of the sample responded positively in relation to participation in the process of returning organic waste for composting on farms. In the same vein, organic waste is destined for composting by some respondents to the research by Pasqualotto and Sampaio (2022).

Maitre-Ekern and Dalhammar (2019) suggest that policies and legislation be created to encourage consumers and make them feel more confident about more sustainable choices. According to the European Commission (2015), the legislative proposal provides for new

provisions to boost readiness activities for reuse. As much as the current behavior of consumption has been driven by the Industrial Revolution, there is no reason why this paradigm cannot be changed to promote more qualitative and sustainable consumption habits (Maitre-Ekern & Dalhammar, 2019).

On the other hand, consumers are not seen as powerful market actors, being considered in the eyes of legislators the weakest party in a contract, in addition to very volatile and complex market actors (Maitre-Ekern & Dalhammar, 2019).

### *Supermarket as a disposal point*

The idea of supermarkets being the biggest physical retailers until the last few years, made them also become an environment of contact between producers and consumers. With the increasing number of retail brands, in a world driven by consumption, there has been an increase in waste, there is an aesthetic pressure for better-looking products on the part of consumers, leading stores to discard more edible products and increasing the amount of waste produced, only in that space, even before consumption itself (Zeida, 2019).

As it is a point of relationship between producer and consumer, retailers are responsible for the correct disposal. “The use of returnable and biodegradable bags, the creation of places to collect used batteries and light bulbs, purchases from suppliers considered socially responsible, consumer education and environmental awareness actions” (Ceretta & Froemming, 2013, p. 257). These are actions considered essential in this relationship of the retailer as a stakeholder in a conscious disposal chain. Furthermore, the incorporation of socio-environmental responsibility practices by supermarkets makes them become an educational agent for the community and the workers who provide services to them, mobilizing the entire chain (Aligleri, 2009).

Werf et al. (2020, p. 16) suggest: “in areas with a higher density of supermarkets, the city could work with food retailers and families to improve the way families buy food and help them work to reconcile the purchase of food with its consumption [...] a potential driver of behavior change” (Werf et al., 2020).

Trento et al. (2021) propose that food producers, when putting their products on sale to supermarkets, reduce their disposal; however, retailers end up buying beyond the necessary capacity, which can only displace the problem of disposal, if not well managed. Still, excessive purchases, excessive preparation, caring for a pet, avoiding leftovers and inadequate food conservation, impulse buying, lack of planning and preference for large packaging are other causes of food waste, generating greater discard by consumers (Porpino et al., 2015).

As a solution to the problem of disposal, Goldstein (2003) presents examples such as that of Ukrop's Super Markets Inc., which already in 2003 transformed its garbage into fertilizer and managed to make this operation profitable, by selling the fertilizer in its retail chains, the garbage can contain kitchen liquids, bakery waste and outdated dairy products such as milk, sour cream and yogurt. With this, the company “fulfilled an environmental vision by creating a product that can be sold in its stores from bagged compost” (Goldstein, 2003, p. 28). The idea of disposing of consumer garbage in the supermarket would help actions like these, increasing the life cycle of products.

## Methodology

In order to verify the perception of consumers from the city of Montreal in Canada to dispose of their recyclable waste in supermarkets in Montreal, qualitative research was carried out. Consumers residing in the city of Montreal in Canada were defined as the unit of analysis. For data collection purposes, in-depth semi-structured interviews were used with consumers, as suggested by Malhotra (2001). For convenience, residents and consumers of large supermarket chains in Montreal were selected to answer the questionnaire. The answers reached saturation in the seventh interviewee (so, this number was defined considering the generation of new data). The consumers were identified in this research with numbers from one to seven (consumer 1 to 7).

For data collection, a semi-structured script was prepared with open questions (Appendix 1) directly related to the objective of the study. The script underwent content validation by a professor who is a specialist in the subject.

The interviews were carried out in a personal way and were recorded with the prior consent of the respondents, and later transcribed for analysis. The data were analyzed from the perspective of theoretical foundations, initially following a descriptive pattern, comparing the discourses with what was found in the literature. The information obtained from the collection of respondents was analyzed using the deductive Content Analysis technique (Bardin, 2016).

## Data analysis

Consumers can contribute significantly to the circular process, avoiding waste, by disposing the waste properly (Maitre-Ekern & Dalhammar, 2019). In the circular food system, for example, the consumer carries out disposal activities and reintroduction into productive use (looping) (Ellen MacArthur Foundation, 2019). In line with these authors, it is unanimous among respondents that it is important to separate the garbage and that the separation will help the recycling process. “Permits to recycle the recyclable waste and send the food waste for composting on the farm” (consumer 1). This point of view agrees with the study of Borrello et al. (2017) which the Italian housewife replied positively to send the organic garbage for composting on farms, and the study from Pasqualotto and Sampaio (2022) who presents consumers doing composting with their organic waste.

The separation of garbage “is important because we want to reduce our waste automatically, for the planet” (consumer 2). “To reduce the waste in the land field is very important” (consumer 3). Consumer 4 believes that in the future, people could separate the recycles by material. In accordance with the importance of separating the garbage, Lakatos et al. (2016) mentioned that it is important to separate the garbage in order to avoid depletion of natural resources. Consumer 4 comments:

“It is important for the environment. If I do my share, it will help the rest of the process. Recycling is important to reuse the material to do new products. It is very beneficial to do this at home. Reduces the incineration, reduces the CO<sub>2</sub> level emissions, it has a positive effect in the greenhouse. In Quebec we don't separate plastic, cardboard, ... we put all recyclable waste together” (consumer 4).

By the way, consumers 1, 4 and 7 mentioned a great inconvenience to separate the garbage at home, especially the organic one. “The problem is organic garbage collection occurs only once a

week, garbage gets smelly, flies and mosquitoes appear at home” (consumer 1). According to consumer 4, It will encourage people to recycle a little bit more if the compost truck collects twice a week, avoiding accumulation at home, especially during the summer. “You leave these bags out and the squirrels open the bags, or people open the bags to take the cans and bottles to resell or use the machines in supermarkets to get money back” (consumer 4). Consumer 4 thinks that it is not good to keep at home the compost waste because of the bad smell and lack of space. “The truck picks up twice a week, will be good” (consumer 4).

Questioning the consumers if they believe that the supermarket encourages consumers to recycle the garbage, just one of them agrees. Although some consumers identify small incentives. According to consumer 1, the supermarkets zero waste can encourage people to recycle by offering to their consumers to take the packages back to the shop to fill in with the products. “The packages are reused. It's environmentally friendly and can be cheaper too” (consumer 1). The opposite is mentioned by consumer 2: “The shops to refill the products can encourage in the future, not now. It is inconvenient to remember to carry the packages”. Consumer 3 thinks the same: “The shops that refill the products cannot encourage it, because I don't have time to wait to fill in all the bottles. It is inconvenient. To make sense, it should have a universal type of measurements or container”. In contrast with consumer 1, consumer 3 doesn't believe that it can cost less, just if you buy a very big quantity.

Consumer 4 recognizes small incentives, like to avoid the use of plastic bags. “If you have to use a plastic bag, you will have to pay, but it is not too much (it is too easy to take a plastic bag). A positive thing is that some places offer plastic bags made with recyclable plastic (you have also to pay)” (consumer 4). Another action observed by consumer 4 is that some groceries sell reusable bags, and this encourages people to buy them (beautiful, good price, you can find easily), this reduces plastic bags. Consumer 7 also recognizes one positive thing done by the Cotsko supermarket. The plastic bags used for meats are biodegradable and can be used at home for organic garbage because it is compostable (consumer 7).

In general, consumers 2, 3, 4, 5, 6 and 7 don't think that supermarkets encourage consumers to recycle. “They have the cans and bottles machines in the supermarkets to return and receive a cash back, but it is little. The change came from the customer, not from the supermarket” (consumer 2). According to consumer 3, the supermarkets don't do many things, they look for profit. “The machines can be useful just for the people from the suburbs who have space to store the bottles and cans [...] can encourage a little bit” (consumer 3). In a similar way, for consumer 5, the machines are usually used by poor people to get some money from the garbage items. “It is not to incentivize the supermarket consumer” (consumer 5). And also in a similar way, consumer 4 argues:

“There aren't any efforts from the supermarkets. For example, the machines that recycle plastic bottles and cans are there, people use them, but just to get money back. Encourage people to get a little money back but I don't see many people doing that. Perhaps it takes some time to do that, and we are usually in a hurry. The machine smells bad, because of the beer and alcohol. So, I don't like to use these machines”.

The results also show that, in general, all consumers think that it's not practical and convenient to dispose of their recyclable waste in the supermarket in Montreal. Consumer 1 does not take the

cans and plastic bottles to the supermarket to be recycled because she doesn't have space to keep the cans and also, she has to wash the cans. “It is not convenient” (consumer 1 and 5). It is inconvenient also for consumer 2, because she doesn't have space at home either. “I feel comfortable putting in recyclable waste because people will take it” (consumer 2). The same opinion has consumer 3, that prefers to put on recyclable waste and someone will take to recycle and get money. “I prefer to leave for the people who really need this money” (consumer 3).

According to consumer 4: “It is not a bad idea” dispose of their recyclable waste in the supermarket, but she puts, every Monday on the street, the recyclable waste and the food waste (compost) to be collected and affirm: “It is enough for me” (consumer 4).

Consumer 5 believes that it would be convenient to leave the packages in the supermarket cashier. “It will be better also to carry the products home” (consumer 5). Consumer 7 gives another suggestion: supermarkets could have separated containers (for papers, cardboard, cans, plastic bottles, glasses, plastics, batteries, electronic items, used oil). Consumer 4 affirms that if the supermarket has separated containers to discard the recyclable waste, she will take the waste to the supermarket. “It will be a good idea” (consumer 4).

The results also show that consumers agree that it will be positive if the supermarkets encourage their consumers to dispose of the recyclable waste by offering financial benefits. They also believe that this action could incentivize people to recycle more. These results are in line with de Menezes and Dapper (2013) study. Consumer 1 mentions that a lot of people will start to recycle. “If you do this, you will receive money [...] people will say OK. It will be positive” (consumer 1). “For people who live in suburban areas will be good, they like rewards programs too” (consumer 2). “I like rewards programs. I am sure I will do it. It should be a totally motivator. Discounts, whatever system of benefits customers receive, they will be motivated. People love the points” (consumer 3). And consumer 4 mentions:

“Yes, absolutely. Because people often care a lot, if not too much about earning money or saving money. People look for the best price. If you can save a little bit of money by bringing recyclable stuff to the supermarket, I am a hundred percent sure that it will encourage people to bring the recyclable waste to be discarded in the supermarket. Today there is not an incentive”.

According to consumer 4, the supermarket can incentivize the customers by giving coupons when customers leave the bags with recyclable waste there. Consumer 6 presents other suggestions:

“Everything at the beginning has a rupture, it is more complicated at first until people get used to it. But if supermarkets help, for example, giving some material or discount in the beginning [...] a discount for people who bring their reusable bags for instance. This kind of action encourages people to do that and to want to do that” (consumer 6).

The use of returnable bags was pointed out by consumers interviewed in this study. Consumers 6 and 7 believe that supermarkets giving reusable bags to their customers will incentivize them to reduce waste. “I think it would be a good idea to bring your own bags to pack fruits and vegetables” (consumer 5). “Groceries should encourage more people to bring their own bags” (consumer 4). And consumer 7 mentioned:

“When Portugal inserted the reusable bags in the supermarkets, around 12 years ago, from a certain value in shopping, a supermarket provided the returnable bags with a very attractive design. They started charging € 0,05 per plastic bag, so people didn't want to pay for it [...] encouraging them to use returnable bags. The bags from Canada are not as beautiful as those of Portugal and to have a more beautiful bag, you have to pay more. They could introduce bags like this here in Canada [...] this will encourage the use”.

In this sense, in the study by Sijtsema et al. (2020) consumers bring their own bags to shop and avoid buying plastic bags. Pasqualotto and de Menezes (2021) also mention that consumers arrive at the farmer's market with their ecological bags.

According to some consumers analyzed in this study, recycling more will impact positively for the society (government, companies and citizens). “In general, the world will be better. It is good for the environment. The environment is being destroyed. Recycling is a positive thing that people can do” (consumer 1). “If people recycle more, the government will save money. Positive impact on the environment. For citizens, if we do something better, we feel better. Supermarkets have the power to be in contact with the citizens, so they can calculate how much people are bringing back” (consumer 4). Consumer 5 believes that if everyone recycled more, they would minimize environmental impacts.

On the other hand, consumer 2 doesn't feel that recycling more will have a huge impact. She believes that reduction and reuse is more important (consumer 2). In a similar way consumer 3 says: “I don't have any faith in recycling. For example, only 20% of recyclables get recycled. Recycling is great but [...]”. And consumer 7 mentioned:

“There is another point here, I do like recycle but I do not like the waste that goes to be treating as recycle material, because you waste a lot of water, washing to recycle, for example, to recycle paper you have to use a lot of water, you pollute a lot of water [...] not only to wash, it is used a lot of water in all process”.

Inserted in this context was observed also that, in general, consumers believe that it is better to reduce waste than recycle. According to consumer 7, people should have an education for recycling and to minimize the use of materials. She also comments:

“For example, if they say that cardboard is recyclable, people use this type of packaging in abundance because they know it can be recycled. But the fact is that we must minimize the need for recycling because we have expenses on the recycling process. It is important for people to know the recycling process and the expenses arising from recycling. So, let's avoid spending on recycling. Education should start at the point you are going to buy and at the point of avoiding consumption [...] avoiding consuming, avoiding expenses with recycling” (consumer 7).

Consumer 2 affirms: “It is better to reduce the waste then recycle. Recycling is good in theory, but I think we still need to work more on the reduction”. But the problem is mentioned by consumer 3: “People forget to reduce”. Consumer 5 commented that if people had to separate everything by type of material, they would be more careful when buying, and this would have a wonderful impact. “The problem is that our city is very capitalist, they want us to buy more” (consumer 5). Inserted in

this scenario, the reuse of packaging, either for its own use or returning to the supplier was an action observed in the study from Pasqualotto and Sampaio (2022). In this sense, Maitre-Ekern & Dalhammar (2019) comment on avoiding putting in the trash items that can be reused. The reuse of waste is also pointed out as a concern of the European Commission (2015) and addressed in the 2030 Agenda (2015).

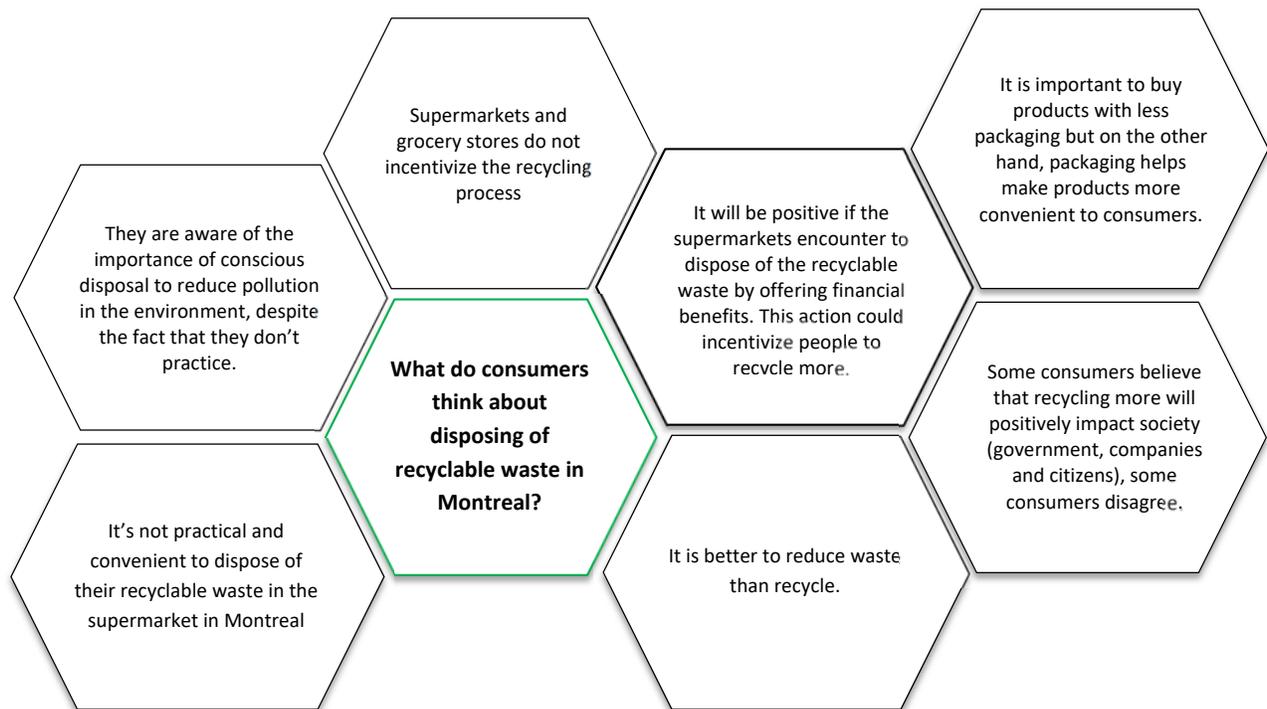
Finally, there is no consensus between the interviewees regarding the use of packings by supermarkets. Consumers believe it is important to buy products with less packaging, but on the other hand, packaging helps make products more convenient to them. Consumer 7 mentioned that companies should avoid supplying packaging, such as frozen broccoli that comes divided in small parts in plastic bags inside a bigger plastic bag. Contrasting, consumer 1 believes that these kinds of packaging are more convenient because they are microwavable. Consumer 7 also commented that she has seen supermarkets reducing the use of plastic packaging. But complement: “Packaging plays an important role in communicating the product in the supermarket, so it is difficult to reduce, due to convenience, e.g., when I was a student, buying a box with burger steaks was more convenient than a piece of meat” (consumer 7).

A summary of the study results presenting the perception of consumers from the city of Montreal in Canada to dispose of their recyclable waste in supermarkets in Montreal was presented on Figure 1. This Figure shows the main points discussed by consumers, which are relevant for the formation of a joint opinion on the disposal of recyclable waste in supermarkets in Montreal. There is knowledge about the importance of recycling and the role of the consumer to do so but discarding waste in supermarkets is not considered a convenient practice. If supermarkets encourage the practice, more people could be interested in doing it.

## **Conclusion**

This study, through a qualitative approach, verified the perception of the consumers from the city of Montreal in Canada to dispose of their recyclable waste in supermarkets in Montreal.

It was possible to identify consumers being aware of the importance of conscious disposal to reduce pollution in the environment, despite the fact that they don't practice. They emphasize that supermarkets and grocery stores do not incentivize the recycling process. In general, consumers think that it's not practical and convenient to dispose of their recyclable waste in the supermarket in Montreal. Consumers agree that it will be positive if the supermarkets encourage their consumers to dispose of the recyclable waste by offering financial benefits. They also believe that this action could incentivize people to recycle more. The results also show that, some consumers believe that recycling more will positively impact society (government, companies and citizens), and some consumers disagree. They believe that it is better to reduce waste than recycle. Finally, there is no consensus between the interviewees regarding the use of packings by supermarkets. Consumers believe it is important to buy products with less packaging but, on the other hand, packaging helps make products more convenient to them.



**Figure 1.** Summary of study results: perception of consumers from the city of Montreal in Canada to dispose of their recyclable waste in supermarkets in Montreal

Source: Prepared by the Authors (2022)

The results of this study are important for the sustainable development, for the establishment of strategies walking forward sustainability by the supermarkets. The supermarkets can develop sustainable practices working together with their consumers, promoting gains to supermarkets, consumers and the environment. The results of this study are still advancing towards sustainable economies (García-Quevedo et al., 2020) and will meet the 2030 Agenda (2015).

The main limitation of this research refers to the single method approach, because it was not possible to confirm the results with a larger number of consumers. In this way, it is suggested in future studies the realization of a survey with a quantitative approach. It is also interesting, for a future study, to compare the reality of Canada with that of other countries regarding the idea of discarding in supermarkets in a post-pandemic context.

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## **Appendix 1**

Questionnaire on waste recycling in Montreal.

- 1 - Why do you think you have to separate the garbage (recyclable, leftover food and non-recyclable garbage)? Is it important for you to recycle your waste? Please explain.
- 2 - Do you think that supermarkets and grocery stores encourage their customers to recycle their garbage? Why? (Even offering these machines to recycle plastic bottles and cans at the supermarket. Do you think these machines encourage people to recycle their garbage? Why?)
- 3 - Do you think it is practical/convenient to take the recyclable waste out of your home and dispose of it/deliver it to a supermarket? Please explain.
- 4 - If supermarkets/grocery stores encourage their customers to recycle their garbage by offering other benefit policies (in addition to five cents per can or plastic bottle) such as other discounts, bonus, and some reward programs, what do you think will happen? Why? (Do you think people will recycle more household waste?)
- 5 - For society (government, companies and citizens), in your opinion, what will be the impact if people recycle more? Why?

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