

Consumer perspective on the recycling process. Social media analysis of RetuRO

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Abstract

Purpose – This study aims to analyze the attitude of consumers toward the recycling process, especially toward the manner of its promotion through social media platforms.

Design/methodology/approach – Using social media analysis, the authors analyzed the posts on the RetuRO page on Facebook. The results showed us that the first posts started in January, the recycling program and the guarantee return systems implementation have been active in the stores since November 30. Thus, the posts from each month were analyzed, observing that at the beginning of the program, the posting frequency was higher (8–10 posts/month), whereas in 2024, the frequency registered a slight decrease.

Findings – This paper reflects two facets of consumer attitudes: if at the beginning of the recycling program, the feeling expressed was one of delight and satisfaction because customers had the opportunity to get rid of plastic or glass packaging, respectively aluminum cans, thus contributing to protecting the environment, with the development of the program, their opinions changed. The problems generated by the difficulty of recycling, and the technically deficient aspects of the devices led to a paradigm shift and the manifestation of a negative component of consumer attitudes.

Originality/value – To the best of the authors' knowledge, this study is the first carried out in Romania that analyses the influence of the RetuRO platform in the recycling process carried out in our country using social media analysis.

Keywords Facebook, Social media analysis, RetuRO, Recycling process, Guarantee return system (GRS)

Paper type Research paper

1. Introduction

In recent years, social networks have become an essential factor of everyday existence. From simple means of communication and socialization, social media networks have become popular among companies as well, being seen as a way to get closer to consumers.

The informal nature of social media networks has facilitated the process of connecting individuals, making the transition from simple social tools to complex platforms that can influence communities of individuals and society as a whole.

Currently, social networks play an essential role in promoting recycling behavior, influencing social and personal norms, and having the ability to modify pro-environmental



behaviors by reinforcing them but also personal values (Hynes and Wilson, 2016). Thus, the norms activated through social media platforms can stimulate recycling behaviors, appealing to the theory of planned behavior (Park and Ha, 2014).

At the same time, some authors highlight the fact that social media platforms facilitate the exchange of information and experiences regarding recycling, increasing awareness and community involvement (Sujata *et al.*, 2019), encouraging, especially plastic recycling through educational campaigns (De Fano *et al.*, 2022).

In the current context, where the challenges generated by the application of sustainable principles are increasing, and the desire of companies to involve individuals in actions related to protecting the environment is becoming more visible, social media platforms are becoming a widely accessible promotion tool.

In this research, the research questions are:

RQ1. How are consumers convinced to recycle through the RetuRO campaign – recycling time?

RQ2. What feelings do RetuRO company posts generate in consumers?

Thus, through sentiment analysis, we sought to see consumers' reactions to the messages posted on the Facebook social media platform. We started from the idea that this network is used by a large number of people (Statista, 2024), so information can be disseminated easily. The research gap is precisely represented by sentiment analysis regarding messages related to recycling.

Within this scientific approach, the research novelty consists in the fact that this is the first study conducted after the launch of the RetuRO platform that analyzes the feelings of individuals, transposed through the comments posted on the Facebook social network, as well as the tone conveyed by the messages posted by the RetuRO company.

2. RetuRO company: how did the company that promotes packaging recycling in Romania appear?

According to Directive 98/2008 of the European Parliament and of the Council, the member states of the European Union are obliged to adopt appropriate measures for recycling, by introducing separate waste collection systems. If this aspect had to be regulated and put into practice by 2015, preparing for the reuse and recycling of waste was an obligation that member states had to assume by 2020 (European Parliament, 2008).

Additional regulations regarding the legislative framework are brought by Directive (EU) 852/2018 of the European Parliament and of the Council, which imposes new deadlines to stimulate recycling. Thus, the member states must recycle, until December 31, 2025, “at least 65% of the weight of all packaging waste”, the percentage increasing to 70% by the year 2030 (European Parliament, 2018).

The guarantee return system (GRS) represents a way for economic operators – producers – to fulfill the responsibility for taking over, transporting and recycling GRS packaging, establishing the legal framework for implementing this system throughout Romania.

Economic operators are responsible for taking over and valorizing packaging/package waste from consumers/end users. Producers, through the GRS administrator, are obliged to achieve the following minimum annual objectives for the return of GRS packaging:

- 65% glass, 65% plastic and 65% metal for the year 2024;
- 75% glass, 80% plastic and 80% metal for the year 2025; and
- 85% glass, 90% plastic and 90% metal, starting with the year 2026.

In Romania, the GRS is administered by RetuRO, the start of the project representing a first step toward fulfilling the legislation in force and contributing to a more sustainable future.

The company RetuRO was established by the representative associations of beverage producers and traders to manage the guarantee-return system. By launching this program, Romania becomes the second country of the European Union, after Germany, to implement GRS (RetuRO, 2023a).

To encourage citizens to recycle, they pay a guarantee of 0.50 RON every time they purchase products from the categories of water, soft drinks and alcoholic beverages, with plastic, glass or metal packaging, with a volume between 0.1l and 3l. Once the container is empty, citizens must bring it to the return points made available by merchants, and in exchange for the packaging, they will receive the amount of the guarantee initially paid (RetuRO, 2023b).

With the start of the recycling project, it was proposed to open 17 regional centers to collect the packaging, becoming operational during the first months of the start of the project. The first center was inaugurated in Bon̄ida, Cluj, with an area of over 4,700 square meters, being equipped with packaging counting and sorting equipment (RetuRO, 2023a).

Seen as the largest circular economy project in the country, GRS has numerous benefits. First of all, it contributes to protecting the environment, eliminating the presence of packaging in nature. Thus, each individual will benefit from a healthy, cleaner environment, through their actions contributing to its protection, by recycling packaging.

Second, the system allows for reaching the collection and recycling targets imposed by the European Union, targets which, if not reached, generate major costs for Romania. The second benefit consists in the fact that it acts on two levels: it allows the achievement of the objectives imposed at the level of the union both for individuals and the community, as a whole and for producers. They should offer products in packaging made from recycled plastic to the extent of 25% by 2025 and 30% by 2030 (RetuRO, 2024a).

Of course, the launch of the program was a challenge both for the merchants involved and for citizens who fell into two categories: some who were enthusiastic about the new initiative, especially as it was supported by a legislative framework. The second category did not show the same satisfaction, starting from the idea that storing packaging until the moment it will be recycled generates space problems, for some citizens it is difficult to move with them to the shops.

A solution that could be considered in the future would be the installation of compactors (small devices), which would allow citizens to recycle packaging at home, subsequently only needing a container to allow their collection and transport to the operational recycling centers.

Of course, at the beginning of the GRS program, a precarious aspect was also the provision of GRS-type devices to traders, in some of them, the devices were missing or not functional at all. Also, the dissatisfactions from the merchants came through the lens of the significant resources needed to be able to mount the GRS-type devices, the sums of money that had to be obtained from recycling, being available much later (Badea, 2024).

However, the first three months since the start of the recycling project reflected people's desire to get involved in actions that help protect the environment, with around 23 million plastic, glass or metal packaging being recovered. Starting from 31.000 packages in December, their number evolved to 2.2 million in January, and approximately 21 million were registered in February. Thus, the packaging return rate reached approximately 6%. Regarding the involvement of traders, in the first three months after the start of the project, out of a total of 80,000 operators, 70,000 of them were involved in the GRS program (RetuRO, 2024b).

3. Social media platforms and their role in promoting the recycling process

When it comes to social networks (social network sites), they are considered online services that allow people to build a public/private profile, make a list of people they want to be in touch with or view the lists created by other users (Boyd and Ellison, 2008).

Originally launched in 1997, social media platforms became more popular among young people in the early 2000s with the launch of MySpace and Friendster. Greater visibility coincided with the launch of the Facebook platform (2004), its success is due to its ease of use as well as its way of working – the ability to connect people around the world.

The year 2006 brings a change in the typology of social media platforms with the launch of the Twitter network. Initially, the platform was thought of not only as a way of socializing but mainly as a microblogging service that facilitated the transmission of short messages. The success of the platform was mainly due to the political and cultural sphere, with numerous actors from these fields opting for this network (Johnston, 2024).

Both Facebook and Twitter allowed the publication of texts, their content not always having an entertainment role. This aspect, together with the definition of new generations of consumers, led to the recognition of a new desire of individuals regarding the expansion of entertainment services in the online environment. Thus, in 2010, the Instagram platform was created, a photo- and video-sharing social media application (Blystone, 2024).

The year 2016 comes with a novelty in terms of social media networks with the launch of the TikTok platform. With a high level of engagement, the platform allows users to create, watch and share video content through mobile devices (D'Souza, 2024). If Twitter and, later, Facebook distributed political content, the TikTok platform is mainly aimed at Generation Alpha and Z, offering entertainment services.

With the advent of social networks, the way individuals communicate has experienced a major change. Opting for instant messaging or content creation, Social media platforms have facilitated interaction between individuals, satisfying their socialization needs (Kietzmann *et al.*, 2011).

From the moment of launch, social media platforms have been used to transmit information, often being seen as having an educational role, they are also used later and analyzed to understand people's recycling behavior (Jiang *et al.*, 2021). Similarly, Minton *et al.* (2012) carried out a cross-national analysis of motivations for sustainable behaviors, including recycling, and highlighted the crucial role of social media in spreading and strengthening these motivations. Through social media platforms, users can be inspired to adopt sustainable practices, including recycling, due to the influence these media have on individual behaviors and attitudes.

Social media platforms have a complex and varied role in influencing and promoting recycling behavior, emphasizing their importance as tools for educating, motivating and mobilizing communities.

4. Methodology

To carry out this research, we analyzed the posts of the RetuRO company on the Facebook social media platform. The motivation for choosing this platform to analyze the content offered was given by the large number of registered users. Thus, at the level of 2024, there were approximately 12.34 million users in Romania, registering an increase of 500,000 users compared to the previous year (Statista, 2024). Unlike the Facebook platform, YouTube gathers several approximately 12 million users (Neagu, 2023). Although the difference between the two platforms is not big, on YouTube, the RetuRO channel has only 151,000 subscribers, which means that it is harder for news to reach nonsubscribers.

In carrying out this scientific approach, we took into account the number of posts existing on the platform since the launch, continuing with the analysis of the messages posted after the program started. The RetuRO page appeared on the Facebook platform in January 2023 and the number of posts is described in Table 1. We note that we only considered posts that appeared until the end of June.

Thus, it can be seen that there is a fluctuation in the number of posts, at the level of 2023, most of them being in October, with the approach of the launch date of the return guarantee system.

Of course, each post attracted some shares or comments from users. Regarding the comments, the content analysis was carried out only for a part of them, the selection is made according to the subject of the comment. Thus, comments that included images or those that were very brief and whose analysis would not have generated any results were removed from the analysis.

Regarding sentiment analysis, statistical tools and software were used, each post or comment taken into account being fragmented into independent phrases to facilitate the analysis process, the resulting graphs reflecting the positivity/negativity of the message transmitted.

5. Results

In the data analysis, we channeled in two directions. First of all, we analyzed RetuRO's posts to see, through the software, its positivity/negativity. The second direction we followed was the analysis of the impact the published message had on people. Thus, from each post we selected the comments that we considered relevant after applying the selection criteria (message size, language used, etc.), these being included in the selection process.

Given the fairly high number of posts in a month, as well as the fairly long period during which the GRS program was promoted, we have chosen to present the graphical representation of only a portion of the published messages and comments.

For example, the first message posted in January informed consumers about the return guarantee system, explaining how it works and what implications it will have on consumers.

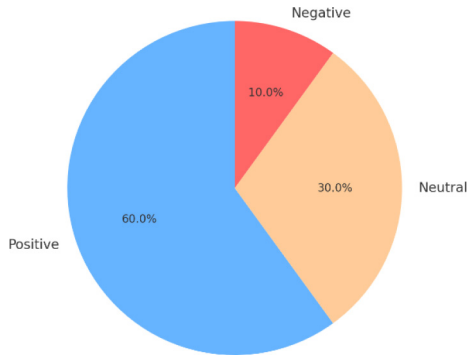
According to the analysis, the general feeling is positive (Figure 1), through the aspects included in the text suggesting the significance and positive impact of the project. Most of the time, the sentiment analysis results are positioned between -1 and 1, and these values can be considered negative, neutral or positive.

One of the comments associated with this post relates to consumer frustrations with financial recovery, as well as concerns with the implementation of GRS.

Table 1. Number of RetuRO posts on the Facebook platform

Month and year	No. of posts	Month hand year	No. of posts
January 2023	10	October 2023	15
February 2023	8	November 2023	14
March 2023	11	December 2023	11
April 2023	9	January 2024	6
May 2023	1	February 2024	9
June 2023	2	March 2024	7
July 2023	12	April 2024	13
August 2023	10	May 2024	9
September 2023	9	June 2024	14

Source: Authors' own creation

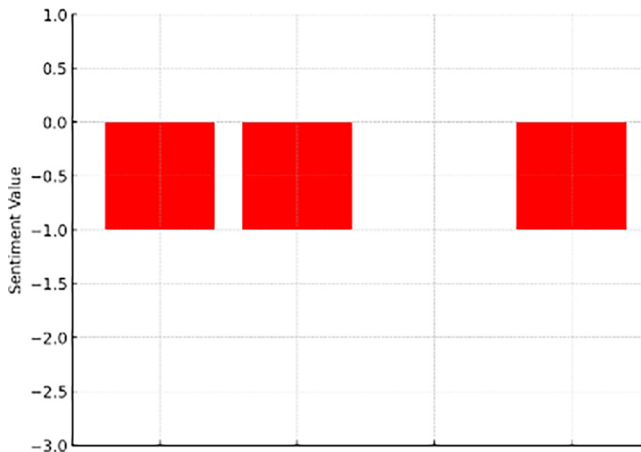


Source: Authors' own creation
Figure 1. January – sentiment analysis for RetuRO post

In this situation, the comment was divided into four statements related to how the records of the drinks sold will be kept, the existence of a column at the brand house, the inclusion of the value-added tax for 0.50 lei, respectively, the recovery of the invested resources. Considering the distribution of statements, the sentiment is negative (Figure 2).

Analyzing the posts of the RetuRO company for February, we can say that they are mostly neutral, having the role of reminding the consumer. However, some comments reflect negative sentiments. For example, the meaning of the comment:

For cities, we saw that the pick-up point must be organized at a maximum of 150 m from the small neighborhood shops (they are not obliged to do it individually, having less than 200 square meters of surface). If they do not understand each other if there are no other traders within a radius of 150 m². The administrative-territorial units have not yet received any instructions about partnerships to open a common collection point. And again, if the distances from the merchant are



Source: Authors' own creation
Figure 2. January – sentiment analysis for comments

not respected? My opinion is that they need to come up with clarifications. A pickup point also means a lot of work and strict records of packaging and money.

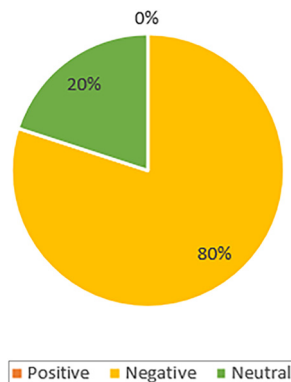
Is reflected in [Figure 3](#). The sentiment of the post is largely concerned and frustrated. The author expresses worry about several logistical and procedural issues regarding the setup of collection points for small neighborhood shops. They highlight the lack of clear instructions and the potential for confusion among local businesses if certain distances are not respected. The post reflects a need for clarification and better organization to ensure that the process is smooth and effective. The author also points out the additional burden of managing these collection points, which involves significant effort and precise record-keeping. Overall, the tone conveys frustration with the current state of planning and a strong desire for clearer guidance.

Similarly, for March, the overall sentiment of the RetuRO posts is neutral. It provides a factual update about the RetuRO platform, emphasizing the ongoing opportunity for merchants, producers and importers of beverages to complete their mandatory registration procedures or make future registrations. The post outlines the specific data required for completing the registration process in a detailed and procedural manner.

The post is primarily informative, offering clear instructions and details about the registration process. It focuses on practical steps and requirements rather than expressing any emotional or subjective opinions. There are no words or phrases indicating positive or negative emotions. The language is straightforward and neutral, aimed at ensuring compliance and providing necessary information. The purpose of the post is to convey important procedural information without any explicit feelings of satisfaction or dissatisfaction.

Regarding the citizens' comments, the overwhelming majority of the sentiment is negative. The post expresses frustration and dissatisfaction with the Romanian program, criticizing its complexity and perceived dishonesty. Words like “bureaucrats”, “deceive” and “profit-making decision” indicates a high level of discontent. The author believes that the program was designed to exploit users for financial gain rather than to serve the public efficiently ([Figure 4](#)).

In April, the way of communication changes, so that the messages appear in the form of “Questions-Answers”. It aims to provide answers to the most common questions received



Source: Authors' own creation

Figure 3. February – sentiment analysis for comments

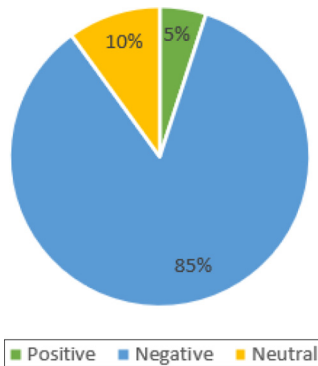
from consumers. By changing the content, the result of the sentiment analysis also changes. Thus, the selected message is reflected in Figure 5.

The post provides an informative and reassuring update about the implementation of the RetuRO SGR system. The explanation of how the system will work contributes to a positive tone. The post highlights beneficial aspects such as the return process for packaging, the guaranteed refund and the lack of requirement for a receipt, which are all likely to be well-received by consumers.

For May and June, the frequency of posts is minimal (one in May and two in June). Given the low presence on the social media pages, the three posts were not included in the analysis.

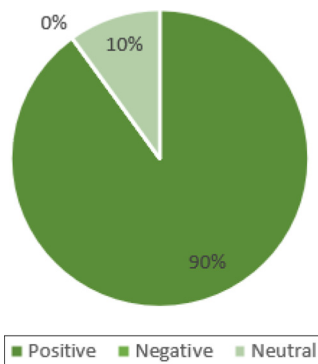
Starting from July and approaching the start date of the GRS project, the frequency of posts shows an upward trend (Figure 6).

The selected post exudes a strong positive sentiment. It announces a significant achievement in the journey towards implementing the GRS in Romania – securing a green



Source: Authors' own creation

Figure 4. March – sentiment analysis for comments



Source: Authors' own creation

Figure 5. April – sentiment analysis for RetuRO post

loan of 426 million lei from ING Romania. This is presented as a major milestone, emphasizing the financial support and operational capability it will provide. The message highlights the creation and operation of regional centers for sorting and recycling returned packaging, underscoring the commitment to sustainability and a greener Romania. The language is optimistic and forward-looking, showcasing a collaborative effort toward environmental goals.

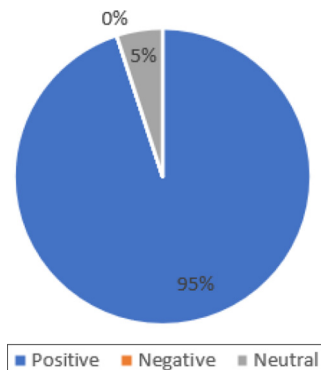
In July, there are some major changes in consumer behavior. Thus, they end up posting fewer and fewer comments on RetuRO messages on the Facebook platform. This aspect may be due to the acquisition of knowledge regarding the GRS system that was to come into force or through the prism of the lack of interest in the posted messages. Sentiment analysis for one of the few posted messages is reflected in [Figure 7](#).

The primary sentiment of the post is negative, driven by concerns and questions regarding potential issues with the GRS after November 30. The author raises doubts about the fairness and transparency of the system, specifically questioning the right to refuse vouchers and receive cash, the imposition of brand-specific purchases and deceptive marketing practices. These concerns reflect frustration and dissatisfaction with the current state of the implementation and the potential for exploitation.

In August, the messages posted on the Facebook platform by the RetuRO company showed openness to possible concerns, the response period of the company's representatives being shorter and shorter. For the message under consideration, there is a positive sentiment. It expresses a commitment to making the packaging return process as simple as possible and offers assistance with any questions or concerns. The language used is supportive and helpful, aiming to reassure and assist users. By stating that they are available to provide more details and address inquiries, the post promotes a positive and customer-friendly attitude.

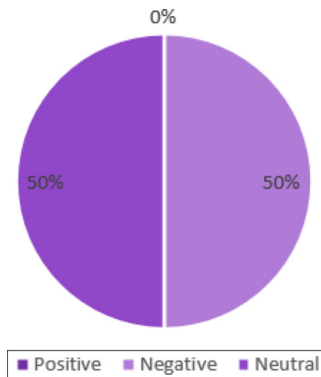
Consequently, during August, although there are significantly fewer messages from page followers, their structure is changed. Messages are more complex and to the point, targeting only certain aspects that are unclear to consumers ([Figure 8](#)).

The post is expressing gratitude for the transparency and periodic communication from RetuRO. The author acknowledges the progress made and appreciates the ongoing efforts. Phrases like “thank you for the periodic communications and transparency” and “again, thank you for the progress made and for the transparency” highlight a supportive and



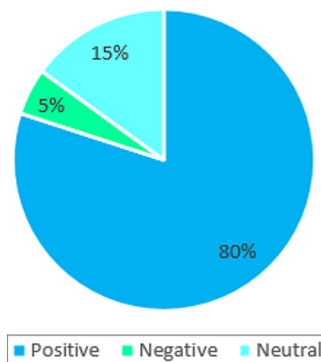
Source: Authors' own creation

Figure 6. June – sentiment analysis for RetuRO post



Source: Authors' own creation

Figure 7. July – sentiment analysis for comments



Source: Authors' own creation

Figure 8. August – sentiment analysis for comments

appreciative tone. The enthusiasm about the upcoming system launch and the desire to obtain detailed information reflect a positive engagement with the process.

In September, the posts served as reminders regarding the signing of contracts by traders, without generating significant comments that could have been analyzed through a sentiment analysis.

The month of October brings a change in the way of promotion. Short videos on the recycling process are becoming available on the Facebook platform, presenting the content in the form of a “slice of life” message.

As for the posts, they generate positive sentiments: “There’s a little more and we’re entering the Recycling Hour!” conveys a sense of excitement and eagerness about starting the recycling initiative or phrases like “Let’s learn the steps” and “Let’s lend a hand with hand” encourage collective participation and motivation to take action.

However, consumers are beginning to show their reluctance to change, being convinced that the packaging return process will be deficient, both in terms of the available

infrastructure and the personnel involved. One of the analyzed comments reflects skepticism and concern (75%) about the readiness and successful implementation of the recycling system by the stated deadline (Figure 9).

The user doubts whether current market conditions will meet the requirements and expresses a lack of confidence in achieving the goal by November 30. The inquiry and mention of the deadline are neutral (25%), serving to frame the user's concern.

The month of November is the launch period of the program. Thus, the analyzed post coincides with the day the system is rolled out:

The Recycling Hour begins! We are launching Romania's largest circular economy project: the Guarantee-Return System. All the collected packaging will be recycled, and both we and future generations will be able to enjoy a cleaner and greener environment.

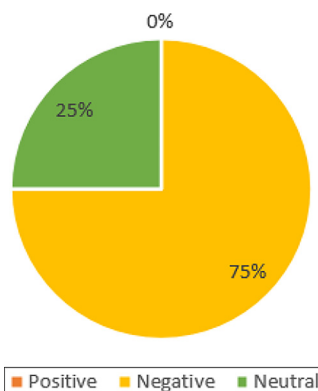
The post is overwhelmingly positive, emphasizing excitement, pride and the environmental benefits of the new recycling initiative. The tone is motivational and inclusive, encouraging collective participation and highlighting the long-term positive impact on the environment for current and future generations. The informational content is neutral but supports the positive message by providing context and details about the project.

The company's enthusiasm is not reflected among consumers. According to posts in November, most are convinced that GRS is just a price hike, with no immediate or long-term benefits. For one of the ads analyzed, the sentiment analysis is reflected in Figure 10.

The post is highlighting significant frustration, perceived unfairness and criticism of the recycling project and similar systems. The user questions the personal benefit and effectiveness of the current approach, suggesting that previous incentives might have been more effective. The tone conveys a strong aversion to forced participation and dissatisfaction with the perceived exploitation of consumer effort.

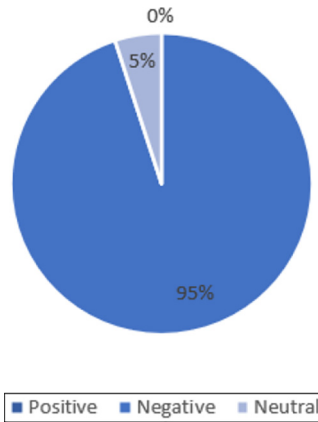
December is the first month in which the GRS is active. RetuRO messages generate a feeling of positivity, reminding consumers of the possibility they have to get rid of the packaging of the purchased products.

However, among consumers, the first problems are becoming visible: the machines run out of paper to be able to issue the receipt certifying the amount they must receive, or they are



Source: Authors' own creation

Figure 9. October – sentiment analysis for comments



Source: Authors' own creation

Figure 10. November – sentiment analysis for comments

blocked, not being checked in time. Consumers also mention that the stores that are part of the GRS system are not visible, so they are not fully informed about the merchants where they can recycle. Most of the messages posted in December reflect a feeling of negativity (95%).

The first months of 2024 bring changes regarding online behavior related to the promotion of the RetuRO platform. Thus, for January, February and March, the number of posts decreases, registering an increase in the number of consumers who leave comments related to the problems encountered. If RetuRO messages are considered neutral, the negative attitude of consumers is reflected in the comments posted.

In April 2024, the posts reflect more excitement, to attract consumers. The post is celebrating the success of the recycling initiative and expressing gratitude and optimism. The tone is encouraging and appreciative, highlighting the importance of collective effort in achieving a cleaner country.

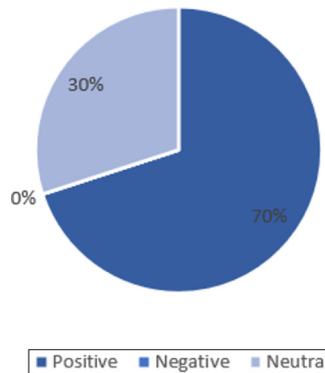
Consumer opinions are divided in two directions: some believe that the system is a disadvantage for the consumer, involving effort and resources on his part. However, some consumers see the utility of GRS and believe that implementing it will lead to a cleaner environment (Figure 11).

The post is primarily positive and encouraging (70%), emphasizing optimism, commitment and the long-term educational and behavioral benefits of the recycling program. It acknowledges initial challenges (30%) neutrally, providing context for the encouragement and motivation that follows.

Analyzing the posts from May, most of the messages reflect a feeling of positivity, emphasizing gratitude and encouragement for users who persist in recycling despite challenges. However, it also contains a significant acknowledgment of the negative experience (30%) related to the inconvenience of dealing with machine errors. This mix of sentiments reflects an understanding of the users' frustrations while maintaining a supportive and appreciative tone toward their efforts.

However, consumer responses are positioned at the opposite end of the axis, reflecting the frustration they have accumulated in the recycling process and the impediments they have had.

The posts related to July try to provide an answer to the problems encountered, mainly, by traders, in particular, by small ones. Although sentiment analysis reflects a positive or neutral



Source: Authors' own creation

Figure 11. April – sentiment analysis for comments

impact, consumer opinions mainly reflect a negative impact. They recall the difficulties of recycling and believe that often this process, in the way it has been understood by retailers, contributes to the humiliation of consumers.

6. Conclusions and recommendations

Regarding the conclusions of the research, considering the sentiment analysis we carried out and how we selected the company's posts and customer comments, they were formulated from two perspectives: from the customer's point of view, respectively, from the point of view of the company.

From a customer perspective, analyzing the sentiments expressed in the respective posts, we note that the majority of comments reflect concern and confusion related to the management and return of drinks, with questions about technical and financial aspects, suggesting a sense of frustration and uncertainty regarding the application of the rules. Equally, both before the program runs and after it starts, there is dissatisfaction with the organization of pick-up points and the lack of clarification from the authorities, highlighting difficulties in coordinating and enforcing regulations, which indicates a sense of uncertainty and a need for improvement.

The prevailing sentiment is negative, with harsh criticism of administrative processes and the perception of corruption and over-complexity, suggesting deep frustration and distrust of the system. The questions reflect concerns and confusion about the rights and rules applicable to the guarantee-return system, indicating a sense of uncertainty and dissatisfaction with possible business practices.

Knowing how consumers feel about the ongoing program would be in the company's favor as, in the comments posted, they mention RetuRO's "sensitive points". Based on customer dissatisfaction, representatives could make the necessary changes to improve the way the recycling program is run. There is a sense of frustration and disappointment among customers regarding the perception that recycling is inefficient and that the system imposes additional costs without clear benefits, indicating deep dissatisfaction with its implementation.

From the company's perspective, the posts are oriented toward informing customers, the general feeling being one of optimism. The messages emphasize the importance and benefits of GRS, mentioning the implementation dates and functional aspects of the system and suggesting a positive and encouraging tone. Concerns and questions are addressed clearly and directly without

expressing obvious frustrations. There is an emphasis on legal requirements and transparency of the process, which reflects a sense of seriousness and responsibility.

Appreciation and support for green initiatives are evident in posts announcing achievements and future steps, highlighting a sense of satisfaction and commitment to protecting the environment. Acknowledging the challenges of using vending machines is balanced by a message of thanks, indicating a positive attitude toward consumers' efforts and a desire to improve their experience.

In conclusion, a significant contradiction can be observed between the sentiments generated by RetuRO's posts and those reflected in customer comments. Based on this, we believe that clarifying and simplifying procedures is essential to reduce confusion and frustration for traders and consumers. It is important to provide detailed and accessible information about how the guarantee-return system works, including legal obligations and registration procedures.

Given the novelty of the program and the lack of consumer education regarding recycling, the RetuRO company had the role of informing and convincing about the benefits of these actions. Opting, in particular, for the online environment in terms of the RetuRO campaign was beneficial, especially from the perspective of young consumers, who are more present in social media.

We also recommend improving the infrastructure and coordination for the return points, which could alleviate the problems related to distances and their organization, thus ensuring that the process is more accessible and efficient for all participants.

Also, we recommend a more intense activity in the online environment by responding to customer comments. On many occasions, they show confusion or lack of clarity about the recycling program, and depending on the number of comments, many times some remain unanswered, which can lead to a feeling of frustration. We also feel that there should be a larger number of posts, which are made after reviewing customer comments. Practically, the company's posts should answer the customer's queries.

Last but not the least, we believe that one of the most important aspects is the active and educational support for traders and consumers, which should be intensified, including through information campaigns and training, to ensure a smooth implementation and to clarify any unclear aspects related to the return of packaging and obtaining the guarantee.

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