

THE RECYCLING BEHAVIOR OF ROMANIAN CONSUMERS

Mirela-Cristina VOICU*

Abstract

For any of us, protecting the environment should no longer be an optional activity, taking into account the negative effects of the environmental degradation that is becoming increasingly acute these days. Yet a positive attitude toward protecting the environment is still lacking for many of us, not to mention the lack of positive behavior in this direction. As the field of environmental protection requires a multidisciplinary approach, the marketing also contributes to the achievement of sustainable economic development in our country, especially through the researches carried out on consumers ecological behavior. Both the business environment and public organizations require reliable information about the determinants of consumers' environmental behavior. One aspect of this ecological behavior is the recycling behavior. Given that the need to meet the European recycling standards is becoming increasingly stringent, it is also necessary to know all the factors that can determine an appropriate environmental behavior. In this context, the following paper reveals some important aspects regarding the current situation of the recycling activity in Romania together with the characteristics of the recycling behavior of Romanians that require a specific marketing activity conducted in this field.

Keywords: green marketing, consumer environmental behavior, recycling, circular economy, sustainable marketing

1. Introduction

It's been quite a while since the environmental issues have been put on the table, and yet they are far from being resolved. Moreover, experts in the field warn us every year about the continuous degradation of the environment. The volume of solid waste has increased, while the number of areas where we can store it is getting smaller, toxic waste has contaminated the soil and water, gas emissions are increasingly diminishing the ozone layer, plastic finds itself already in the most protected areas of the Earth¹ and in our intestines for some time². It is quite clear that, despite the increasing number of those who support the environmental protection movement, more and more consumers must be persuaded to think about the consequences of their consumption decisions.

Recycling is one of the solutions that contribute to improving the quality of the environment or at least slowing down the degradation process. The recycling industry is basically about taking over used materials, such as plastic or glass containers, and converting them into new materials, thus saving them from the landfill. The idea behind recycling is to reduce energy costs, reduce air and water pollution, and encourage the use of "clean" raw materials.

What is actually happening in this area shows that the solution to the recycling problem requires an interdisciplinary scientific approach. Under these circumstances, marketing plays an important role given that the key element that determines the success of recycling programs is the consumers participation. On the other hand, given the situation in which Romania is currently in, placing at the bottom of the ranking regarding the recycling activity, it is necessary, among other things, to know the determinants of the Romanian recycling behavior as well as the characteristics of the marketing activity leading to changing behavior in the desired direction.

2. Recycling in Romania

Before analyzing the recycling phenomenon in Romania, it is advisable to understand the importance of this activity. Thus, recycling can be defined as the process through which products or other materials are recovered or diverted from the waste stream for use as raw materials in the manufacture of new products³. Recovering materials reduces the need to re-produce those materials, which leads to the conservation of vital resources. For example, collecting approximately 1kg of used garments means saving roughly 3.6 kg of carbon emissions and 5,678 liters of water⁴, or

* Lecturer PhD, Faculty of Economics and Business Administration, „Nicolae Titulescu” University of Bucharest (email: voicu.cristina.m@gmail.com).

¹ Sample, I., 2018, "Sad surprise": Amazon fish contaminated by plastic particles, The Guardian, 16 November, <https://www.theguardian.com/environment/2018/nov/16/sad-surprise-amazon-fish-contaminated-by-plastic-particles>

² O'Sullivan M., 2018, Plastic particles found in human digestive systems, The Times, 23 October, <https://www.thetimes.co.uk/article/plastic-particles-found-in-human-digestive-systems-7wbgt0kpkj>

³ Sarmaniotis, C., Tilikidou, I., 2000, Consumer attitudes towards recycling: construction of a reliable and valid multi-item measure, Mediterranean Journal of Economics, Agriculture and Environment, Vol. 11, No 2, pp 48-51, http://newmedit.iamb.it/share/img_new_medit_articoli/633_48-sarmaniotis.pdf

⁴ Balch, O., 2012, Is recycling revamping retail rules?, The Guardian, <https://www.theguardian.com/sustainable-business/recycling-circular-economy-consumer-behaviour>

collecting one liter of waste oil saves one million liters of water⁵.

The recycling industry takes on materials such as glass, paper, metal, plastic, textiles and electronics. Food and garden waste can be transformed into compost, and then used as fertilizer, thus giving them back to the soil and helping to protect the environment. By recycling, the quality of the environment improves and becomes stable.

Unfortunately, Romania is still at an early stage when it comes to consumer behavior oriented towards recycling or the consumption of recycled materials. According to the European Commission report, in 2016 Romania had very low recycling and composting levels, i.e. 16%, compared to the European average of 44%, as well as high rates of waste storage. By comparison, Germany recovers 65% of recycled material annually, the rest of the waste being incinerated for energy production. Even Croatia, which joined the European Union in 2013, does five times better than Romania in this respect, according to the European Environment Agency⁶.

Practically, Romania is everyday wasting a significant amount of reusable materials, taking into account that, according to Elena Gașpar-Ion, the representative of the Environ Association (an organization that created the EcoRampa in Bucharest, the first selective waste collection center with 10 different streams), household waste contains about 16% -20% paper/cardboard, 5% aluminum/metal, 5% glass, 10% -15% plastics, 15% other materials, and only 39% biodegradable debris⁷.

On the other hand, according to European directives, Romania has to achieve a number of recycling targets by 2020: a minimum of 50% rate of reuse and recycling of the total mass of waste (paper, metal, plastic and glass) at least 70% level of preparation for re-use, recycling and other material recovery operations of at least 70% of the mass of non-hazardous waste resulting from construction and demolition activities, 60% recycling of packaging waste from the total packaging placed on the national market. Also, our country will have to reach an annual amount of 4 kg per inhabitant of collected electronic

waste and to collect bio-waste separately for composting and fermenting⁸. Yet Romania was in 2018 the only European Union country that had not yet adopted waste prevention programs, since the new European laws adopted on 22 May 2018 included the obligation to monitor waste prevention measures and to report how the waste was reused⁹.

Even worse, the Environment Ministry warned that Romania is liable to pay a fine of 124,000 euros per day since 2018 due to the failure of the authorities to close non-compliant municipal landfills. Also, Romania is liable for infringement for failure to comply with the requirement to collect and recover at least 50% of waste, with a minimum fine of 200,000 euro day¹⁰, given that in 2018 this figure was 5%¹¹.

One of the biggest obstacles to achieving these goals, along with the disinterest of state bodies, is the lack of public interest in environmental protection.

3. Consumer recycling behavior

Recycling involves a behavior that is different from most consumer behaviors. In this case, consumers do not show an immediate interest for recycling and the benefits of this activity are not immediate, but accumulate over time in society, while the costs of time and effort are immediate.

In terms of recycling behavior, individuals can fall into the following categories¹²:

- *Non-recyclers* who do not believe in recycling and its benefits and act in accordance with this belief;
- *Not-assumed recyclers* are people who recycle but do not strongly believe in this activity;
- *Recyclers* who believe in recycling and its benefits and act according to this belief;
- *Involuntary non-recyclers* represent a segment of consumers who believe in the principles of recycling but do not recycle, often due to the absence of recycling facilities or misperceptions about the lack of facilities.

Whilst the motive for most recyclers is based on the belief that recycling is environmentally beneficial, the quantification of the positive impact of recycling is not enough to convince a number of consumers that

⁵ Zaharia, C., 2014, *One liter of waste oil pollutes one million liters of water but is still not perceived as waste in Romania*, Green Report, <https://www.green-report.ro/uleiul-alimentar-uzat-nu-este-perceput-ca-un-deseu-in-romania-inca/>

⁶ Stanca, A., 2017, *On paper, Romania is at the forefront of EU countries in terms of municipal waste. Recycling pulls us down*, Vocea.biz online magazine, <https://vocea.biz/social/2017/feb/03/pe-hartie-romania-este-in-fruntea-tarilor-ue-la-capitolul-deseuri-municipale-reciclarea-ne-trage-in-jos/>

⁷ Rachita, P., Chiruta, R., 2015, *Why are we the last in Europe to recycle*, Romania Libera, October, <http://romanalibera.ro/special/documentare/de-ce-suntem-pe-ultimul-loc-din-europa-la-reciclare-395255>

⁸ Badea, D., 2017, *EC report: Romania has recycling and waste composting levels of 16%, below the European average of 44%*, National Press Agency official site (AGERPRES), <https://www.agerpres.ro/economie/2017/02/07/raport-ce-romania-are-niveluri-de-reciclare-si-compostare-a-deseurilor-de-16-sub-media-europeana-de-44--18-00-55>

⁹ *Product reuse and longer lifespans hold untapped potential to cut waste in Europe*, 4 July 2018, European Environment Agency, <https://www.eea.europa.eu/highlights/product-reuse-and-longer-lifespans>

¹⁰ Golea, M., 2017, *Romania will pay fines of 340,000 euros/day due to waste in 2018*, Magna News, <https://magnanews.ro/2017/12/18/romania-va-plati-amenzi-de-340-000-de-euro-zi-din-cauza-deseurilor-2018/>

¹¹ *Romania IMPORTS Waste! Half of recycled materials come from abroad*, 19 June 2018, NewsTeam.ro, <https://newsteam.ro/politica/uluitor-romania-importa-deseuri-jumatate-din-materialele-reciclate-vin-din-afara-tarii/19/06/2018/>

¹² Johansson, K., 2016, *Understanding recycling behavior: a study of motivational factors behind waste recycling*, Proceedings of the 8 International th Conference on Waste Management and The Environment, published in Transactions on Ecology and The Environment, Vol 202, available at <https://www.witpress.com/Secure/elibrary/papers/WM16/WM16036FU1.pdf>

recycling does have an impact and that it is a behavior to be adopted. Aside from the fact that consumers usually associate sustainable behaviors (such as recycling) with a series of costs (money, time, effort and inconvenience), for many consumers there is a fragmentation between individual recycling behavior and its positive impact on the environment that cannot be measured in the short term, which leads to poor consumer feedback. Given that consumer actions have no consequences that can be noticed, they will not be motivated to continue to conduct themselves in that manner. For example, one of the beneficial effects of recycling that consumers cannot see is the reduction in greenhouse gases which they perceive as harmful. Thus, the lack of feedback on the impact of recycling perpetuates consumer inactivity¹³. Although consumers have a theoretical understanding of the benefits of recycling, these benefits do not have a tangible impact on everyday life, so good intentions do not translate into good recycling behavior.

Studies in this field have shown that recycling is a decision on which consumers do not spend too much time thinking, and habit and inertia block the change¹⁴. Also, consumers' attitude towards recycling is the determining factor of consumer recycling behavior, the attitude being influenced, first of all by the opportunities, facilities and knowledge regarding recycling, secondly by the obstacles involved in the actual process of recycling (time, space and inconvenience)¹⁵. Under these circumstances, efforts to stimulate recycling should focus primarily on making it a convenient process, visible for others and having personal rewards.

4. Objectives of the marketing activity regarding recycling

The marketing specific to recycling can be considered to be analogue to consumer goods marketing, just that the purpose involves the formulation of a rather delicate proposal consisting in encouraging voluntary behavior encumbered by tangible costs and less tangible future benefits.

Marketing activity in the field of recycling collection programs targets mainly the following specific objectives:

- *Increasing the recycling rate.* The recycling rate is the share of collected recycled materials in relation to the total generated waste;
- *Increasing the quantity of recyclable materials;*

- *Increasing the number of consumers who recycle or the participation rate* (the percentage of people recycling in the total potential recyclers).

In addition, it is well-known that as the various recyclable materials are more mixed, the recycling process gets more complicated, more costly and the risk of contamination increases. The recycling becomes costly and inefficient. The problem underlying the inefficient recycling is the way to recycle, the way individuals take into account the specifications listed on collection bins available on the street, in schools and office buildings. Most times, people don't know what can and cannot be introduced into these containers either because of the lack of education in this area or because of the faulty way in which the collection containers are labeled (for example, the "plastic" label may lead us to mistakenly consider polystyrene as recyclable material). Under these circumstances, one of the marketing objectives in this field is *to obtain a less contaminated collection* from the consumer by increasing the level of their involvement, raising awareness and standardizing the labeling of collection containers. In other words, one of the marketing objectives regarding recycling is *to persuade the population to hold different types of waste in the household, to collect them in a certain period of time, and to dispose of them separated into categories.*

5. To do's in marketing regarding consumer recycling behavior

Any attempt to implement or improve recycling systems and / or recycling behavior should take into account the following three issues¹⁶:

- a well-designed recycling infrastructure;
- specific recycling knowledge;
- a general understanding of environmental issues.

A high recycling rate should be achievable given that consumer motivation is high enough and the conditions for achieving this task are simple.

Taking into account the characteristics of the recycling behavior presented in the previous section, the paths to be followed and the strategies to be implemented to achieve the recycling marketing objectives are outlined on the following coordinates:

- **Identifying the target of the recycling promotional activity.** Only by clearly identifying the consumer segment we want to persuade to recycle we can develop a good marketing strategy in this area. Thus, the segment may be represented by producers,

¹³ Shrum, L.J., Lowrey, T.M., McCarty, J.A., 1995, *Applying Social and Traditional Marketing Principles to the Reduction of Household Waste*, American Behavioral Scientist, Vol. 38, No 4, February, pp. 646-657

¹⁴ Smallbone, T., 2005, *How can domestic households become part of the solution to England's recycling problem?*, Business Strategy and the Environment, No 14, pp 110-122, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.519.4222&rep=rep1&type=pdf>

¹⁵ Tonglet, M., Phillips, P.S., Read, A.D., 2004, *Using the Theory of Planned Behavior to investigate the determinants of recycling behavior: a case study from Brixworth, UK*, Resources, Conservation and Recycling, No 41, pp. 191-214, <https://www.sciencedirect.com/science/article/pii/S0921344903001629>

¹⁶ Johansson, K., 2016, *Understanding recycling behavior: a study of motivational factors behind waste recycling*, Proceedings of the 8 International th Conference on Waste Management and The Environment, published in Transactions on Ecology and The Environment, Vol 202, disponibil la <https://www.witpress.com/Secure/elibrary/papers/WM16/WM16036FU1.pdf>

traders or individuals, each segment determining the selection of a different strategy.

Social marketing strategies in this area may target a particular territorial area, a neighborhood or multiple neighborhoods of a city being integrated into a recycling program, a single apartment block or a whole apartment complex, a school or more, a collection point or more, a specific collection activity (for example, the collection of home appliances or household oil), a single shopping complex or a whole chain of stores.

Depending on the target segment, the communication and motivation of consumers will also be adapted. In this context, a distinction will be made between those segments with a more individualistic orientation than those with a collectivist orientation¹⁷.

In addition, in organizing and carrying out marketing activities in this area, it is imperative that in the target audience investigation process, to properly understand which barriers/obstacles the consumers perceive in adopting the recycling behavior¹⁸.

- **Educating the public.** Unfortunately we can't state about the Romanian consumers that they are an educated public when it comes to recycling. We have not yet reached a culture of recycling. Thus, most of the efforts of those interested in this field must be directed towards education, bearing in mind that before attempting to change consumers' behavior regarding recycling, it is important to provide people with a strong reason that explains the programs focused in this direction. A rational justification for the recycling incentive program will increase the likelihood of developing an intrinsic justification for the desired behavior and the continuation of that behavior even in the absence of extrinsic reasons (such as rewards and punishments). The public should be informed about the benefits of implementing a recycling program at home, at work and in public spaces: reuse of materials that would otherwise reach the landfill, protect the environment from pollution by non-breakdown materials, etc. In addition to programs to build a positive attitude towards recycling, public education should also be done through individual programs focused on certain categories of waste (batteries, electronics, waste oil, clothing, etc.).

On the other hand, with regard to the organization and implementation of educational programs, research has shown that education aimed at changing consumer behavior is much more effective on small groups than large groups and should include interactive demonstrations and discussions rather than lectures or watching films by a passive audience, following the principle: "Tell them and they will forget - Demonstrate

and they will remember - Involve them and they will understand"¹⁹. In this context, we shouldn't overlook the fact that public education programs on recycling should focus not only on the education component, but also on motivation. We must not lose sight of the fact that relying solely on information to change behavior is not enough. Changes in consumer behavior are difficult to achieve, including when the new behavior has considerable advantages over the old one. In order to determine changes in the behavior of Romanian consumers in terms of recycling, it is necessary to focus the education activity towards direct experimentation of what recycling means, an approach that will have a much stronger influence on behavior than indirect experiences (learning only theoretically!). For a lasting change in consumers' recycling behavior, the creation of attitudes through direct experience must be determined.

It is advisable to organize and carry out education campaigns especially during the launch of a recycling program or in the event of changes to certain existing programs.

- **Using the Internet.** It goes without saying that today, those that don't turn to the online for promotion, don't exist. Thus, for an interested organization, it is important to promote the idea of recycling on its website, including the hours and days of waste collection or the location of the containers it provides for collection, as well as information on the types of materials the organization is interested in collecting and the tariff offered for each material (taking the example of „Uleiosul”, „Sigurec” etc.).

- **Creating news.** Press releases, providing advice and information on the importance of recycling, information on innovative technology in the industry, and how waste is transformed into other products complement consumer education campaigns. In addition, given that the lack of feedback on the impact of recycling perpetuates consumer inactivity, providing data on what has been achieved through macro-level (national, regional) recycling can significantly contribute to remove feelings of individual helplessness and inefficiency which accompany the recycling behavior.²⁰

- **Carrying out social campaigns aimed at raising awareness and sensitize** the population. It has been proved that the use of emotional messages in social campaigns has most often influenced the consumer's

¹⁷ McCarty, J.A., Shrum, L.J., 2001, *The Influence of Individualism, Collectivism, and Locus of Control on Environmental Beliefs and Behavior*, Journal of Public Policy & Marketing, Vol. 20 (1), pp. 93-104, http://130.18.86.27/faculty/warkentin/SecurityPapers/Merrill/McCartyShrum2001_JPPM20_1_IndividCollect.pdf

¹⁸ McKenzie-Mohr, D., 2000, *Promoting Sustainable Behavior: An Introduction to Community-Based Social Marketing*, Journal of Social Issues, Vol. 56, No. 3, pp 543-554

¹⁹ Geller, E.S., 1989, *Applied Behavior Analysis and Social Marketing: An Integration for Environmental Preservation*, Journal of Social Issues, Vol. 45, No. 1, pp 17-36

²⁰ Shrum, L.J., Lowrey, T.M., McCarty, J.A., 1995, *Applying Social and Traditional Marketing Principles to the Reduction of Household Waste*, American Behavioral Scientist, Vol. 38, No 4, February, pp. 646-657

intention to recycle²¹.

Usually, traditional social marketing campaigns emphasize the low level of participation of the target segment in the recycling process. This type of campaign sometimes induces feelings of aversion against the promoted request as well as feelings of guilt and resentment, considering that not everyone is delighted to be told what to do. Traditional campaigns tell the public that it has a similar behavior to everyone else (in the sense that the best environmental decisions are not adopted), which has been shown to reinforce unwanted behavior. In this context, in social marketing campaigns, the emphasis should be placed on the environmental behavior that consumers have already adopted, a situation that can lead to an improvement in their attitude towards recycling²², and can raise public awareness regarding the campaign's request to adopt an additional pro-ecological behavior, such as recycling. Placing the emphasis on the ecological behavior adopted by individuals in the past will cause the target consumers to repeat that behavior in the future. Studies in this field have shown that individuals who perceive themselves as ecological consumers are motivated to act in the direction of this perception.

Another aspect to be considered in organizing campaigns in this area is the need to provide multiple and explicit examples of positive environmental changes as a cumulative result of recycling behavior to alleviate the perceived uselessness that accompanies recycling²³.

In this context the use of creative visualizations in waste collection locations (on the street, inside institutions, restaurants, etc.) should not be ignored, as they have the power to trigger an immediate emotional response from consumers. These visualizations can evoke positive emotions of joy and delight, causing consumer's greater responsiveness to recycling and increased willingness to adopt this behavior.

In addition, from the research on ecological marketing, we can conclude that associating recycling behavior with a positively assessed social identity in campaigns to stimulate recycling is much more effective. In other words, the recycling activity would be particularly stimulated if it were to associate this behavior with a prestigious image at the same time as associating an "outdated" identity to the anti-ecological behavior²⁴. An additional boost may come from using social norms in pro-recycling campaigns, those unwritten rules about how to behave, given that we all want to integrate into the society we live in.

• **Creating a well structured and convenient collection system** where consumers can participate as easily as possible. People will recycle when the necessary infrastructure is provided. As long as the services in this area remain at the same low level of development, a pro-recycling behavior cannot develop. In Romania, things have begun to catch a minimal momentum in this area, a statement based on some examples. First example is the infrastructure developed by Sigurec, coupled with convenient location near the major commercial areas with a positive impact on waste reduction and increased recycling. For now, hypermarkets are one of the most convenient solutions for recycling. The most important hypermarkets in Romania (Cora, Carrefour or Auchan) have installed in most of their locations, systems that collect PETs, aluminum and glass recipients as well as other types of waste, such as electronics and home appliances.

It is particularly important to create and place recycling facilities as close as possible to those who are expected to recycle. In order to create a convenient recycling system for consumers, the following aspects should be considered:

- the distance consumers are willing to travel to the collection point;
- number of collection points;
- placing collection points in convenient locations for consumers (such as commercial premises);
- visibility of collection points;
- the variety of waste collected. The more diverse the types of waste collected, the more convenient the recycling system is for the consumer.

• **Introducing the „pay as you throw” system** a situation where consumers pay in proportion to the amount of waste dumped. People would be encouraged to reduce the amount of waste generated and pay a lower bill for waste collection.

• **Using incentives**, whether of financial nature, such as those currently used, in the form of coupons offered for recycling PETs, paying with PETs for services (such as in Indonesia with transport services), the „Rabla” program for used cars, discounts for old appliances, old clothing and shoes, etc. when buying new ones, promotional contests (such as the competition organized by Kaufland Romania in partnership with the ViitorPlus Association for the “Recicleta” program to increase the paper recycling rate for a number of 300 apartment buildings in sector

²¹ *Big Brands, Big Impact – A Marketer's Guide to Behavior Change*, 2015, site-ul oficial al Business for Social Responsibility, pp. 21, https://www.bsr.org/reports/BSR_SLFG_Marketers_Guide_to_Behavior_Change.pdf

²² Cornelissen, G., Pandelaere, M., Warlop, L., Dewitte, S., 2008, *Positive cueing: Promoting sustainable consumer behavior by cueing common environmental behaviors as environmental*, International Journal of Research in Marketing, Issue 1, pp. 46-55, disponibil la https://lirias.kuleuven.be/bitstream/123456789/121057/1/MO_0.

²³ Smith, S.M., Haugtvedt, C.P., Petty, R.E., 1994, *Attitudes and recycling: Does the measurement of affect enhance behavioral prediction?*, Psychology and Marketing, Vol. 11, Issue 4, pp. 359-374

²⁴ Mannetti, L., Pierro, A., Livi, S., 2004, *Recycling: Planned and self-expressive behavior*, Journal of Environmental Psychology, No 24, pp 227-236, https://s3.amazonaws.com/academia.edu.documents/33740924/2004_Recycling_Mannetti_Pierro_Livi_JEP.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1532444063&Signature=bu3UA6v%2FwFo18hni3PT%2B1FI1Oh4%3D&response-content-disposition=inline%3B%20filename%3DRecycling_Planned_and_self-expressive_be.pdf

2 of Bucharest²⁵), or incentives of a moral nature. However, we must be aware that the use of financial incentives (or, on the contrary, the use of punishments) only motivates the consumer to obtain the reward (respectively to avoid punishment) rather than promoting a pro-environment behavior, so that with the elimination of the incentive system, the pro-recycling behavior is also stopped. In this context, we reiterate the idea that consumers need a positive feedback to reward their altruistic impulses such as communications on the benefits to the community and the environment as a result of their recycling activity in order to change the behavior on the long term.

5. Conclusions

For recycling to become an efficient and effective waste treatment method, it is necessary to achieve a high, usual and regular level of participation in the separation, storage and collection of household waste and this can only be achieved by changing the attitudes of Romanian consumers, a goal much more difficult to achieve given that attitudes change much harder and through a long-term process. Success in achieving this

depends significantly on the extent to which this behavior will be considered normal.

Changing the behavior of Romanian consumers with regard to recycling is a challenge of great importance for the development of a circular economy. Manufacturers and retailers have the power to make this change, and many of them have already proceeded in reaching this goal. Governmental and non-profit organizations as well as local authorities should incorporate creative campaigns aimed at creating environmental attitudes, social responsibility, and consumer perception of the power they have over policymakers and policy into recycling strategies.

Approaches to achieving a change in the Romanians' recycling behavior can take the form of intervention through education to change attitudes and to increase consumer knowledge, either a religious and moral approach that employs a sum of values aimed at changing general beliefs and opinions, either in the form of effort focused on behavior that is sensitive to material incentives and, last but not least, an approach through community management, involving the establishment of common rules and expectations. By far, the most effective programs for changing consumer behavior regarding recycling involve combining the four types of intervention²⁶.

References

- Badea, D., 2017, *EC report: Romania has recycling and waste composting levels of 16%, below the European average of 44%*, National Press Agency official site (AGERPRES), <https://www.agerpres.ro/economie/2017/02/07/raport-ce-romania-are-niveluri-de-reciclare-si-compostare-a-deseurilor-de-16-sub-media-europeana-de-44--18-00-55>
- Balch, O., 2012, *Is recycling revamping retail rules?*, The Guardian, <https://www.theguardian.com/sustainable-business/recycling-circular-economy-consumer-behaviour>
- Cornelissen, G., Pandelaere, M., Warlop, L., Dewitte, S., 2008, *Positive cueing: Promoting sustainable consumer behavior by cueing common environmental behaviors as environmental*, International Journal of Research in Marketing, Issue 1, pp. 46-55, disponibil la https://lirias.kuleuven.be/bitstream/123456789/121057/1/MO_0..
- Golea, M., 2017, *Romania will pay fines of 340,000 euros/day due to waste in 2018*, Magna News, <https://magnanews.ro/2017/12/18/romania-va-plati-amenzi-de-340-000-de-euro-zi-din-cauza-deseurilor-2018/>
- Johansson, K., 2016, *Understanding recycling behavior: a study of motivational factors behind waste recycling*, Proceedings of the 8 International th Conference on Waste Management and The Environment, published in Transactions on Ecology and The Environment, Vol 202, available at <https://www.witpress.com/Secure/elibrary/papers/WM16/WM16036FU1.pdf>
- Mannetti, L., Pierro, A., Livi, S., 2004, *Recycling: Planned and self-expressive behavior*, Journal of Environmental Psychology, No 24, pp 227-236, https://s3.amazonaws.com/academia.edu.documents/33740924/2004_Recycling_Mannetti_Pierro_Livi_JEP.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1532444063&Signature=bu3UA6v%2FwFo18hni3PT%2B1F11Oh4%3D&response-content-disposition=inline%3B%20filename%3DRecycling_Planned_and_self-expressive_be.pdf
- McCarty, J.A., Shrum, L.J., 2001, *The Influence of Individualism, Collectivism, and Locus of Control on Environmental Beliefs and Behavior*, Journal of Public Policy & Marketing, Vol. 20 (1), pp. 93-104, http://130.18.86.27/faculty/warkentin/SecurityPapers/Merrill/McCartyShrum2001_JPPM20_1_IndividCollect.pdf
- McKenzie-Mohr, D., 2000, *Promoting Sustainable Behavior: An Introduction to Community-Based Social Marketing*, Journal of Social Issues, Vol. 56, No. 3, pp 543-554

²⁵ ViitorPlus and Kaufland Romania extend the free paper recycling infrastructure to a network of 300 block stairs in the Capital, 2017, the official website of Kaufland Romania, <https://despre.kaufland.ro/presa/comunicate-de-presa/presse-detail.y=2017.m=08.n=extindere-recicleta.html>

²⁶ Stern, P.C., 2000, *Toward a Coherent Theory of Environmentally Significant Behavior*, Journal of Social Issues, Vol. 56, No. 3, pp 407-424, <https://pdfs.semanticscholar.org/af18/c7127c241cafc187d1ad2521b0ba88a5ef32.pdf>

- O'Sullivan M., 2018, *Plastic particles found in human digestive systems*, The Times, 23 October, <https://www.thetimes.co.uk/article/plastic-particles-found-in-human-digestive-systems-7wbgt0kpj>
- Rachita, P., Chiruta, R., 2015, *Why are we the last in Europe to recycle*, Romania Libera, October, <http://romanalibera.ro/special/documentare/de-ce-suntem-pe-ultimul-loc-din-europa-la-reciclare-395255>
- Sample, I., 2018, "Sad surprise": Amazon fish contaminated by plastic particles, The Guardian, 16 November, <https://www.theguardian.com/environment/2018/nov/16/sad-surprise-amazon-fish-contaminated-by-plastic-particles>
- Sarmaniotis, C., Tilikidou, I., 2000, *Consumer attitudes towards recycling: construction of a reliable and valid multi-item measure*, Mediterranean Journal of Economics, Agriculture and Environment, Vol. 11, No 2, pp 48-51, http://newmedit.iamb.it/share/img_new_medit_articoli/633_48-sarmaniotis.pdf
- Shrum, L.J., Lowrey, T.M., McCarty, J.A., 1995, *Applying Social and Traditional Marketing Principles to the Reduction of Household Waste*, American Behavioral Scientist, Vol. 38, No 4, February, pp. 646-657
- Smallbone, T., 2005, *How can domestic households become part of the solution to England's recycling problem?*, Business Strategy and the Environment, No 14, pp 110-122, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.519.4222&rep=rep1&type=pdf>
- Smith, S.M., Haugtvedt, C.P., Petty, R.E., 1994, *Attitudes and recycling: Does the measurement of affect enhance behavioral prediction?*, Psychology and Marketing, Vol. 11, Issue 4, pp. 359-374
- Stanca, A., 2017, *On paper, Romania is at the forefront of EU countries in terms of municipal waste. Recycling pulls us down*, Vocea.biz online magazine, <https://vocea.biz/social/2017/feb/03/pe-hartie-romania-este-in-fruntea-tarilor-ue-la-capitolul-deseuri-municipale-reciclarea-ne-trage-in-jos/>
- Stern, P.C., 2000, *Toward a Coherent Theory of Environmentally Significant Behavior*, Journal of Social Issues, Vol. 56, No. 3, pp 407-424, <https://pdfs.semanticscholar.org/af18/c7127c241cafc187d1ad2521b0ba88a5ef32.pdf>
- Tonglet, M., Phillips, P.S., Read, A.D., 2004, *Using the Theory of Planned Behavior to investigate the determinants of recycling behavior: a case study from Brixworth*, UK, Resources, Conservation and Recycling, No 41, pp. 191-214, <https://www.sciencedirect.com/science/article/pii/S0921344903001629>
- Zaharia, C., 2014, *One liter of waste oil pollutes one million liters of water but is still not perceived as waste in Romania*, Green Report, <https://www.green-report.ro/uleiul-alimentar-uzat-nu-este-perceput-ca-un-deseu-in-romania-inca/>
- * * * - *Big Brands, Big Impact – A Marketer's Guide to Behavior Change*, 2015, site-ul oficial al Business for Social Responsibility, pp. 21, https://www.bsr.org/reports/BSR_SLFG_Marketers_Guide_to_Behavior_Change.pdf
- * * * - *Product reuse and longer lifespans hold untapped potential to cut waste in Europe*, 4 July 2018, European Environment Agency, <https://www.eea.europa.eu/highlights/product-reuse-and-longer-lifespans>
- * * * - *Romania IMPORTS Waste! Half of recycled materials come from abroad*, 19 June 2018, NewsTeam.ro, <https://newsteam.ro/politica/uluitor-romania-importa-deseuri-jumatate-din-materialele-reciclate-vin-din-afara-tarii/19/06/2018/>
- * * * - *ViitorPlus and Kaufland Romania extend the free paper recycling infrastructure to a network of 300 block stores in the Capital*, 2017, the official website of Kaufland Romania, <https://despre.kaufland.ro/presa/comunicate-de-presa/presse-detail.y=2017.m=08.n=extindere-recicleta.html>