

PUBLIC AWARENESS OF CIRCULAR ECONOMY: CASE OF THE SLOVAK REPUBLIC

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Abstract: The paper aimed to identify the awareness and behavior of the population of Slovakia concerning the circular economy. Awareness of the circular economy is a vital factor in effective public participation. The quality of the environment also depends on the level of environmental awareness in society. The circular economy is a very complex issue which requires involvement of all actors in society. The circular economy is currently an actively discussed topic, and therefore we focused on examining the level of awareness of this issue. In general, it is perceived mainly as an economic model that takes the environment into account and prioritizes active waste management. The conducted survey focused on the level of awareness in Slovak respondents. The questionnaire was designed to include all principles of circular economy. We focused on determining the rate of recycling, reusing, reducing, and also the new concept of refusing. Consequently, several hypotheses were analyzed to identify the degree of involvement of the population. At the same time, the survey was intended to introduce the respondents to the idea that they too can participate more actively in the principles of circular economy. In the introduction, we defined the theoretical basis and principles of the circular economy. Subsequently, in the Methodology section, we identified the techniques used to process the questionnaire survey. The Research section describes the outputs and analyzes the established hypotheses. In the discussion, we summarized the results from the Research section and mentioned some of the authors who had handled the same issue in the past. The Conclusion section summarizes the research paper.

Keywords: circular economy; reuse; recycle; reduce; refuse

JEL Classification: Q51; F64; N54

1. Introduction

The introduction of a resource-efficient economy is currently one of the problems that countries focus on most. Each country's economy is acknowledged due to its overall importance, as well as being an integral element in ensuring quality environment and an opportunity to strengthen the competitiveness of businesses, employment, and purchasing power of consumers. In order to assess production and consumption, it is necessary to take into account the depletion of resources and to limit the impact of excessive use of these resources on the environment. Within the European Union, there are many projects that represent plans

to achieve successful transformation of current national economies into more sustainable ones (Sperling, 2017).

Currently, the whole world is trying to fight the spread of COVID-19. The coronavirus claims a huge number of victims every day, and individual countries impose restriction on movement of citizens. However, this huge disaster, which is likely to last for several years, has a positive impact on environmental pollution, as the media around the world pointed out. It is time to realize that the planet can exist without humans, but not vice versa (Ochilova and Dushaev, 2019).

The original idea of circular economy dates back to the 1960s, when the society began to realize the consequences of constant use of the linear model of economy for increasing environmental pollution (Maji et al., 2019). Practical application of the concept to industrial processes and economic systems however did not happen until the late 1970, the year which can be called a turning point, because it was then that circular economy began to attract professional authors, academics, and economic experts. Professional articles and publications on the topic started to be published in larger numbers. Development of the circular economy on the international level came only after 1990, when individual countries began to present their own concepts of this model (Morseletto, 2020).

At present, circular economy is an increasingly popular concept, as a modern way of dealing with exhaustible resources, but also a highly efficient way to use energy and employees in production and its processes. This issue is coming to the fore more and more often and appears as one of the main topics at various environmental conferences. In order for circular economy to be highly effective, it is necessary to ensure sufficient marketing communication for its general popularization. This form of marketing can ultimately benefit all stakeholders, but pre-established rules and obligations must be followed. Ideally, circular economy can use marketing communication to streamline production processes, sales processes and, last but not least, recycling processes, which will result in improved environment (Kouhizadeh et al., 2020; Bag et al., 2020).

1.1 Principles of circular economy

The circular economy has its clearly defined principles, the so-called 3R. It is an abbreviation based on three English words: reduce - reuse - recycle. These principles constitute an economic code of conduct. They are the basis for marketing communication in the circular economy (Chen et al., 2020).

The general growth and gradual acceleration of economy in various sectors, which initially resulted in the industrial revolution, has opened up new possibilities, production methods, and, last but not least, an improvement in living standards in many ways (Dorling, 2020).

However, this economic growth began to place higher and more demanding demands on natural resources, and last but not least, levy a tax on the environment as a whole. Globalization, which has hitherto been perceived as a significant development of human society, has recently begun to be perceived as a problem (Flew, 2020).

The current model of linear economy is no longer able to ensure sustainability. It is not possible for production from primary sources to increase indefinitely. The impact of industrial production on nature, most visible in climate change, is beginning to be seen as a threat to the continued presence of humanity on the planet.

In some parts of the world, it already directly affects the population's lives and brings about negative elements such as climate change, increasing disparities between poor and rich regions, and natural disasters with more serious consequences than has been the case so far. Emerging

issues such as deteriorating air, soil, water quality have a direct impact on declining human well-being.

Human, material, and economic resources are not inexhaustible. Nevertheless, the amount of waste produced is constantly increasing (Prasad, 2017).

As an example, we can mention plastic waste, whereas one-third of the world's volume is not collected or treated in any way. In addition, it has recently become clear that recycling alone cannot be sustainable without socio-economic fluctuations, it is necessary to include up-cycling as part of the circular economy, which means re-use of products at the end of their life, or when they become morally or physically worn out by previous users, which does not exclude their functionality after modification or repair (Zhang et al., 2018).

Reduction represents orientation of the economy towards scientific and technological progress and innovation. Empirical evidence suggests that sustainable innovation is sensitive to changing consumer attitudes. Popp, Hafner and Johnstone (2011) suggest in their study that innovation was mainly due to changes in consumer concerns (Popp et al., 2011). The aim is to make more efficient use of resources and reduce the amount of raw materials used and energy consumption. It is an effort to use modern technologies to the maximum extent possible. It is necessary to identify inputs that can replace material inputs in order to achieve economic, social and ecological harmony of production and the environment for the benefit of humanity. It also represents the preference for production of smaller and lighter products, and for simple and practical packaging over luxury packaging that generates more waste. Businesses that care about the environment should strongly promote the use of alternative, or so-called green energy. Green energy includes solar and wind energy and the use of biological waste. The use of these types of energy significantly reduces environmental pollution (Jena et al., 2017).

Reuse, or the principle of reuse, is a requirement for the production of reusable products and packaging materials. Businesses should focus on products that are durable and reusable, thus extending their life cycle. This is a principle based on having products and packaging include materials of elements which, in a certain way, ensure their repeatability. Through the use of renewable resources, it is possible to reduce production and negative impacts on the environment (Alvarez-Herranz et al., 2017).

Recycle, or the principle of recycling, is based on the fact that these products can be reused at the end of their life. It also emphasizes the need to build and support the development of a recycling industry that returns waste, intermediates, raw materials, and other materials to the production process (Bui et al, 2018). When waste is exported to countries with safe and environmentally responsible recycling capacity, trade in waste can be considered efficient in the same sense as trade in goods (Kellenberg, Levinson, 2014).

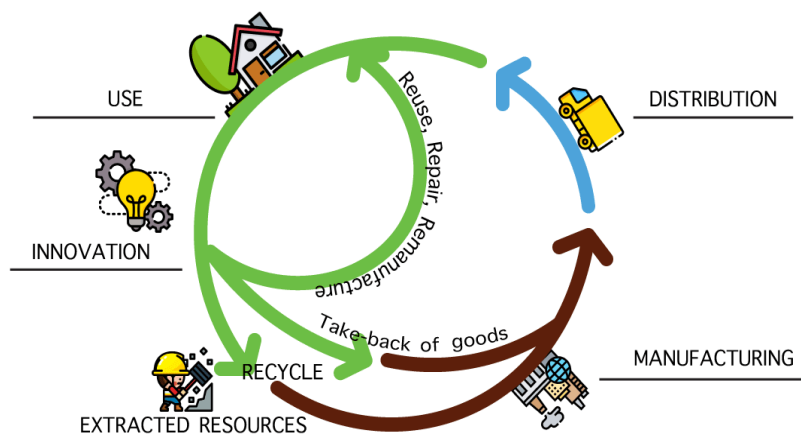
The vital economic priority is to save limited natural resources, streamline high-efficiency, low-resource-producing products, and reach low (or even zero) emissions. According to McKinsey, the circular economy should achieve a minimum net savings of 380 billion USD annually for raw materials within Europe (Korhonen, 2018). In addition, the circular economy is a job holder and supports local economic development. For these reasons, it can be said that take-back of materials and the facilitation of their flows within distribution cycles can be a significant business opportunity.

The circular economy is characterized by a closed-loop flow of material and energy, taking into account natural and human resources, science and technology. The circular economy represents saving and efficient use of limited natural resources, more efficient production of products with high efficiency and low resource consumption, and low (in some cases even zero) emissions (Loucanova, 2017). It involves prevention and reduction of the production of waste

and, subsequently, of sources of pollutants due to recycling, when resources return to the economic cycle, which is of increasingly urgent practical importance (Fig. 1).

Description of Figure 1: Innovation—Research is needed to transform used goods into newly usable ones and to recycle atoms. Extracted resources—Water, energy, and natural resources enter the manufacturing process. Manufacturing—Renewing used products lessens the need to make originals from scratch. Distribution—Ownership transfers from manufacturer to consumer at point of sale. Use—Is controlled by buyer-owner-consumer of goods, or by fleet managers who retain ownership and sell goods as services.

Figure 1: Closing Loop



Source: Adapted from the Knowledge Transfer Network

1.2 Socially responsible business

The concept of corporate social responsibility refers to “Voluntary efforts by companies that go beyond the normal framework of compliance. It is an increasingly intensive involvement of all key partners in the daily activities of companies and institutions. Socially responsible business is an ever-evolving business method that incorporates sustainable development into the company's business model. It has a positive impact on the social, economic and environmental environment” (Abbas, 2020).

With the expansion of the use of corporate social responsibility, it is very important for consumers to be aware of the environmental impact of individual products. Consumers, employees, and stakeholders in today's environmentally and socially aware society are beginning to prefer to buy products from companies that use the principles of socially responsible business. Each company represents a separate economic system that upholds certain values (Park et al., 2017). If a company wants to be socially and environmentally beneficial for society, it should perform the functions of a socially responsible business.

Companies can contribute to improving the environment, in particular by raising the awareness of employees, customers, and suppliers, through simple incentives. These can include installation of recycling bins, provision of suggestions to reduce energy consumption, rewards for using public transport or provision of promotional products (Xing and Starik, 2017).

Companies whose main priorities include environmental protection follow strict environmental rules and standards throughout the product's production and distribution process.

Socially responsible businesses deal not only with the external environment of the company, but focus as well on their own employees.

It is necessary for companies to treat their employees with respect, create a safe working environment for them, and to engage them in partial processes of company management. While achieving profit is a key goal of business, a socially responsible company can also be described as one that supports non-profit organizations or charitable foundations at the expense of its own profit. Companies can offer their products to these entities at lower prices or offer them free of charge. For example, a printing services company will provide a non-profit organization with free printing of leaflets and brochures. Such companies should manage resources and living systems, including employees, to achieve high sustainability (Kumar and Samadder, 2017).

Achieving important environmental goals together with sustainable economic development is a major challenge for society, with economists emphasizing that the long-term environmental impact of economic activity is profoundly affected by the speed and direction of technological change (Bezin, 2019; Popp, 2004; Acemoglu et al., 2012).

1.3 Circular economy in the European Union

Doubts about the future of the modern Western-style economy have been raised in various forms since Malthus. In the aftermath of the oil shocks, these doubts took written form in the first report and one of the most influential publications of the twentieth century, the 1972 Club of Rome-commissioned report entitled *The Limits to Growth*. The French economist Jacques Turgot outlined a linear approach to economy in his work: *A Philosophical Review of the Successive Advances of the Human Mind* published in 1750. He presented a model of linear progress, which found its basis for growth in the first industrial revolution, global expansion, and the success of capitalism (Kirchherr et al., 2018).

During the post-war confrontation of capitalism and socialism, where the main themes were the struggle of the market economy with the centrally planned economy, private ownership with collective ownership, and democracy with authoritarian governance, the issue of the environment did not arise (Silvestri et al., 2020). The environment issue has been circumvented partly because the global economy has long represented only a fraction of the entire ecosystem. Therefore, in a world where humanity occupied only a tiny part, the idea of unlimited production growth seemed possible because it was mainly only theoretical. In the years following World War II, humanity's share of the global ecosystem increased rapidly, and in 2010, total needs exceeded the Earth's regenerative capacity by more than fifty percent. This fact results in a phenomenon where the continuing increase in the extraction of resources from the environment, the increase in products sold by the markets, and at the same time the reduction of waste production become physically impossible (Türkeli et al., 2018).

Due to several different signals coming from the economy related to the rising costs of raw materials or related to environmental protection and waste management, based on suggestions from scientists, NGOs but also citizens, several attempts were made in the second half of the 1970s to improve the relationship between human activities and the environment, or at least mitigate the negative effects on the environment (Eisenriegler, 2020).

Immediately after the oil shocks, energy-saving became a priority, which was reflected in various instances of increased efficiency. More pragmatic approaches began to emerge, focusing on saving energy but at the same time increasing energy efficiency. The theory of sustainable development was first mentioned in 1988 by the Brundtland Commission in its report on the environment and development, *Our Common Future*, for the UN World Commission. According to the report, sustainable development is development that meets the

needs of the present without compromising the ability of future generations to meet their own needs (Eisenriegler, 2020).

Discussions begun on climate change and global demographic change, and concerns were raised about the limited nature of natural resources and the irreversible changes caused by human activity. In a modern economic framework, the rule of the game is based on profit, and therefore success is also measured by its amount. Higher profit means higher sales, and higher sales mean more pieces produced and sold, the question however is whether it is possible to continue like this forever. Many facts point to a negative answer. It has been proven that the planet takes one and a half years to produce and absorb what is used as raw materials and disposed of as waste in one year's time. Due to the process of globalization, which has dramatically increased interconnections and interdependence between all actors in the world economy, individual solutions cannot be found at any level. An example is the European Union which has adopted stricter environmental regulations that have simply forced large companies to move to other parts of the world where there is no such strict environmental protection. Global governance and regulations could provide solutions for this situation, but such solutions are unlikely to be possible shortly (Mhatre, 2020).

The European Union's solution is the circular economy. The gradual raising of awareness of the limits of the linear economy has led to an interest in creating a new model of economic organization that would provide the necessary goods and services to maintain and improve living standards for more and more people without increasing raw material consumption and waste (Eisenriegler, 2020).

1.4 Circular economy in the Slovak Republic

The Slovak Republic took its first official step in introducing the circular economy at the end of 2016, when it hosted an international conference entitled Transition to Green Economy. The event was attended by more than five hundred experts from thirty-two countries. In 2017, Ministry of the Environment of the Slovak Republic organized a follow-up conference under the title Driving towards Circularity, whose main topic was transition to the circular economy in the automotive industry. The next step in Slovakia's of transition to sustainable development was the conference Bratislava Smart Region (Bodova, 2017).

The event aimed to search for specific economic and ecological solutions within the concept of the circular economy. We see the Slovakia's major problem mainly in the observance of the waste management hierarchy. In the neighboring Czech Republic, forty-five percent of municipal waste ends up in landfills, while in Austria the figure is only four percent. Meanwhile, Slovakia's share of landfill waste has climbed to sixty-seven percent. However, a change could be brought soon by the amended legislation on waste disposal fees, which entered into force on 1 January 2019. Another problem is the insufficient number of waste recovery facilities, whereas landfills remain a cheaper, more convenient, and often the only waste management solution (Hanulakova, Dano, 2018).

Slovakia has introduced several programs that should reduce the amount of waste produced. A program focused on waste separation aims to introduce young people to waste-related issues and educate them on proper waste sorting and disposal, with nine hundred and sixty-two classes from all over the country having participated in the program.

From January 2018, a law came into force which mandates charging for plastic bags, intending to reduce production and use of plastic bags in Slovakia. At the same time, sellers are obliged to introduce an ecological alternative to plastic bags. For violating the law, the seller may receive a fine of up to fifty thousand euros. In 2018, Slovakia began subsidizing electric vehicles, whereby Slovak citizens could apply for a subsidy for purchase of electric cars and

plug-in hybrid vehicles in the amount of five thousand euros per person. Eight hundred and thirty-one people applied (Matova et al., 2019).

2. Methodology

The quality of environment also depends on the level of environmental awareness in society. People must be properly informed about current environmental concerns and developments.

With the development and spreading of the internet, it has become easier for people to stay up to date with current news, including with regard to the environment, but there is also a lot of unreliable information, which is sometimes difficult to distinguish from the truth. An example is the endless statements concerning the supposed impending end of the world. Therefore, it is vital to be properly educated on the environment and circular economy.

The research aimed to determine the level of awareness of circular economy in Slovakia's population, and find out whether the basic principles of the circular economy (reduce, recycle, reuse, and refuse) are followed. The principle of refusal is a relatively new principle that is intended to prevent excessive consumer society, while people learn to say no to things that are not necessary. As part of the analysis, a questionnaire survey was compiled. The total number of responses was eight hundred and thirty, and represents a random sample. The sample size was determined using the website www.qualtrics.com where based on the population of 4,000,000, margin error of five percent, and confidence level of ninety-five percent, the ideal value of sample size was set to three hundred and eighty-five. We consider the sample size to be adequate. The following hypotheses were established before sending out of the questionnaire:

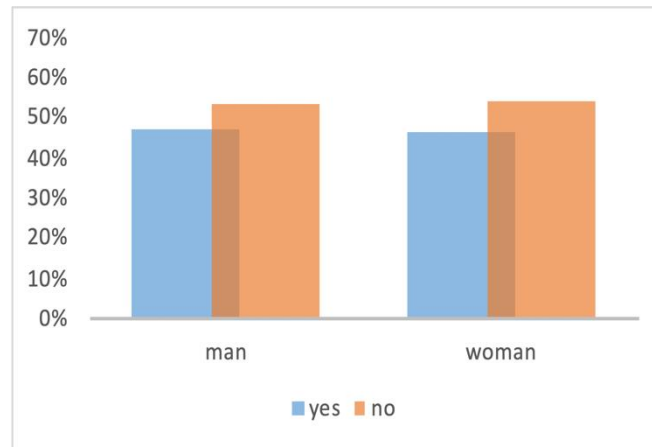
- Hypothesis 1: At least 50% of respondents know the concept of circular economics.
- Hypothesis 2: At least 30% of respondents buy products with lower energy consumption.
- Hypothesis 3: At most 20% of respondents buy only such amount of food as they are able to consume.
- Hypothesis 4: More than 50% of respondents prefer online documentation over printed.
- Hypothesis 5: More than 50% of respondents buy and sell in second hand stores.
- Hypothesis 6: A maximum of 30% of respondents would buy a product made from waste.
- Hypothesis 7: At least 65% of respondents sort plastic waste.
- Hypothesis 8: A maximum of 50% of respondents dispose of electrical waste and other hazardous waste correctly.
- Hypothesis 9: Plastic bags and bags offered by stores are rejected by no more than 50% of respondents.
- Hypothesis 10: In a restaurant, café, or bar, a maximum of 30% of respondents will warn the staff that they are not interested in using a straw.

3. Results

Verifying the first hypothesis (at least 50% of respondents know the concept of circular economy), we came to the following conclusions. From the original eight hundred and thirty answers from the respondents, eight hundred and thirteen could be taken into account, with the remaining answers stating the respondents knew the concept only "partly". Based on the results of the chi-squared test, we decided to exclude these answers, due to their insufficient number, with the result a clear rejection of the null hypothesis (Fig. 2). The results clearly show that

awareness is very low and the issue needs to be communicated much more through various media.

Figure 2: Awareness of the concept of circular economy



Source: Author

For the second hypothesis, we intended to find out whether at least 30% of respondents buy products with lower energy consumption. The hypothesis was not confirmed, as only 28.31% of respondents buy products with lower energy consumption. We were further interested in whether this is affected by gender, formulating the null hypothesis H₀: gender does not affect the rate of purchase of more energy-efficient products. Given the value of asymptotic significance at 0.409 which is more than alpha (0.05), we can state that the value is statistically significant, and we accept the null hypothesis, and therefore that gender does not decide in this case (Tab. 1).

Table 1: Verification of hypothesis: effect of gender on the rate of purchase of more energy-efficient products

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.682 ^a	1	.409		
Continuity Correction ^b	.418	1	.518		
Likelihood Ratio	.675	1	.411		
Fisher's Exact Test				.472	.258
N of Valid Cases	830				

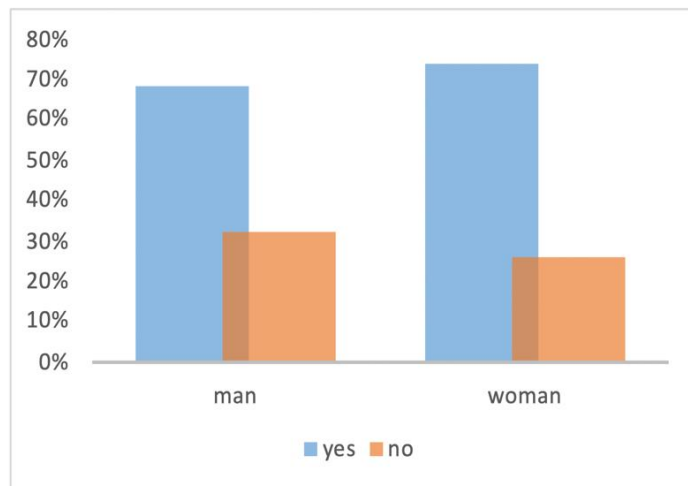
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 16.70.

b. Computed only for a 2x2 table

Source: own processing

The ratio in which respondents are willing to buy less energy-efficient appliances is shown in the graph. Out of the total number of eight hundred and thirty respondents, up to 72% buy energy-efficient appliances. For men, almost 68% take energy security into account when choosing an appliance. For women, the figure is even higher at almost 74%. Of course, this high percentage is also related to EU rules, which seek to give priority to these products and at the same time to inform consumers on the possible consequences and impacts on health (Fig. 3).

Figure 3: Willingness of respondents to buy less energy-efficient appliances

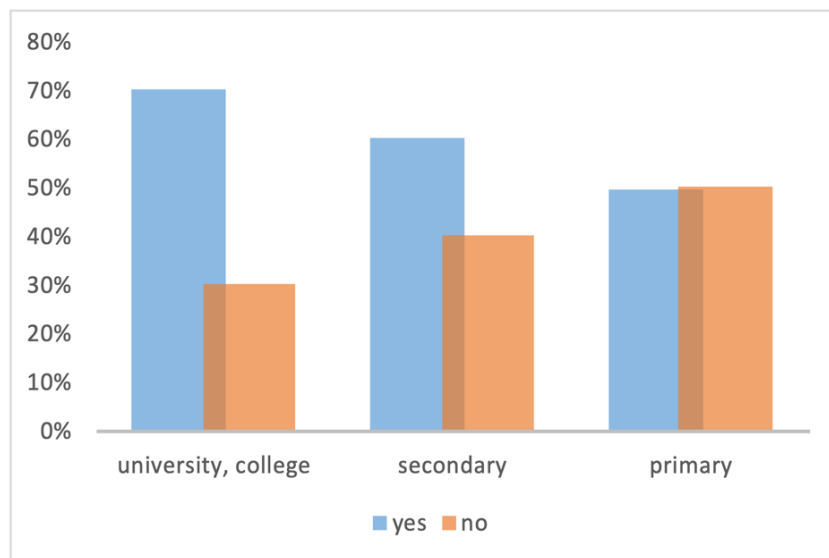


Source: Author

Furthermore, we assume that only 20% of respondents buy only such amount of food as they are able to consume, based on the assumption that almost every household in current consumer environment today throws food away. However, based on the results of the analyses, up to 49.40 % of respondents try to shop in such manner as to throw away food.

The hypothesis of preferring online documentation over print was confirmed, as almost 72.30 % of respondents prefer online documents, but it turned out that this applies more to men than women. We were also interested in the willingness to buy and sell through various portals focused on the sale of second-hand products. We confirmed the hypothesis, as up to 61% of respondents sell and buy using second-hand stores. We also investigated whether this propensity is related to individuals' education levels.

Figure 4: Impact of education on willingness to buy and sell in second-hand stores



Source: Author

In the null hypothesis, we proposed that education level does not affect such buying and selling. Up to 70% of university-educated respondents are willing to buy or sell goods second-hand. For secondary school graduates, the willingness figure is 60%, and, finally, for

respondents with basic education, it is only 50% (Fig. 4). We can assume that respondents with basic education do not have the sufficient computer skills. The significance rate is at the level of 0.205 and therefore we accept the null hypothesis (Tab. 2).

Table 2: Verification of hypothesis: effect of education buying and selling through the bazaar

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.169 ^a	2	.205
Likelihood Ratio	3.194	2	.203
N of Valid Cases	830		

a. 0 cells (0.0 %) have expected count less than 5. The minimum expected count is 14.31.

Source: own processing

In the sixth hypothesis, we focused on the consumers' willingness to buy products made from waste. The analysis showed that up to 59.04 % of respondents would buy such a product. While waste sorting is currently taken for granted, we also decided to ask respondents about their willingness to sort specifically plastic waste (PET bottles, packaging). Of the respondents, 60.24 % do sort plastic waste. At the same time, we decided to analyze whether the level of education affects this sorting. We assumed that education should not affect sorting of plastics. The null hypothesis was H0: the level of education does not affect sorting of plastic waste, and, alternatively, H1: the level of education does not affect sorting of plastic waste and alternatives.

Table 3: Verification of hypothesis: effect of education to the plastics sorting

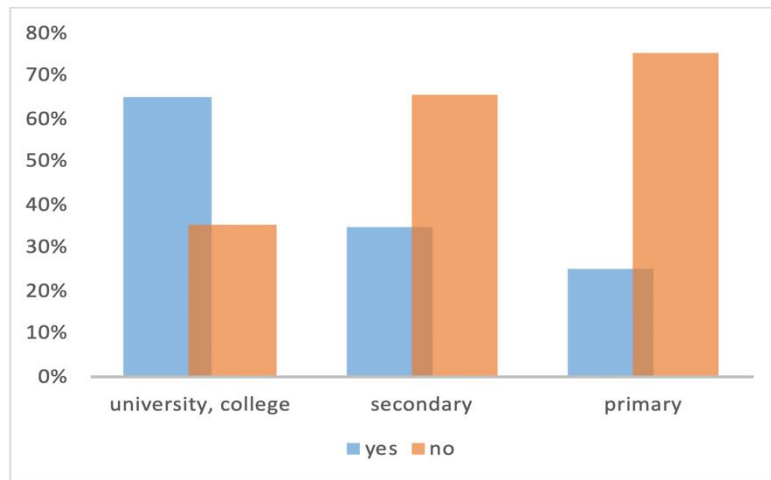
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	14.975 ^a	2	.001
Likelihood Ratio	14.919	2	.001
N of Valid Cases	830		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 14.31.

Source: own processing

The asymptotic significance value is 0.001, lower than 0.05, and we therefore reject the null hypothesis and accept the alternative (Tab. 3). The difference is also shown in Figure 5. Of the respondents with a university degree, 65% are sorting plastic waste. In the case of respondents with secondary and primary education, it is less than 50%, specifically, 34% of respondents with secondary education and 25% with primary education sort plastic waste (Fig. 5).

Figure 5: Relation of education to sorting of plastic waste

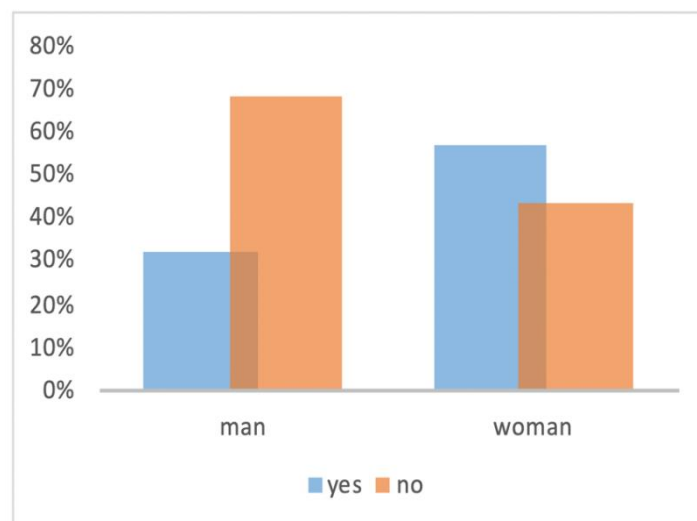


Source: Author

The eighth hypothesis concerned the sorting of electrical waste. We assumed that a maximum of 50% of respondents sorts electrical waste. However, based on our analysis, the actual figure was 50.6 %, i.e., more than we expected. In addition, electrical waste is sorted more by men than women. Specifically, up to 54.24 % of the interviewed men and 48.6 % of women sort this type of waste.

At present, stores often offer plastic bags for purchase at negligible prices. We focused on whether the respondents are willing to bring their own bags when shopping, and whether they reject the option of plastic bags at checkout. We assumed that roughly every second customer would reject the bag. The analysis showed that 48.19 % would not reject the bag when paying at the cash desk.

Figure 6: Relation of gender to the bag refusal in supermarkets



Source: Author

In addition, we set a sub hypothesis, as assumed that women tend to bring fabric bags with them in their handbags; the null hypothesis being H₀: women refuse plastic bags at checkout more often than men. The alternative hypothesis H₁: women do not refuse plastic bags more often than men at checkout. According to the graphic representation, it is obvious that men are more likely not to refuse a plastic bag at the cash register (Fig. 6). Specifically, up to 57% of

women reject such bags in stores, while for men the figure is only 32%. Based on the chi-squared test (specifically Pearson's chi-squared test), the asymptotic significance is higher than alpha (0.05) and therefore we accept the null hypothesis and confirm the statement that women refuse plastic bags at checkout more often than men .

Table 4: Verification of hypothesis: gender relationship and the redundant purchase of bags in the store

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9.373 ^a	1	.062		
Continuity Correction ^b	8.406	1	.064		
Likelihood Ratio	9.534	1	.062		
Fisher's Exact Test				.053	.042
N of Valid Cases	830				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 28.43.

b. Computed only for a 2x2 table

Source: own processing

We also investigated the behavior of respondents when consuming drinks through straws. We focused on whether the respondents demanded a straw or rejected it immediately. Currently adopted regulations restrict the production and sale of plastic straws and other plastic products related to consumption (plastic cups, cutlery, plates). The food and drink industry reacted quickly and replaced plastic straws with paper alternatives. Overall, only 15.67% of respondents would warn the staff not to put a straw in their drink, while others actively ask for a straw.

4. Discussion

Awareness of the circular economy is a vital factor in effective public participation. Projects and activities or policies implemented by local or central governments often affect the natural environment and the quality of life of people. This research paper aimed to find out the awareness of the circular economy in Slovakia and to provide an overview of the population's approach to the environment. We initially prepared ten hypotheses to test. The output of the verification is in the table below (Tab. 5).

Table 5: Summary of accepted and rejected hypothesis

Hypothesis:	accepted/rejected
Hypothesis 1: At least 50% of respondents know the concept of circular economics	rejected
Hypothesis 2: At least 30% of respondents buy a product with lower energy consumption	rejected
Hypothesis3: Up to 20 % of respondents buy only as much food as they manage to consume	rejected
Hypothesis 4: More than 50% of respondents prefer online documentation overprinted	accepted
Hypothesis 5: More than 50% of respondents buy and sell in bazaars	accepted
Hypothesis 6: A maximum of 30% of respondents would buy a product made from waste.	rejected
Hypothesis 7: At least 60% of respondents classify plastics.	accepted
Hypothesis 8: A maximum of 50% of respondents dispose of electrical waste and other hazardous waste correctly.	rejected
Hypothesis 9: Bags and bags offered in the store will reject a maximum of 50 % of respondents.	rejected
Hypothesis 10: In a restaurant, café, or bar, a maximum of 30% of respondents will warn the staff that they are not interested in a straw	accepted

Source: Own processing

At present, public participation is mandatory in most countries of the world. Citizens have the right to information about the environment and the circular economy, and nation states inform anyone who may be significantly affected by any planned actions.

Environmental education is being transformed into education about sustainable and ethical development, both locally and globally. It is environmental education that prepares the next generation to design appropriate problem-solving strategies. Environmental knowledge is not the end, but rather the beginning. Knowledge of the environment contributes to changing attitudes and behavior.

5. Conclusion

Water, soil, and air are interconnected. If the condition of one of these elements of environment is poor, it will also affect the quality of the others. Therefore, it is very important to improve the quality of the environment; something what we have to fight for, and which we are aware is not easy to achieve at the moment.

In today's world where the environment is constantly polluted, people need to minimize these negative effects. More and more international companies focus on preserving the environment. Not only is this necessary for people's lives, it also improves their public image. We need the idea to spread more among enterprises so that they change their operation and move towards environmental protection.

On this note, the papers aimed to investigate the awareness of the circular economy in Slovakia. The questionnaire was designed to include all the principles of the circular economy. We focused on determining the rate of recycling, reusing, reducing, and also the new concept of refusing. Based on the results, we can conclude that in terms of environmental awareness, there is much to learn from the neighboring countries. It is essential to build awareness and teach the importance of caring for environment in schools.

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