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The Promotion of the Zero-Waste Concept by Influencers in Social Media

Abstract

Objectives: The aim of the conducted research was to examine the level of knowledge of the idea of zero waste as well as to correlate it with the use of social media and influencers' followings.

Research Design & Methods: The research methods used in the study are as follows: descriptive research, Internet research, observation, and graphical presentation of data.

Findings: Those respondents who see that influencers promote the zero-waste concept have significantly higher index of the time spent in social media. Education level of the survey participants does not translate into the level of knowledge about the zero-waste concept.

Implications / Recommendations: The analysis shows that values of the promotion of the zero-waste concept are important in caring about the natural environment. Influencers can effectively promote the zero-waste concept via social media.

Contribution / Value Added: The author tries to show the purpose of the promotion of the said concept by using influencers in social media. The topic of environmental care is extremely important, especially in this day and age, when the climate crisis is progressing. Influencers who impact their customers can contribute to the spread of the zero-waste concept, which fits into an alternative economic model – namely circular economy – in place of a linear model.

Article classification: research article

Keywords: climate crisis, influencer marketing, Anthropocene, Zero Waste, circular economy social media, consumer behaviour

JEL classification: M31, Q51, Q54

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Introduction

In the era of the development of the Internet and social media, consumers' awareness regarding the use of plastic is gradually increasing. The perception of individual products or services that are not only supposed to satisfy consumer needs, but also to be environmentally-friendly, is constantly changing. The idea of zero waste is a concept which promotes lifestyle according to which a human being tries to produce as little waste as possible and not to pollute the environment. For example, consumers extensively promote buying coffee to go in their own reusable cups, packing sausage in their own food containers instead of a plastic bag offered by a supermarket, using their own cotton bags to pack bread or vegetables in a shop, etc. Consumers are becoming increasingly aware of the environmental impact of food packaging or elements such as plastic straws for drinks or unnecessary plastic films on perfume boxes. The concept of zero waste is not difficult to understand; it merely requires a change in habits to make our planet less polluted. The goal of the zero-waste concept has ethical, economic, and visionary dimensions as well as it aims to help people understand that all discarded materials are to become resources again.

Literature review

Making purchases in an environmentally-friendly way requires going beyond the needs of the company and considering the effects of each purchase in the long run. When looking at the zero-waste concept and the 5R principle, both the state – when it makes public statements – and the consumer – who makes daily decisions as to shopping – should ask themselves whether a given product is needed at all.

The aim of the zero-waste concept is to care for – and protect – the environment. Taking care of the environment is a utilitarian goal of any country. The circular economy model and the zero-waste concept – which itself is

part of the circular economy model due to its specificity and nature – aims to improve the quality of society, but also of future generations. Public procurement is the main driver of the transition to a circular economy. The European Union Circular Economy Plan includes actions to maintain resources in the economy as well as their value, contributing to a sustainable, lowcarbon, resource-efficient, and competitive economy. In order to achieve these objectives, social media influencers can be useful, which is also confirmed by the results of the study presented later in the article. For example, purchasing products with lower utility and energy or water consumption can help significantly reduce utility bills, while governments implementing green public procurement will be better placed to meet changing environmental challenges. The idea of zero waste is intended to motivate not only consumers or residents of the countries concerned, but, above all, the authorities of the countries so that they can set targets for reducing CO2 emissions, increasing energy efficiency, etc.

Green public procurement is the process by which public bodies seek to obtain goods, services, and works, whose environmental impact during their life cycle is lower than that of other goods, services, and works of the same character, which would have been ordered otherwise (Budzyński, 2020, pp. 37–38). Green public procurement can provide public authorities with financial savings, taking into account the cost of the products or services procured throughout their life cycle and not just through the prism of the purchase price (definition by the European Commission)¹.

Many authors around the world are conducting research on the introduction of the zero-waste concept, but research into the promotion of zero waste by influencers is rather uncommon compared to other aspects, such as the introduction of zero-waste activities into entire cities. Cole et al. (2014)

¹ See: https://www.uzp.gov.pl/baza-wiedzy/zrow-nowazone-zamowienia-publiczne/zielone-zamowienia (accessed: 22.11.2020).

conducted a case study on the development of a zero-waste strategy for the Charnwood Borough Council (a local authority in England), which established a household waste management system. The waste management system fits not only into the concept of zero waste, but also into the circular economy model. The project was subject to a broader public consultation, highlighting areas for review. The zero-waste system took into account local issues as well as national strategies and legislation (Cole et al., 2014, pp. 1-12.) On the other hand, a study by Săplăcan and Márton (2019) aimed at examining and outlining the behavioural dimensions of zerowaste lifestyles at the consumer level, a well as identifying the motivation of a given behaviour. According to the authors, waste reduction is considered by consumers to be the main dimension of lifestyle according to the concept of zero waste. Using one's own textile bags for confectionery or vegetables, one's own water bottle and food box, or refusing to use plastic straws and other disposable items for daily consumption could be managed independently of the surroundings, i.e. at the household level of each consumer. These individually executed efforts are seen by the authors' respondents as the main elements of the lifestyle in accordance with the idea of zero waste (Săplăcan & Márton, 2019, pp. 9–25, 58–60).

In contrast, other authors have conducted a study to explore how resource strategies to reduce waste and increase recycling affect people's exposure to hazardous chemicals when recycling materials. In order to investigate the flow of hazardous chemicals in recycled material, a mass flow analysis of plastics and paper was carried out at the European level. The results for 2012 show that 26% of plastic waste and 60% of paper consumed in Europe were recycled. This corresponds to the finding about 4% and 18% of annual demand in Europe, as the raw material re-enters the product cycle of recycled plastics and paper (Lee, Pedersen, & Thomsen, 2014, pp. 312–332).

To sum up the review of some studies into the subject, the field of zero waste is wide, but it has many research gaps that are worth investigating, as there is only one Planet Earth and it should be taken care of. Living in line with the idea of zero waste allows consumers to be more aware and spread the concept on a larger scale. Many consumers are not yet aware of the negative effects of reckless purchasing decisions. The limitation lies in the lack of knowledge of the concept, which is why the use of influencers for its promotion can be a very positive step. Social media continue to grow stronger and it is worth using their potential.

How influencers build consumer awareness

Climate change is a controversial topic, but environmental protection is not controversial at all. People are increasingly aware of the fact that oceans and forests are getting more and more polluted. That is why humanity finally decided to take action to protect the environment and produce less pollution. We do not need to be like Greta Thunberg, it is enough to modify our daily habits. Social media such as Facebook or Instagram are an inherent part of our life, hence the enormous popularity of influencers who promote zero waste. Man-made degradation of the natural environment and the resultant disturbing news make us anxious. Media informs us about global warming, pollution of rivers and oceans, smog, droughts and floods caused by human activity. However, we can follow zero-waste rules every day to make the Earth a clean and safe place again. Our environmentally-friendly behaviour will help to protect the natural environment. Posts published by social media influencers can help us to be more zero waste.

In influencer marketing, digital opinion leaders such as bloggers, vloggers, owners of popular social media profiles, and also experts, use their images in social media. Media constitute a channel to communicate with their audiences (Sammis, Lincoln, & Pomponi, 2015, pp. 16–19). Social media influencers who interact with their audience are treated as ordinary and impartial people who

present expertise in social media (Bareman, 2015, pp. 1–3).

Internet users treat influencers as friends and trust information published in social media by them. That is why influencers who promote zero waste may encourage consumers to be more eco-friendly, e.g. to reduce the amount of plastic in packaging, use reusable shopping bags, or stop packing a single lemon in a plastic bag (Futrell, 2004, pp. 147–149). Social media influencers who promote zero waste may persuade consumers in the same way as brands do. An influencer is perceived as an impartial person who is seeking to maximise profit. But in the case of zero waste, it is about maximising the welfare of the planet and not maximising corporate profits (Kiss & Bichler, 2008, pp. 233–240).

Consumers have more trust in recommendations from other people (even if they do not know them) than in brand communication in social media. When someone popular promotes a product, a brand becomes more reliable and its value is increasing. Such a type of communication enjoys a 'halo effect', i.e. a psychological tendency for unaware (automatic) attribution of consistent and positive features on first impression to an object or other accompanying objects (Talamas, Mavor, & Perrett, 2016, pp. 165–167).

When it comes to marketing communication, social media are a place which connects directly and meaningfully market participants who wish to interact voluntarily with an influencer. That is why following profiles of influencers who promote use of shampoo bars packed in cardboard boxes instead of shampoos in plastic bottles contributes to building awareness about a specific brand product. At the same time, it is an advertisement of a product which is less harmful for the natural environment. Social media constitute a communication channel which helps to keep steady relations and facilitate two-way communication with consumers at a relatively low cost. Another important characteristic of social media is their global extent (Szpura, 2019, pp. 197-199).

Zero waste as a concept supporting the circular economy model

Circular economy is a modern concept of an economic system that involves less resource consumption and less waste. Circular economy is also intended to reduce emission and energy loss in a closed-loop system, where waste from one process is used in other process, not necessarily in the same industry (Linder & Williander, 2015, pp. 183–189).

In 2012, the Ellen MacArthur Foundation developed an idea which is currently treated as a basis for many definitions of circular economy. Reports created by the Ellen MacArthur Foundation describe the circular economy as a production (industrial) system that is aimed to use more renewable energy, eliminate use of toxic chemicals (reusing such substances is more difficult) and, more importantly, give back resources to the biosphere. Circular economy seeks to eliminate waste by well-thought-out design of products, systems, and business models. Circular economy model places emphasis on the modernisation and use of products, components and materials, as well repairing, refurbishment, and recycling. Circular economy uses natural resources such as solar and wind energy, biomass energy from waste collected within a whole value chain and a life cycle described as 'cradle to cradle'. It is a zero waste approach to product design (Braungart & McDonough, 2019, pp. 15–20; MacArthur, 2015, pp. 2–5). This holistic design approach is intended to manufacture products, which would not harm the ecosystem and quite the opposite – they would support the natural environment. The Ellen MacArthur Foundation has developed a set of six action areas for business, which emphasise advantages of circular economy, i.e. so called "RESOLVE" (MacArthur, 2015, pp. 2-5):

- **RE**generate
- Share
- Optimise,
- Loop,
- Virtualise,
- Exchange,

Those action areas facilitate the utilisation of physical resources and also extend a product's life cycle, render the use of renewable resources instead of non-renewable resources, and improve the effectiveness of resource exploitation. All these action areas both accelerate as well as reinforce operations of the remaining elements of the circular economy.

Circular economy is promoted by the European Commission and many enterprises and business environments all over the world. Currently, business models are linear – they are based on continuous growth and involve the consumption of more and more natural resources as well as the production of a considerable amount of waste (Zielińska, 2019, pp. 339-341). The linear model is not sustainable and does significant harm to the natural environment. A final stage of the linear business model entails the accumulation of waste on dumping grounds and leads to a loss of energy contained in the product. Burning or recycling unusable goods reduces energy use, but reusing products helps to save energy (Nowaczek, Kulczycka, Smol, Avdiushchenko, & Hausner, 2017, pp. 19–27).

The origin and definition of the zero-waste concept

The term 'zero waste' was used for the first time by Dr Paul Palmer in the 1970s². Dr Palmer is a founder of the Zero Waste Systems Inc. in Oakland, California. The company recycles chemical resources utilised in electronic equipment. Since that time, the zero-waste movement has been slowly growing – it is focused on environmental issues and a conscious approach to waste in the economy, i.e. circular economy. Dr Palmer established the Zero Waste Institute to promote reusable product design. The zero-waste movement gained more publicity in the period of 1988–2002. Dr Daniel Knapp, the representative of the Urban Ore from Berkeley, California,

held a series of meetings with governments, entrepreneurs, and residents of big cities during his journey throughout Australia (Węgrowska, 2017, pp. 10–13). He talked about ways to maximise the recovery of materials and minimise waste from recycling and composting. In 2003 in Beaumarisna (Wales), during an international meeting, the Zero Waste International Alliance's Charter Principles were discussed and developed (Silva, Rosano, Stocker, & Gorissen, 2017, pp. 547–549).

The Zero Waste International Alliance, which is an international organisation, was established to promote positive alternatives for storing and burning waste as well as to increase social awareness about the social and economic benefits of circular economy. This approach treats waste as a resource base which supports employment and business opportunities (Song & Zeng, 2015, pp. 199–202). Living a zero-waste life involves simple technologies and methods that exist in every population all over the world. The Zero Waste International Alliance connects interested business environments with leaders in the zero-waste movement, who can provide communities with models, designs, human capital, and means to facilitate the development of zero-waste companies. Zero-waste product design and packing entails manufacturing that allows products to be repaired, restored, processed, and reused in other related industries (Zaman & Lehman, 2011, pp. 177–179).

Zero waste is not limited only to rational waste management, but it also recommends recycling optimisation. It aims to create and use new innovative methods to minimise waste. Zero waste motivates consumers to care for the environment more, not only through recovery and recycling processes. Recycling involves using waste as a secondary raw material in industrial processes. However, recycling concentrates directly on the waste problem and not on the source of the problem. The zero-waste approach aims for the smart redesign of industrial and trade practices to eliminate as much waste as possible (Zaman & Lehmann, 2011, pp. 177–187).

² See https://zerowasterepublic.com/the-zero-waste-movement/.

The 5R concept – Bea Johnson

Bea Johnson reduces waste on a daily basis of her family life. Currently, annual waste produced by her four-member family can fit into 1 litre jar. Her blog and book titled Zero Waste Home became very popular; the book was translated into 12 languages. When it achieved bestseller status, Johnson became a prime mover of the global zerowaste movement; she also received the 'Green Award'. Johnson uses her icon status to promote zero waste. Owing to growing media attention, she has been invited to universities, company events, conferences, and fairs. She has been present in media all over the world - from New York Times to BBC. Johnson became a global promoter of zerowaste life. She has about thousand followers on Instagram, 152 thousand fans on her fan page on Facebook, and 45 thousand subscribers on Youtube.

Zero production of waste means that in practice we need to follow several rules known as the 5R concept:

- Refuse say no to shopping which does not suit your needs, e.g. when you are tempted by sales promotion. Consumers often decide to buy a product they do not need. Refusing means saying no to disposable packaging and products, whose production is harmful to the environment and which generate waste and pollution, e.g. plastic straws, plates, cutlery;
- Reduce reduce your shopping to the minimum.
 Buy only essential goods and follow the principles of minimalism;
- Reuse give a second life to an empty jam jar and fill it with your own home-made jam, and use glass coffee jars to store rice, groats, or cereal. Waste can often be reused;
- Recycle make sure that items you do not need are recycled and reused. Sort waste properly (paper can be reused up to 6 times) and take it to waste collection points. Recycle whatever you can, even household items (you can make a shopping bag from an old bed sheet);
- Rot compost organic waste, use it to produce energy or a natural fertiliser.

- Other actions could be added:
- Repair mend your clothes on your own (e.g. those that are seemingly not suitable for wearing), go to a shoemaker to mend your shoes instead of buying a new pair, weld a broken bicycle frame, solder a broken cable;
- Remember you have a choice what to buy.

Material and methods

For the purpose of this article, a survey was carried out to examine knowledge of the 'zero waste' term as well as to associate it with social media use and following influencers. It was an exploratory study, because it is the author's first study on the relation between social media influencer marketing and zero waste knowledge. 251 respondents took part in the survey, out of which 247 included complete answers. The main objective of the study was exploration. The selection of the sample was the snowball method. The first stage of the study was to measure the questionnaire. The trial was made up of self-selected volunteers.

The purpose of the survey was to research how knowledge of the zero-waste concept correlates with social media use, time spent in social media, the respondents' education, and promotion of zero waste by influencers.

The questionnaires were distributed to respondents electronically; anonymity was ensured. The respondents answered questions with different types of scales. The survey was carried out from 19 to 25 September, 2019.

Most of the respondents were women (68%). The respondents were predominantly young people aged 15–24 (36%) and 25–34 (53%). This could be attributed to the fact that it is mostly people from these age groups who have come across terms such as 'marketing influencer', 'social media', and 'zero waste'. These groups also have more leisure time, which allows them to take part in the survey. The respondents are generally people with secondary education (68%) and higher education (32%). The respondents are residents of towns with a population

of more than 100 thousand (53.5%), country (20%), and small towns (22%). Income of the respondents is proportionally diversified, although almost half of the respondents earn a monthly salary of no less than 2,500 PLN per person in an individual household. Most of the respondents earn income of more than 3,000 PLN (31%), while 11% earn a living of 2,001–2,500 PLN. The respondents are formally educated, which can explain the level of income.

Results and discussion

Descriptive analysis of variables

The analysis takes into account responses of 247 respondents. It starts with testing normality of the distribution of the analysed indices. The survey was analysed with the SPSS – a statistical analysis software.

The Kolmogorov–Smirnov test showed that the distribution of the 'social media use' and 'time spent in social media' indices does not differ from normal distribution substantially. That is why in further analysis I decided to use the non-parametric Mann Whitney U test instead of the parametric t-student test for independent groups in order to compare two groups regarding the indices.

When it comes to the index of social media use, the respondents obtained results from 1 to 6. The average of the index was 3.06. Half of the respondents achieved higher results, while half – lower than 3. Standard deviation indicates a moderate the differentiation of index results in the analysed group.

For the index of time spent in social media, the respondents' results were from 1 to 6. The average of the index was 3.73. Half of the respondents obtained results higher than 3.86, while the other half had lower results. The standard deviation shows a moderate differentiation of the index in the analysed group.

The following Tables and Figures present distributions of the results of the analysed indices in a graphic form.

As many as 2 out of 3 respondents (67.2%) have higher education, whereas 28.3% have secondary education. Far less respondents have vocational education (2.8%) or primary education (1.6%). Since only a small number of the respondents have primary or vocational education, they were put in one category, namely 'primary and vocational education' in order for me to examine the correlation between the level of education and knowledge of the zero-waste concept.

The vast majority of the respondents (70.4%) have heard about the zero-waste concept. The

Table 1. Normality tests of the analysed indices

Indian		Kolmogorov-Smirn	iov
Indices	K-S	N	p
Use of social media	0.266	247	< 0.001***
Time spent in social media	0.188	247	< 0.001***

Source: own elaboration.

Table 2. Descriptive statistics of the analysed indices

Indices	N	Min	Max	M	Me	SD
Use of social media	247	1	6	3.06	3.00	1.09
Time spent in social media	247	1	6	3.73	3.86	0.87

Source: own elaboration.

remaining 29.6% of the respondents have not heard about this concept.

Less than half of the respondents (42.9%) recognises promotion of the zero-waste concept by influencers. The remaining respondents (57.1%) do not notice that influencers promote the zero-waste concept.

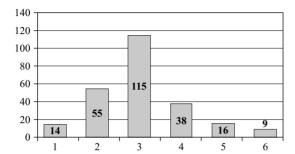


Figure 1. Histogram of the distribution of the 'use of social media' index

Source: own elaboration.

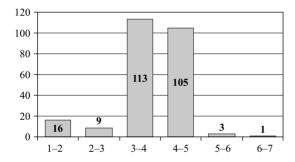


Figure 2. Histogram of the distribution of the 'time spent in social media' index

Source: own elaboration.

Table 3. Education of the respondents

Education	N	%
Primary education	4	1.6
Vocational education	7	2.8
Secondary education	70	28.3
Higher education	166	67.2
Total	247	100.0

Source: own elaboration.

Dependency analysis

In order to verify whether social media use and the time spent in social media correlate with the perception that influencers promote zero waste, people who have heard about zero waste were compared (with regard to the 'social media use' and 'time spent in social media' indices) with those who have not heard about this. Another comparison was between those respondents who had noticed that zero waste was promoted in social media with those who had not.

The Mann-Whitney U Test showed that people who have heard about zero waste differ significantly from those who have not heard about it with regard to both the index of social media use and the index of time spent in social media. It turns out that the respondents who have heard about zero waste are characterised by a significantly higher index of social media use and, at the same time, by a substantially lower index of time spent in social media than people who have not heard about the zero-waste concept.

Table 4. Comparison of people who have heard about the zero-waste concept with those who have not heard about the concept with regard to the use of social media and the time spent in social media

Indices	Н	Have you heard about the zero-waste concept?						
		Yes			No			
	M	Me	SD	M	Me	SD	Z	р
Use of social media	3.17	3.00	1.10	2.79	3.00	1.04	-2.233	0.026*
Time spent in social media	3.69	3.86	0.82	3.84	4.00	0.98	-2.275	0.023*

Source: own elaboration.

Table 5. Comparison of people who notice that influencers promote the zero-waste concept with those who do not recognise this with regard to the use of social media and the time spent in social media

Indices	Do you	Do you notice that influencers promote the zero-waste concept?						Mann–Whitney U Test		
		Yes No								
	M	Me	SD	M	Me	SD	Z	р		
Use of social media	3.19	3.00	1.05	2.97	3.00	1.10	-1.528	0.126		
Time spent in social media	3.70	3.79	0.69	3.78	4.00	0.94	-2.087	0.037*		

Source: own elaboration

The Mann-Whitney U Test showed that persons who had noticed that influencers promote zero waste differ substantially from those who did not observe that, also when it comes to the index of time spent in social media. It turns out that the respondents who did not recognise that influencers promote zero waste are characterised by a significantly higher index of the time spent in social media in contrast to those who did notice that influencers promote zero waste. In the case of the index of social media use, there was not a statistically significant difference between the groups.

The Chi-2 test did not show any significant correlation between education and the knowledge of the zero-waste concept. It turns out that similar numbers of people with secondary education (72.9%), higher education (69.9%), and primary/vocational education (63.6%) heard about zero waste.

Summing up the results

Consumers make purchasing decisions by taking into account opinions of other people, even if they do not know them. Zero waste may be promoted in an original and unobtrusive way. Social media influencers are able to reach wide audiences. Showing zero waste and eco-friendly practices allows influencers to create relations via social media.

Social media provide a communication channel which helps people to promote eco-friendly practices, which was confirmed in the research. The respondents came across this term mostly online. The specific nature of social media – i.e. posting pictures with comments, videos, and live streaming – helps to promote zero waste. Influencers use social media to promote this concept among people who are interested in zero waste. They use e.g. hashtags to spread their ideas.

Table 6. Correlation between education and knowledge of the zero-waste concept

	Have you heard about the zero-waste concept?		Education						total		
			primary secondary /vocational		ondary	higher					
	N	%	N	%	N	%	N	%			
Yes		7	63.6	51	72.9	116	69.9	174	70.4		
No		4	36.4	19	27.1	50	30.1	73	29.6		
Total		11	100.0	70	100.0	166	100.0	247	100.0		
		Test Chi-2	2: Chi-2=0.4	466, p=0.	.792						

Source own elaboration.

The vast majority of the respondents have heard about zero waste. Less than half of the respondents notice that influencers promote zero waste in social media. People who have heard about zero waste differ significantly from those who have not heard about this when it comes to the index of time spent in social media. The index was significantly lower than in the case of people who do not use social media. The respondents who recognise that influencers promote zero waste have a significantly higher index of the time spent in social media. The education level of survey participants does not translate into the level of knowledge about zero waste.

The survey also proved that followers watch influencers voluntarily and this is why they decide to take up a challenge and live a zero-waste lifestyle, or just simply follow influencers and their zerowaste practices. Zero-waste influencers use simple everyday life examples and this can make people eager to follow their steps. The use of social media makes influencers more authentic. The specific nature of social media allows influencers to post photos and videos, live streaming, InstaStories (videos available to the followers for 24 hours) in order to regularly show their activities. To promote zero-waste lifestyle, influencers share their shopping with reduced plastic content or plastic-free, present ideas of how to avoid throwing away food, or show methods of making cleaning supplies using e.g. baking soda.

Concluding remarks

The world suffers from an ecological, economical, and health crisis. Natural resources are depleting, the economy is unstable, and living standards in many places all over the world are record low. Although there are less and less natural resources, consumers still buy petroleum products. Local economies are waning and consumers choose branded foreign products. Consumers are accustomed to comfortable shopping; however, their comfort is not good for the Planet. Consumer choices have a direct impact

on the natural environment, economy, and people's health. Many feel the need to live an eco-friendly lifestyle and would like to learn what more they can do for the natural environment apart from recycling. This is why social media influencers have a chance to contribute to spreading ecofriendly practices and show that it is not difficult to adopt them; it is just a matter of modifying habits. Circular economy is a challenge for the whole humanity; it requires changing habits and thinking about natural resources. Making purchases in an environmentally-friendly way requires going beyond corporate needs and considering the long-term effects of each purchase. When looking at the zero-waste concept and the 5R principle, both the state - when it makes public statements - and the consumer, who makes daily purchasing decisions, should ask themselves whether the purchase of a given good is needed at all. However, implementing a zero-waste lifestyle is not as difficult as the transformation of the economy model is. Zero waste involves the reduction of waste at many stages - from shopping, through usage (i.e. an adequate storage of food so that it can be eaten before it goes off), the maintenance of equipment so that it can be used longer, to the management of leftovers (composting kitchen waste and reusing and repurposing objects to give them a second life). It is enough when consumers start making little steps every day. However, circular economy sets goals such as production of goods which can be easily reused, disassembled and reassembled, or recycled. The zero-waste concept and its application can support the implementation of the circular economy model if instead of using raw materials more consumers start to reuse materials that are recyclable.

In the described study, I wanted to explore this topic in depth. In my previous paper (Buczyńska-Pizoń, 2021), I researched influencers themselves; now I want to focus on those who are engaged in promoting topics as important as taking care of the environment. I believe that influencers who promote zero waste are one of such groups. I am convinced that this subject is worth a more

extensive exploration. The field of zero waste is very wide, but it has many research gaps that need to be filled; the Planet Earth is one and it should be taken care of. Living in line with the idea of zero waste allows consumers to be made aware. The concept of zero waste should be spread on a larger scale; many consumers are not yet aware of the negative effects of reckless purchasing decisions. The limitation, however, lies in the general lack of knowledge of this concept, which is why the use of influencers for its promotion can be a positive step. Social media continue to grow stronger and their potential should be used. In my next studies, I want to research the popularity of individual influencers and their recognition among respondents, as well as investigate consumers' actual zero-waste practices.

References

- Buczyńska-Pizoń, N. (2021). Nowe trendy społeczno-ekonomiczne a rozwój przedsiębiorstwa. In P. Antonowicz, A. Malinowska, J. Siciński, & U. Zaremba (Eds.), Przedsiębiorstwo w obliczu zmian społecznych, gospodarczych i technologicznych (pp. 125–138). Oficyna Wydawnicza Aspra.
- Budzyński, T. M. (2020). Environmental Aspects in Polish Public Procurement System. In K. Daszyńska-Żygadło, A. Bem, B. Ryszawska, E. Jáki, & T. Hajdíková (Eds.), Finance and Sustainability (pp. 37–47). Springer.
- Casaló, L. V., Flavián, C., & Ibáñez-Sánchez, S. (2018). Influencers on Instagram: Antecedents and consequences of opinion leadership. *Journal of Business Research* 117.
- Cole, C., Osmani, M., Quddus, M., Wheatley, A., & Kay, K. (2014). Towards a zero waste strategy for an English local authority. *Resources, Conservation* and Recycling, 89, 64–75.
- Curran, T., & Williams, I. D. (2012). A zero waste vision for industrial networks in Europe. *Journal of Hazardous Materials*, 207, 3–7.
- Dhanesh, G. S., & Duthler, G. (2019). Relationship management through social media influencers: Effects of followers' awareness of paid endorsement. *Public Relations Review*, 45(3).

- MacArthur, E. (2013). Towards the circular economy. *Journal of Industrial Ecology*, 2, 23 44.
- Geissdoerfer, M., Savaget, P., Bocken, N. M., & Hultink, E. J. (2017). The Circular Economy: A new sustainability paradigm? *Journal of Cleaner Production*, *143*, 757–768.
- Geng, Y., & Doberstein, B. (2008). Developing the circular economy in China: Challenges and opportunities for achieving 'leapfrog development'. *The International Journal of Sustainable Development & World Ecology*, 15(3), 231–239.
- Gronlund, J. (2015). Branding the 'Circular Economy' for Millennials. *Biznology*, August 12, 2015, https://biznology.com/2015/08/branding-circular-economy-millennials/ (accessed: 23.07. 2017).
- Johnson, B. (2013). Zero waste home: The ultimate guide to simplifying your life by reducing your waste. Simon & Schuster.
- Kiss, C., & Bichler, M. (2008). Identification of influencers: Measuring influence in customer networks. *Decision Support Systems*, 46(1), 233–253.
- Europejska, K. (2015). Closing the loop: An EU action plan for the Circular Economy. *Komunikat Komisji do Parlamentu Europejskiego, Rady, Europejskiego Komitetu Ekonomiczno-Społecznego i Komitetu Regionów, COM*, p. 614.
- Korhonen, J. (2004). Industrial ecology in the strategic sustainable development model: Strategic applications of industrial ecology. *Journal of Cleaner Production*, 12(8–10), 809–823.
- Korhonen, J., Honkasalo, A., & Seppälä, J. (2018). Circular economy: The concept and its limitations. *Ecological Economics*, *143*, 37–46.
- Kulczycka, J., & Głuc, K. (Eds.). (2017). W kierunku gospodarki o obiegu zamkniętym. Perspektywa przemysłu. Wydawnictwo IGSMiE PAN.
- Lee, J., Pedersen, A. B., & Thomsen, M. (2014). The influence of resource strategies on childhood phthalate exposure: The role of REACH in a zero waste society. *Environment International*, 73, 312–322.
- Lieder, M., & Rashid, A. (2016). Towards circular economy implementation: A comprehensive review in context of manufacturing industry. *Journal of Cleaner Production*, 115, 36–51.
- Linder, M., & Williander, M. (2017). Circular business model innovation: Inherent uncertainties. *Business Strategy and the Environment*, 26(2), 182–196.
- Markard, J., Raven, R., & Truffer, B. (2012). Sustainability transitions: An emerging field of research and its prospects. *Research Policy*, 41(6), 955–967.

- Hannon, J., Zaman, A., Rittl, G., Rossi, R., Meireles, S., & Palandi, F. E. D. (2019). Moving Toward Zero Waste Cities: A Nexus for International Zero Waste Academic Collaboration (NIZAC). In W. L. Filho & U. Bardi (Eds.), Sustainability on University Campuses: Learning, Skills Building and Best Practices (pp. 379–414). Springer.
- Nalewajek, M., & Macik, R. (2013) The role of social media in building awareness of responsible consumption. Active Citizenship by Knowledge Managements & Innovation: Proceedings of the Management, Knowledge and Learning International Conference 2013.
- Nowaczek, A., Kulczycka, J., Smol, M., Avdiushchenko, A., & Hausner, J. (2017). Badania postaw i poziomu świadomości w obszarze gospodarki o obiegu zamkniętym. In J. Kulczycka & K. Głuc (Eds.), W kierunku gospodarki o obiegu zamkniętym. Perspektywa przemysłu (pp. 19–27). Wydawnictwo IGSMiE PAN.
- SÄfplÄfcan, Z., & Márton, B. (2019). Determinants of Adopting a Zero Waste Consumer Lifestyle. *Regional and Business Studies*, 11(2), 25–39.

- Scheepens, A. E., Vogtländer, J. G., & Brezet, J. C. (2016). Two life cycle assessment (LCA) based methods to analyse and design complex (regional) circular economy systems. Case: Making water tourism more sustainable. *Journal of Cleaner Production*, 114, 257–268.
- Stubb, C., & Colliander, J. (2019). 'This is not sponsored content': The effects of impartiality disclosure and e-commerce landing pages on consumer responses to social media influencer posts. *Computers in Human Behavior*, 98, 210–222.
- Węgrowska, K. (2017). Życie Zero Waste. Żyj bez śmieci i żyj lepiej. Społeczny Instytut Wydawniczy Znak.
- Li, Y. M., Lai, C. Y., & Chen, C. W. (2011). Discovering influencers for marketing in the blogosphere. *Information Sciences*, *181*(23), 5143–5157.
- Zaman, A. U., & Lehmann, S. (2013). The zero waste index: A performance measurement tool for waste management systems in a 'zero waste city'. *Journal* of Cleaner Production, 50, 123–132.
- Zaman, A. U., & Lehmann, S. (2011). Urban growth and waste management optimization towards 'zero waste city'. *City, Culture and Society*, 2(4), 177–187.