

Recombination of product properties for increased demand for sustainable packaging under Generation Z consumers

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ABSTRACT

This research focuses on the behaviour of Generation Z in relation to packaging and answers the question what influence the sustainability of food & beverage products' packaging has on Generation Z and on their decisions to buy. The hypothesis is that Generation Z is influenced by other factors than packaging sustainability when making food & beverage purchase decisions. This research attempts to reassess the influential factors with an intention to guide Generation Z towards choosing products with sustainable packaging. The study is based on both secondary and primary research. Firstly, the concepts of sustainability are explained followed by the findings of the secondary research. The primary research - in form of a survey - consists of a quantitative data collection gathered from Generation Z. Furthermore, this study examines those factors which influence the decisions of Generation Z in purchasing food & beverages and the product characteristics that are considered favourably. This research provides solutions to the ongoing problem of triggering demand for sustainable packaging among consumers from Generation Z. The results are valuable for food industry stakeholders as the study provides an insight into Generation Z's decision making. Thus, industries might apply the findings to influence the packaging development process and to increase sales.

Keywords: sustainability, packaging, Generation Z, purchasing behaviour, food & beverage

1. Introduction

The consequences of industrialisation on the natural environment are significant. More and more often, toxic and dangerous materials are found either in water, air or soil. There is an ongoing discussion on how to keep people and animals safe and prevent poisonings. By now, many species are at risk of extinction as they are unable to survive in their natural habitat. Excessive consumption is one of the causes that brings about irreparable damages that cannot be reversed (McDonough & Braungart, 2002). Nowadays, there is a tendency that more and more companies are becoming environmentally aware and trying to act more sustainably. According to studies, Generation Z is more focused on the protection of the environment and the social conditions of people than any other generation. Thus, many companies assume that Generation Z's purchase decisions are strongly influenced by

sustainability aspects. This research examines the behaviour of this generation in order to provide an insight for the food and beverage industry.

This research paper is structured in the following way. After the introduction, the hypothesis and the research questions are set. This part is followed by the explanation of the terms: sustainability, waste management, packaging, packaging waste and Generation Z. Then, the research method is presented, which is followed by the findings of the quantitative research. The research paper ends with a conclusion.

2. Hypothesis and research questions

The hypothesis is that Generation Z is influenced by other factors than packaging sustainability when making food & beverage purchase decisions. This research aims to reassess the influential factors with an intention to guide Generation Z towards choosing products with sustainable packaging.

The research questions are the followings:

- What does Generation Z find particularly important about the packaging?
- Is Generation Z ready to spend more on products with sustainable packaging?
- Are there factors that influence Generation Z's purchase decision stronger than the sustainability of the packaging?

3. Terms and related work

Sustainability

The term 'sustainability' is primarily associated with environmentally conscious actions, the saving of resources and renewable raw materials (GfK Verein, 2016).

Sustainability consists of economic, ecological and social perspectives. In case of economic sustainability, importance is attached to the ensuring of a company's sustainable production in the future besides, its economic success. Ecological sustainability includes an attempt to handle resources in a way that they remain available to the new generations to the same extent as now. Social sustainability means that the companies treat their stakeholders in a way that they are constantly willing to cooperate (Clausen, 2009).

Since the definition of sustainability is not adequately defined, it leaves a wide scope for companies to interpret it. As a result, market participants are free to define their own terms of sustainability. Thus, the same term does not meet the same requirements. However, the aim of the term's use would be to distinguish sustainable from less sustainable developments (Grunwald, 2004).

Sustainability is the prerequisite for ethical action and can be achieved by improving economic, social and environmental compatibility, as well (Zerres & Zerres, 2014). The aim of ethics today is to show consumers how to act sustainably. Consumers no longer want to consume thoughtlessly, but to consciously control their consumption. Instead of a throw-away society, they want to use the system

in a way that makes it available for future generations in its present form, as well ("Neo-Ökologie – Der wichtigste Megatrend unserer Zeit", 2019).

Waste Management

Generated waste means any substance or object generated in the territory of a state from which the holder discards, intends to or is required to discard. Household waste is the mixed or separately collected garbage generated in households, such as apartments, residential properties, recreation areas, holiday sites, public areas and residential areas (*A Fenntartható Fejlődés Indikátorai Magyarországon, 2018, 2019*).

In waste management, the goal is to minimize waste generation. This can be achieved by both a more efficient use of raw materials and a higher recycling rate. Waste generation might be reduced by facilitating the coordination of economic activities along the material and energy flows, too. It means that the material and energy waste generated in one production process should be served as an input for a next process. The National Framework Strategy for Sustainable Development emphasizes that by establishing and applying closed material cycles, materials that previously appeared as waste can be reused in the economy thereby reducing the amount of waste to be disposed of. The strategy identifies waste emission as a significant problem, as a burden on natural resources and proposes recommendations to support basic and applied research in areas such as waste management, ecological production and consumption (*A Fenntartható Fejlődés Indikátorai Magyarországon, 2018, 2019*).

Between 2004 and 2009, the amount of waste in Hungary decreased considerably and has stagnated since then. The amount of waste produced in Hungary has hardly changed since 2008, while it has been slightly increasing in the EU (*A Fenntartható Fejlődés Indikátorai Magyarországon, 2018, 2019*).

The encouraging of recycling and reprocessing as well as the development of secondary raw material markets are particularly essential in sustainability. In case of generated waste, reusing and recycling are of high importance. For recycling, it is necessary to promote the economic viability of recycling technologies (*A Fenntartható Fejlődés Indikátorai Magyarországon, 2018, 2019*).

Packaging

Packaging is an umbrella term for all items consisting of materials applied to hold, preserve, transfer, receive, transport and present goods, including all goods from raw materials to processed goods as well as disposable goods used for the same purpose (*A Fenntartható Fejlődés Indikátorai Magyarországon, 2018, 2019*).

There are several kinds of food & beverage products that require packaging. For example, the bottling of water turns an ordinary liquid into a mobile commercial beverage. It allows water to be distributed and consumed in different ways. The bottle might seem to be the measuring unit for liquids. However, it is additionally conveying new meanings for water and used for branding and various commercial actions (Hawkins, Potter, & Race, 2015).

Corporate responsibility for packaging is becoming increasingly important, and it is one of the most challenging areas of today's industrial and commercial world (Szabó, 2020). Lately, packaging has been strongly criticized regarding sustainability. Packaging is the leading cause of the growth of plastic waste and the leaching of chemicals into the water, which is dangerous for living creatures. Additionally, the logistics of packaging, e.g., water bottles, has negative impacts on the environment, too (Hawkins et al., 2015).

Packaging waste

Packaging waste is the packaging and packaging materials that have become waste, excluding manufacturing or residual waste generated by manufacturing or industrial activities (*A Fenntartható Fejlődés Indikátorai Magyarországon, 2018, 2019*).

The amount of packaging waste per capita in Hungary increased continuously from 2004 to 2008 but decreased significantly between 2009 and 2011 due to the decline of consumption caused by the economic crisis. Since 2012, the total volume has been increasing again and in 2016 the amount of packaging waste was 122 kilograms / person in Hungary, including a significant rise in packaging paper waste (*A Fenntartható Fejlődés Indikátorai Magyarországon, 2018, 2019*).

For a sustainable future, it is of central importance to recycle the maximum possible quantities (Matlack, 2016). In Hungary, the recycling rate of packaging waste increased steadily between 2004 and 2011, except for a slight decrease in two years. Since 2012, the figure has remained at the same level at around 60% of packaging waste. Therefore, Hungary achieved the target set in the Packaging Waste Directive 2005/20/EC, which required Hungary to recycle at least 60% of packaging waste from 2012. Its value has not increased further, it has been at around 60% since 2012. In contrast, the European Union average has been rising steadily since 2005, although at a slower pace than in Hungary. In 2016, the packaging recycling rate was the highest in Finland, Belgium and Luxembourg (over 97%) and the lowest in Croatia (under 55%) (*A Fenntartható Fejlődés Indikátorai Magyarországon, 2018, 2019*).

Generation Z

Generations are constantly in change, and with it, new value systems emerge continuously. Terms such as Baby Boomers, Generation X, and Millennials are well known. The two newest generations that follow the previous models are Generation Z and Generation Alpha. The study focuses on the purchasing behaviour of Generation Z. Therefore, the following paragraphs explain some of their characteristics.

Generation Z, as synonym known as Gen Z, is primarily attributed to those who were born between 1997 and 2012 (Dimock, 2019). However, it is necessary to mention that the exact determination of the beginning and ending years of Generation Z is controversial. Various sources estimate the generation differently like between 1995 – 2012, or between 1994 and 2010 (Singh, 2014). Gen Z represents approximately the 20% of the world's population and has already started to influence the consumption habits of all age groups (Ingold, 2016).

Generation Z grew up in instable conditions. This concerns both the social conditions as well as the rapid technological changes. This is seen as the cause of a general uncertainty, which on the one hand, triggers Gen Z to be more independent and autonomous; on the other hand, uncertainty makes members of Generation Z constantly look for support and orientation (Ingold, 2016).

People of Gen Z care deeply about the environment, have a collective consciousness and want to change the world (Ingold, 2016). Members of Generation Z are aware of the social responsibility towards society and the knowledge of laws, rules and regulations (Singh, 2014).

In today's transparent world, Generation Z consumers no longer differentiate between the ethics of a brand - the company that owns it - and its network of partners and suppliers. The actions and values of a company must permeate the entire stakeholder system (Francis & Hoefel, 2018). Generation Z expects from companies to engage in purposes instead of focusing exclusively on the profit. Companies have to define what they stand for, adopt and promote their purposes rather than focusing entirely on their products (Wells, Fishman, Horton, & Rowe, 2018). Seventy percent of Generation Z aims to purchase products from ethical companies (Francis & Hoefel, 2018). Organic food & ethically produced clothes are often preferred by this group; although, in many cases, they cannot afford them (Ingold, 2016).

Members of Gen Z are digital natives. They became familiar with digital devices and electronic media in their childhood and early youth, and they grew up with the constant changes of technology. Smartphones, combining the functions of phone, SMS, camera, internet access, apps and gaming in one device, have been around since 2002 making the people of Gen Z the first digital natives to grow up with smartphones in their hands (Ingold, 2016).

Based on their tech savviness, they often shop online. For Gen Z eCommerce shoppers, factors such as free returns, mobile optimized websites, unique products, appealing photos, available discounts and product recommendations are especially important. Consumers from Generation Z expect personalized shopping experiences, limited edition collections, unique products, appealing stores and authentic brand stories from retailers and brands. Generation Z loves the visual experience and expects retailers to be stylish and attractive (*Generation Z – Der Report, 2017*).

4. Methodology

The aim of this research is to measure Generation Z's expectations of food & beverages and to investigate their contribution to sustainability.

In the first part of the thesis, the theoretical foundations are uncovered with secondary research. The definitions of sustainability, waste management, packaging, packaging waste and Generation Z are explained. Since it is important for the successful execution of the empirical research to be familiar with the terms and market developments, secondary sources are analysed. After the fundamentals are known, the empirical research is designed.

Although in the theory section, it is presented that the environment and social responsibility have an important role in the life of people from Generation Z, the empirical part examines whether other factors have an even greater impact on their purchase decisions. To measure it, the quantitative research method is chosen as its objective is usually to test an assumption or theory formulated in the form of

a hypothesis in advance. (Uwe, 2016) Therefore the methodology fits to conduct the research. The personal preferences are measured with a Likert Scale. The respondents are able to agree or disagree with the statements on a predetermined multi-level answer scale.

The main aim of the quantitative research is to reach Generation Z consumers between the age of 8 and 23, living in Hungary in the form of an online survey.

5. Findings

The findings of the quantitative study are summarized in this section. The questionnaire is completed by 183 participants. In order to focus on the target group, the answers of subjects older than 23 years are ignored. Thus, 115 relevant respondents remain. The analysis of the answers is based on the answers of these 115 participants.

For a better understanding of the life situation of the participants, demographical characteristics including the employment level, the place of residence and the monthly income are examined. Thus, it can be concluded that 87% of the respondents are students, 9.5% work part-time or full-time, and 3.5% are trainees (as shown in Figure 1).

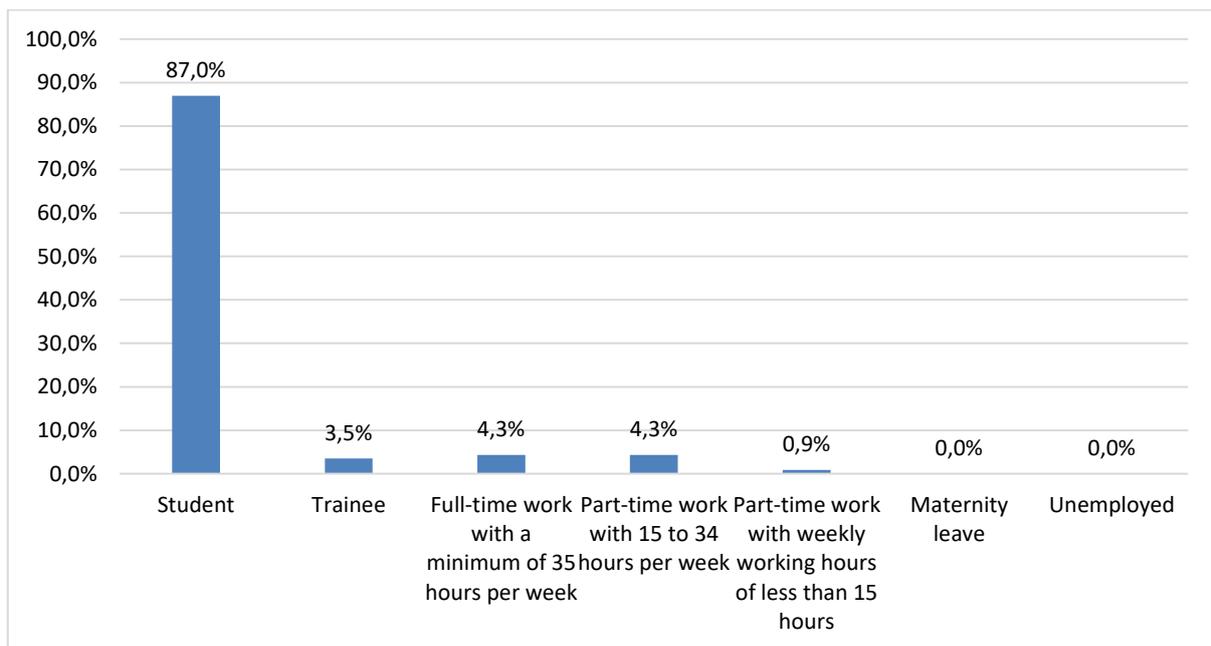


Figure 1 Employment level of respondents, n=115

Figure 2 demonstrates the data gathered on the participants' places of residence. 76.5% of the respondents live at home with their parents, and 16.5% rent a dorm or an apartment with friends. 4.3% live with their partner or spouse and 2.6% live alone.

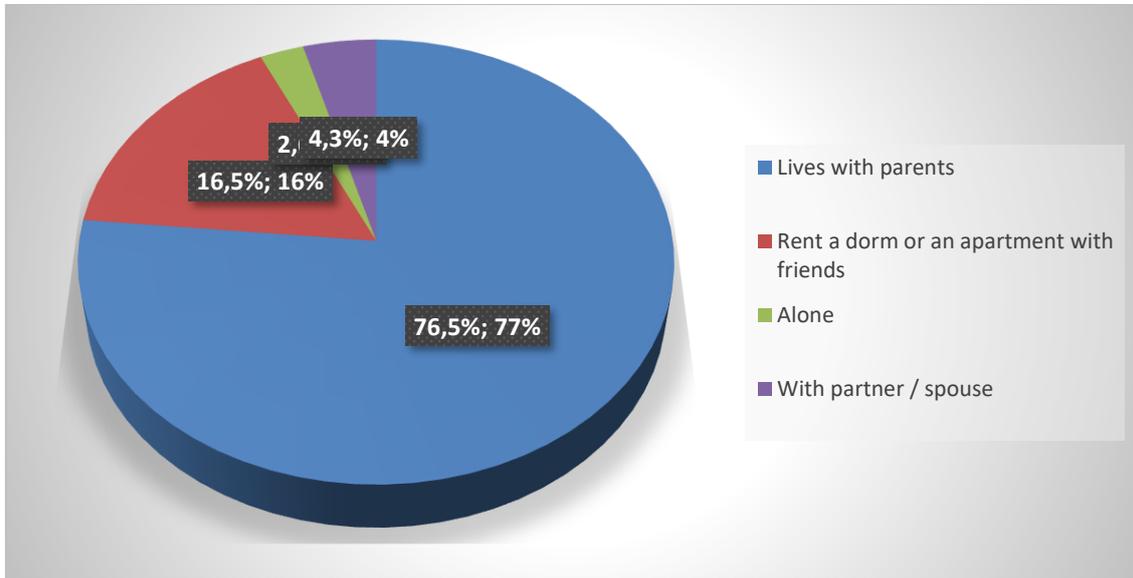


Figure 2 Place of residence, n=115

Figure 3 visualizes the distribution of the monthly available budget. For 33% of the respondents, up to 9.999 HUF are their monthly disposal. 20.9% of participants own between 10.000 and 29.999 HUF as a monthly budget, and the same present is assigned between 30.000 and 79.999 HUF. 13% of the interviewed members of Generation Z have between 80.000 and 119.999 HUF per month. Only 12.1% of the surveyed have a budget over 120.000 HUF.

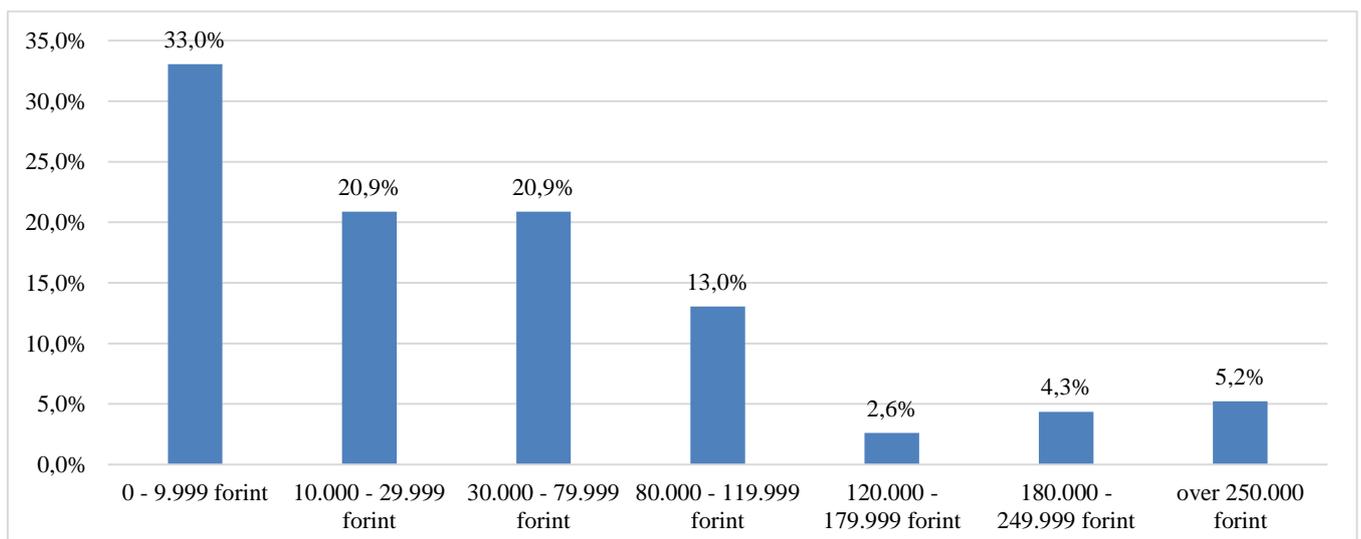


Figure 3 Distribution of the monthly available budget, n=115

Figure 4 illustrates that for over 40% of the respondents, quality is the most important factor while purchasing. Taste is the second highest aspect of the purchase decision with 22.6%, followed by price with 17.4%. The healthiness of the product is on the 4th place with 11.3%. Sustainability and packaging design matter the least for the participants with 4.3% for sustainability and 0% for packaging design.

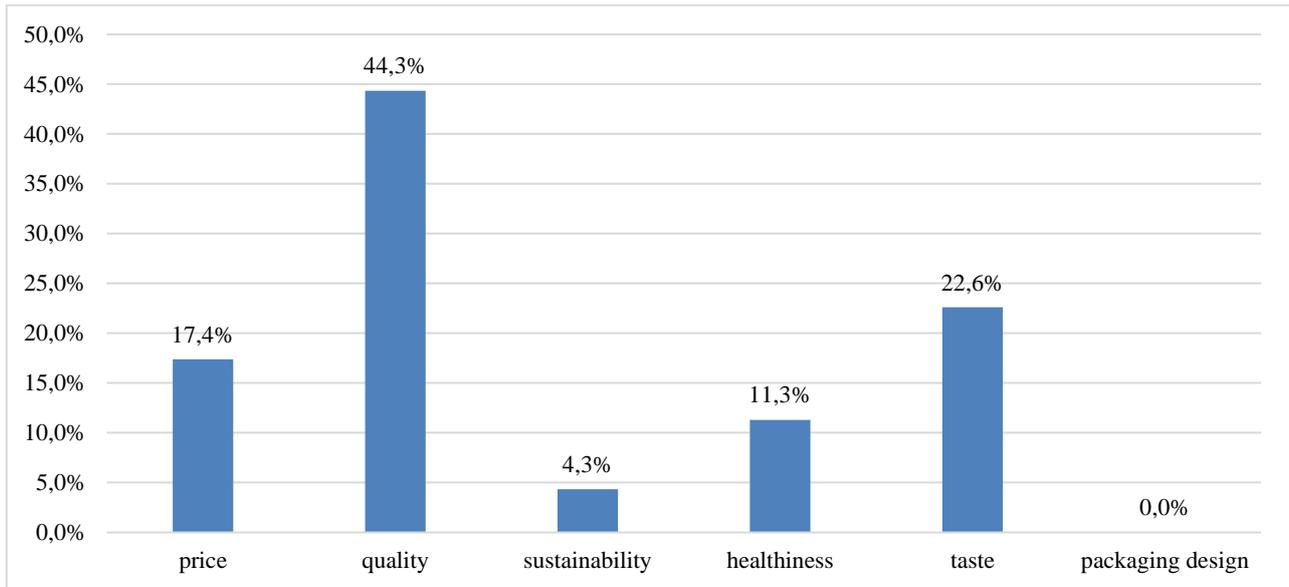


Figure 4 Most important factor in purchase decisions, n=115

In the next step, the importance of the factors quality, price, and sustainable packaging are questioned separately on a Likert scale and then compared in Figure 5. The figure shows that quality is the most important factor for the respondents. Over 70% of the participants consider this factor either extremely or very important. The price of the products is very or moderately important for most of the subjects. Sustainable packaging is moderately important for 37.4% of the participants. 38.2% consider sustainable packaging very or extremely important, and 24.3% find it slightly or not important at all. These answers are visible in Figure 5 and confirm that quality is the most important factor in purchase decisions.

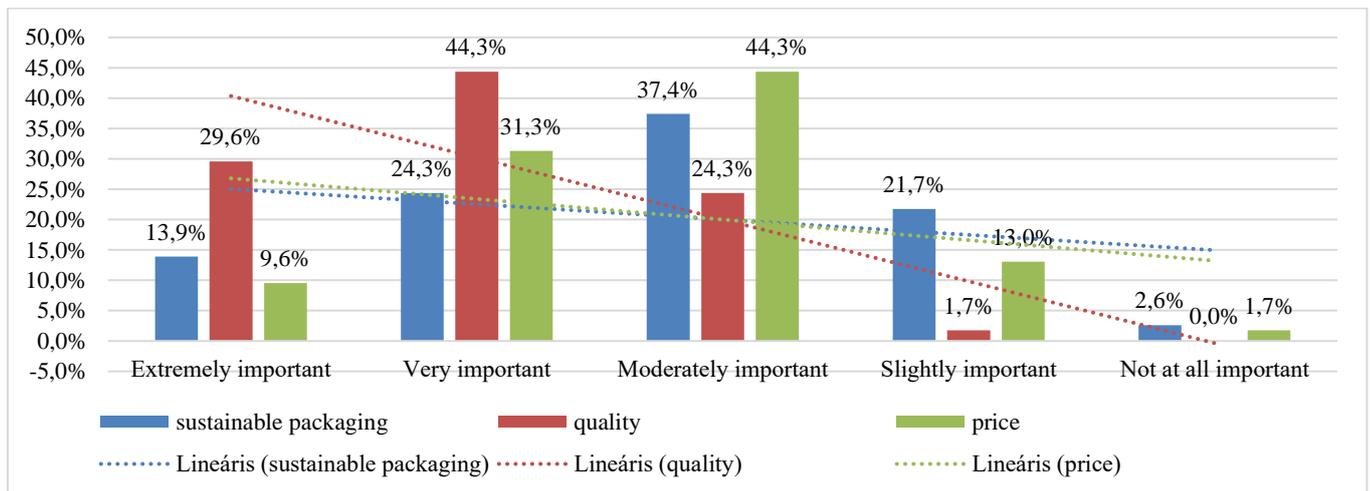


Figure 5 Importance of the factors “quality”, “price”, and “sustainable packaging”, n=115

Generation Z is asked about their expectations for packaging, as well. Almost two thirds - exactly 59.1% - state that the most important aspect is the packaging to be biodegradable, and 21.7% declare that packaging should not increase the price. Visual appeal is the most relevant for 15.7% of respondents. Packaging being pleasant to the touch when buying food & beverage products is essential for 3.5%.

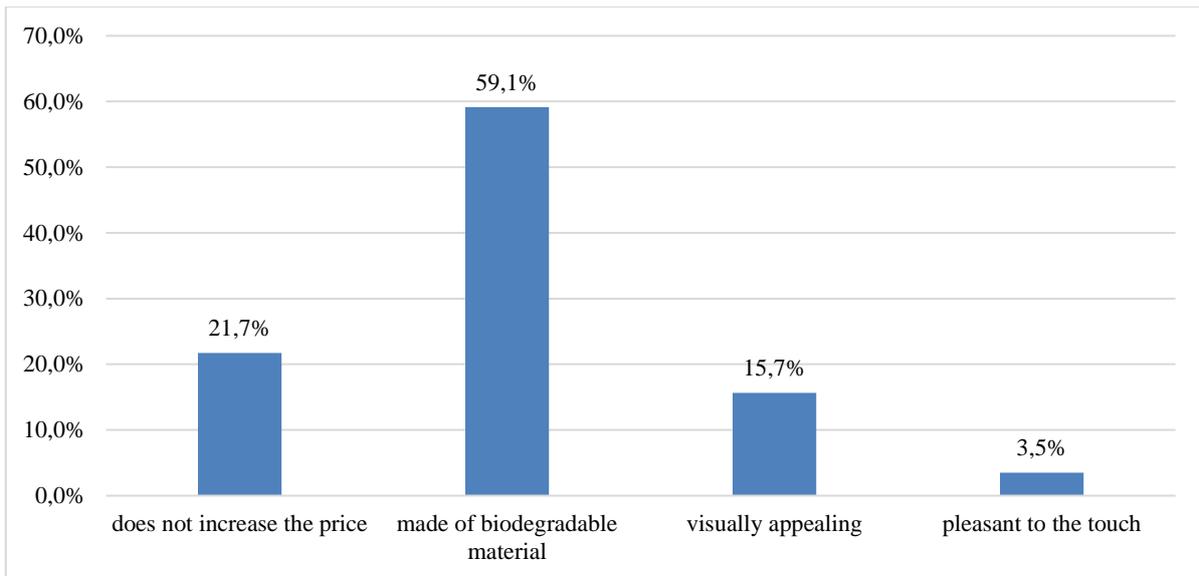


Figure 6 Generation Z's expectations towards packaging

The next part of the survey examines which factors the Generation Z encourages to change on the food & beverage products. Figure 7 shows that only a very small percentage of the respondents, namely 5.2%, does not want to change anything about the packaging, healthiness and taste of the products.

42.6% of the participants wish for a healthier product for the same price. However, almost the same number, 40% of the interviewed wish the products to have an environmentally friendly packaging. These results show that customers find sustainable packaging important if the price of the product remains the same.

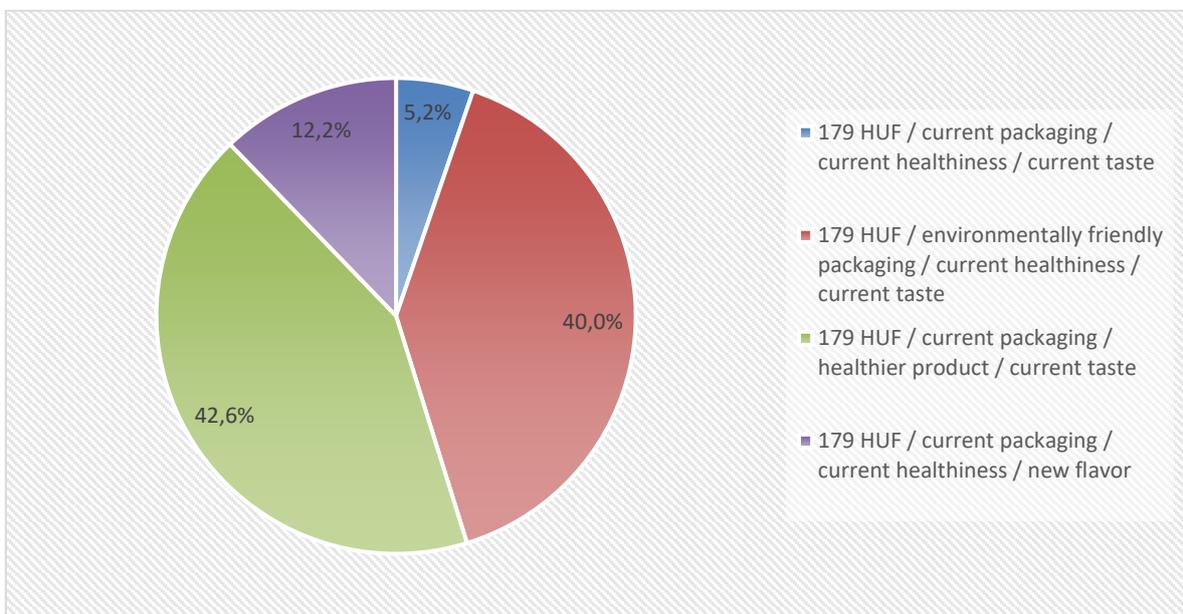


Figure 7 The factors Generation Z wish to improve if it has no effect on the price, n=115

Figure 8 examines what factors the members of Generation Z prefer when the price of the product is changed once a new feature is added. Figure 8 shows how customers make their decisions when they have to pay extra for the improvement of a product feature. In this case, they weigh their decision

differently. The difference is not only that more participants prefer to keep the same price instead of buying an improved product, but several other factors are weighted in a different way, too.

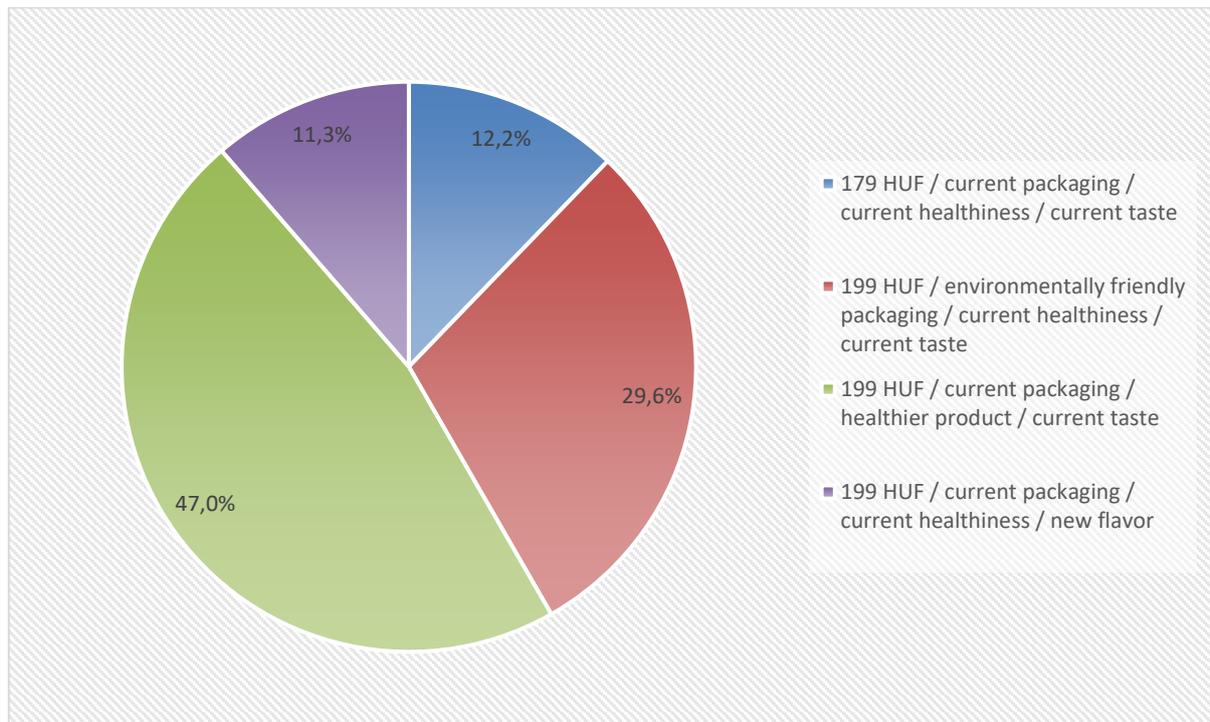


Figure 8 The factors Generation Z wish to improve if it increases the price, n=115

It is visible in Figure 9 how the respondents react when the price of a product is changed with a new feature or improvement. As it was demonstrated in Figure 7, if the price remained the same, 94.8% of participants would prefer products with a new attribute. However, when the price of improved products is increased, 7% of them choose to change their opinion and prefer to keep the lower price with unchanged product features.

In parallel, the importance of environmentally friendly packaging is decreasing, and instead of the 40% of respondents, only 29.6% prefer this feature even at higher prices.

Thus, at the same time, the inquiry rises by 4.4% for healthier product. The interest in new flavour stays almost the same in both cases.

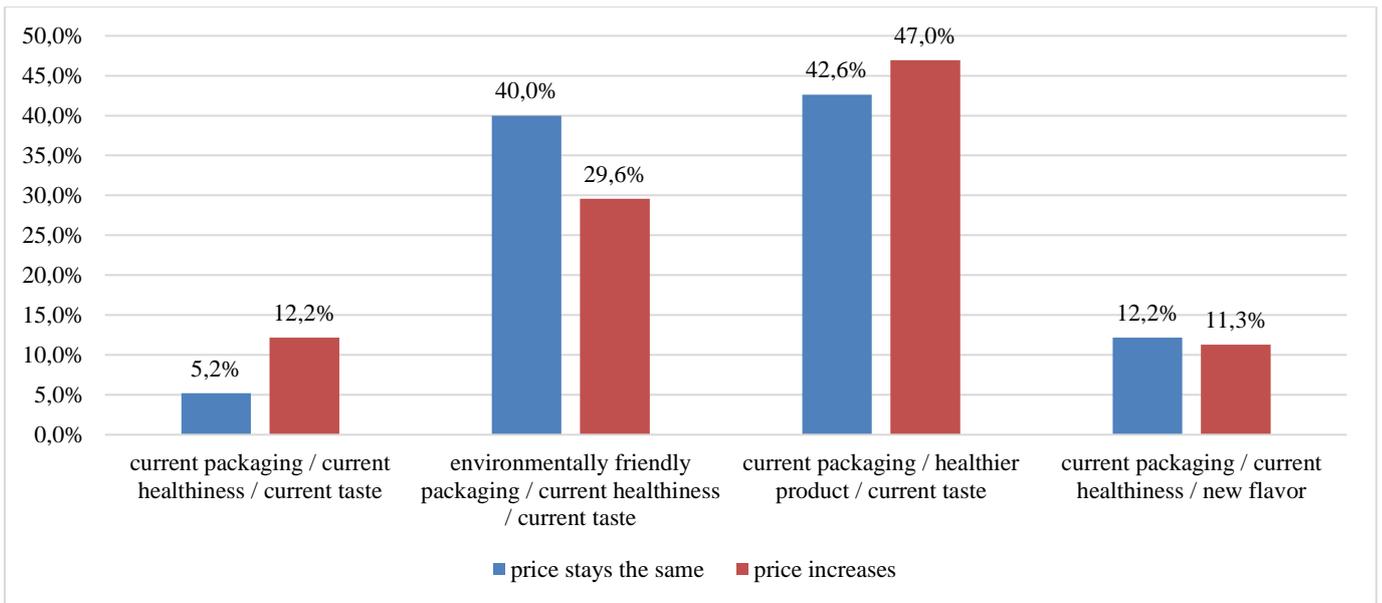


Figure 9 Effect of price on purchase decision, n=115

In order to learn more about the decision of the customers who decide in favour of sustainable packaging at the same price, their answers are examined in more detail in Figure 10.

Out of the 46 respondents (40% of all participants, see Figure 7) who tell in the case, when the price stay the same that they wish to have environmentally friendly packaging, only 26 (56.5% of 46 persons) choose more sustainable packaging if they have to pay for it themselves. 20 persons (43.5%) change their decision in the following distribution: 13 participants (28.3%) choose a healthier product, 5 (10.9%) decide on keeping the features without increasing the price and 2 (4.3%) choose the improved taste.

Therefore, it is important to remember that this customer group is price-sensitive, and even if they find sustainability important, the price effects their purchase decisions.

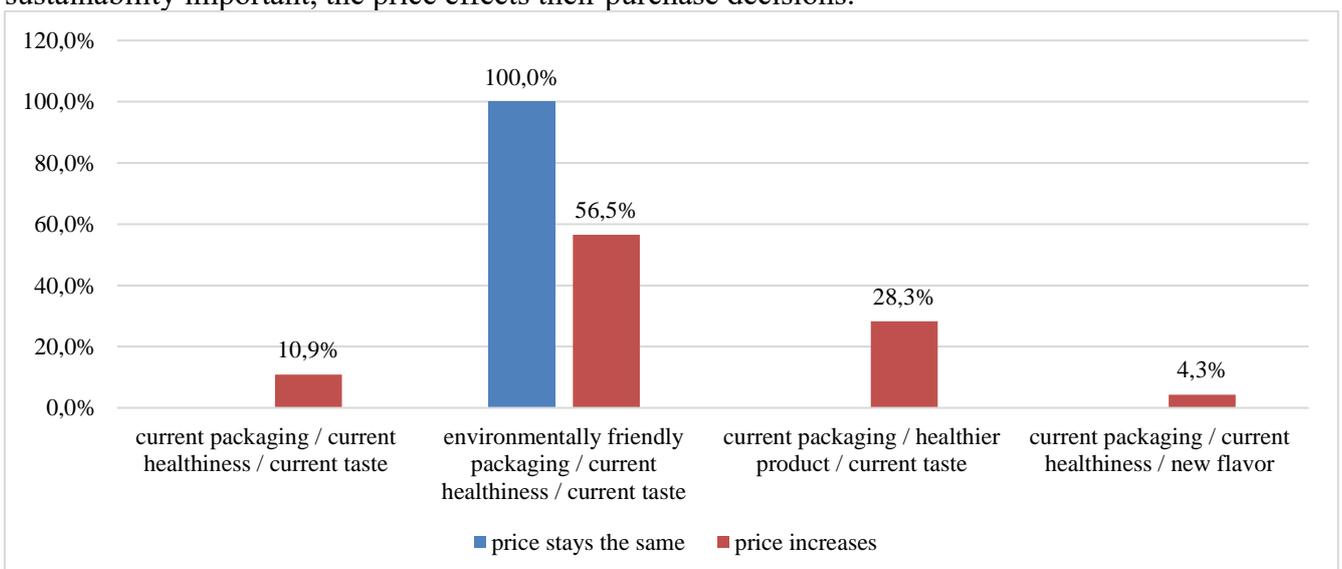


Figure 10 Changing decision of customers who opt for more sustainable packaging at an unchanged price, n=46

Additionally, the participants are asked how much they would like to pay for a more environmentally friendly packaging. The current price of the product is 179.00 HUF and they might choose from 179.00 HUF, 189 HUF, 199 HUF and 209 HUF. 14.8% state that they do not want to pay more for a more sustainable packaging. Therefore, 85.2% give a respond that they would like to pay more for a product with environmentally friendly packaging. All respondents might pay a maximum of 195.09 HUF in average for the product instead of the current price of 179.00 HUF. This answer confirms that Generation Z is willing to pay more for products with more sustainable packaging.

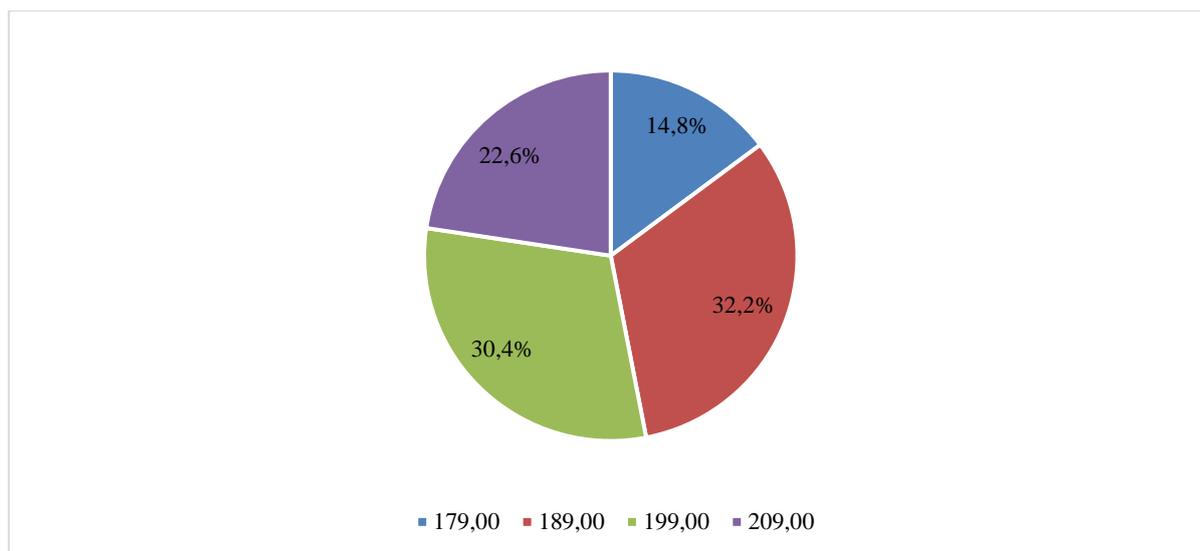


Figure 11 The amount of money Generation Z is willing to pay for a product with more sustainable packaging, n=115

The research focuses on the question how Generation Z makes its food & beverage purchase decisions. The research's hypothesis is: Generation Z is influenced by other factors rather than packaging sustainability when making food and beverage purchase decisions. Based on the findings from primary research, the research questions are answered in the following way:

What does Generation Z find particularly important about the packaging?

The answers to this question are visualized in Figure 6. It is clearly seen that for almost two thirds of the respondents, biodegradability is the most important factor, and 21.7% declare that packaging should not increase the price. Visual appeal is rather unimportant for the interviewed people, and only 15.7% importance is given to it. Being pleasant to the touch is not considered as a relevant factor when making purchase decision.

Is Generation Z ready to spend more on products with sustainable packaging?

85.2% of the participants responded that they would pay more for a product with environmentally friendly packaging. All respondents would pay a maximum of 195.09 HUF in average for a product currently priced for 179.00 HUF. This answer confirms that Generation Z is willing to pay more for products with more sustainable packaging.

Are there factors that influence Generation Z's purchase decision stronger than the sustainability of the packaging?

Yes, there are factors, that influence the Generation Z's purchase decision stronger than the sustainability of the packaging. The answers in the Figure 5 clearly demonstrate that the quality is the most important factor for the respondents when making purchase decisions. Over 70% of the respondents consider this factor either extremely or very important. The price of products is on the second place in making purchase decisions and are very or moderately important for most of the participants. Sustainable packaging lands only in third place.

6. Conclusion

The research focused on the question how Generation Z makes its food & beverage purchase decisions. The research's hypothesis is: Generation Z is influenced by other factors rather than packaging sustainability when making food and beverage purchase decisions. The findings lead to the conclusion that there are factors that influence the Generation Z's purchase decision stronger than the sustainability of the packaging.

As the customers find the factor quality very important and are willing to pay more for products with increased quality, this might be the chance to combine the properties of sustainability and quality and develop a new concept for Generation Z. Sustainable packaging combined with the increase of the product's quality might attract more customer as that is the most important factor to them when making purchase decisions. To test this hypothesis, further studies are suggested which might examine the behaviour of the target group in form of an observation.

References

- A fenntartható fejlődés indikátorai Magyarországon, 2018 [Sustainable development indicators in Hungary, 2018]. (2019). Központi Statisztikai Hivatal.
- Clausen, A. (2009). Grundwissen Unternehmensethik: Ein Arbeitsbuch [Basic knowledge business ethics: A workbook]. Tübingen, Germany: A. Francke Verlag.
- Dimock, M. (2019, January 17). Defining generations: Where millennials end and Generation Z begins. Pew Research Center. Retrieved from <http://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/>
- Flick, U. (2016). Sozialforschung: Methoden und Anwendungen [Social research: methods and applications] (3rd ed.). Reinbek bei Hamburg, Germany: Rowohlt Taschenbuch Verlag.
- Francis, T., & Hoefel, F. (2018). 'True Gen': Generation Z and its implications for companies. McKinsey&Company. Retrieved from <https://www.mckinsey.com/~media/McKinsey/Industries/Consumer%20Packaged%20Goods/Our%20Insights/True%20Gen%20Generation%20Z%20and%20its%20implications%20for%20companies/Generation-Z-and-its-implication-for-companies.pdf?shouldIndex=false>
- Generation Z – der Report [Generation Z - the report]. (2017). Criteo. Retrieved from https://www.criteo.com/de/wp-content/uploads/sites/3/2018/06/GenZ_Report_DE.pdf
- GfK Verein. (2016). Nachhaltigkeit: Mehr als eine Worthülse [Sustainability: More than just an empty phrase]. GfK Verein. Retrieved from https://www.nim.org/sites/default/files/medien/1288/dokumente/1612_nachhaltigkeit_downloadcharts_0.pdf
- Grunwald, A. (2004). Nachhaltigkeit begreifen: Zwischen Leitbild und Trugbild [Understanding sustainability: Between mission statement and illusion]. GAIA - Ecological Perspectives for Science and Society, 13(1), 1–3. (<https://doi.org/10.14512/gaia.13.1.1>)
- Hawkins, G., Potter, E., & Race, K. (2015). Plastic water: The social and material life of bottled water. United States of America: Massachusetts Institute of Technology. (<https://doi.org/10.7551/mitpress/9780262029414.001.0001>)
- Ingold, J. (2016). Generation Z: Metastudie über die kommende Generation [Generation Z: Metastudy on the upcoming generation]. Retrieved from https://tripleteam.ch/wp-content/uploads/2016/06/Generation_Z_Metastudie.pdf
- Matlack, A. S. (2016). Problem-solving exercises in green and sustainable chemistry. Boca Raton, FL: Taylor & Francis Group, LLC. (<https://doi.org/10.1201/b19769>)
- McDonough, W., & Braungart, M. (2002). Cradle to cradle: Remaking the way we make things. New York, NY: North Point Press.
- Neo-Ökologie – Der wichtigste Megatrend unserer Zeit [Neo-ecology - The most important megatrend of our time]. (2019, October). ZukunftsInstitut. Retrieved from <https://onlineshop.zukunftsinstitut.de/shop/neo-oekologie-der-wichtigste-megatrend-unserer->

zeit/?gclid=Cj0KCQjwlvT8BRDeARIsAACRFiWSGzIrrBRAGboUz3El4CnvmSXM5kUiyWGkQE8EqeNjzDty3Ys7HhUaAvmlEALw_wcB

Singh, A. (2014). Challenges and issues of Generation Z. *IOSR Journal of Business and Management*, 16(7), 59–63. (<https://doi.org/10.9790%2F487x-16715963>)

Szabó, L. (2020). A csomagolások változása a fenntarthatóság jegyében [Changing packaging in the name of sustainability]. XXVIII. nemzetközi gépészeti konferencia, 13–16.

Wells, T., Fishman, E. K., Horton, K. M., & Rowe, S. P. (2018). Meet Generation Z: Top 10 trends of 2018. *Journal of the American College of Radiology*, 15(12), 1791–1793. (<https://doi.org/10.1016/j.jacr.2018.05.033>)

Zerres, C., & Zerres, M. (2014). *Einführung in die Marketing-Methodik: Marketing-Methodik I* [Introduction to Marketing Methodology: Marketing Methodology I]. (4th ed.). Retrieved from <http://rybarecords.de/eBooks/Marketing/einfuehrung-in-die-marketing-methodik.pdf>