

[Selected aspects of green behaviour of Czech consumers](#)

Selected aspects of green behaviour of Czech consumers

The paper presents the results of research concerning the green behaviour of Czech consumers. Environmental protection is one of the most widely discussed topics all over the world, and environmental education has become an important part of the Czech educational system. Generation Y could be called “the green generation”. But what is the situation across all of generations of Czech consumers? How do they behave with regards to environmental protection and which green activities do they provide in their everyday life?

Introduction

The world's ecological footprint is not positive. Since 1970s, we have been in ecological overshoot. Yet the many restrictions and regulations have had a positive impact on the development of ecological footprint. Global Footprint Network determines Overshoot Day (note [1]). The day has moved from January in 1970 to August in 2018 (Global Footprint Network 2018). Nevertheless, we still live in an ecological deficit.

Living a green life is one of the most widely discussed topics in the world. Consumers discover green products (Krause 1993), behave ecologically and want to be greener in their life. Consumers change their purchasing behaviour, listen to green promotions and think about the impacts of their consumption. On the other hand, companies apply green marketing, create CSR strategies and communicate their green approach. (Yang et al. 2007) Ecological aspects are important in consumers' and companies' behaviour also. Environmentally friendly behaviour is a global trend. Consumers are influenced by this environmental attitude as well as personal and injunctive norms in the purchasing process. (Zimmer et al. 1994) The global trend of green behaviour is supported by collective environmental efficacy and environmental knowledge, which are important predictors of green purchasing intentions (Lee 2017).

Furthermore, consumers are satisfied by green products, and environmental friendliness influences green trust and green perceived quality (Chen, Lin and Weng 2015). Consumers tend to be loyal, when a product surpasses their expectations (Kotler 2013). Therefore, developing green products provides companies with a means of maintaining customer loyalty.

This paper aims to describe the Czech consumer with regards to green behaviour. The authors selected a representative sample of Czech consumers to obtain data about their ecological activities in everyday life. Based on the research results, it is possible to detect a green purchasing tendency and to predict reactions to green marketing. The authors monitored waste issues (reduction, recycling), energy and water saving, use of packaging and tendency to purchase green products. The authors followed the link between these aspects and personal characteristics (age, sex, education and domicile).

Behaviour of green consumers

Consumers tend to have “intentions to visit/choose environmentally friendly services”, “[a] willingness to pay more for environmentally friendly products or services” and “[a] commitment to environmentally friendly services” and engage in “word of mouth of environmentally friendly communications” (Kontogianni and Kouthouris 2014). Green behaviour of consumers is topic number one in the marketing management of companies in the automobile industry (Jaderná and Přikrylová 2018). Therefore, it is necessary to know their everyday green activities and willingness to purchase green products. Generally, environmental education supports the tendency to protect the environment and behave in a sustainable manner. Consumers recycle, save water and energy and purchase products in bulk quantities. The interest of this part is in their purchasing of green products and following green aspects in the purchasing process. This conclusion is evinced in the greenness trends described below (Kotler and Keller 2016).

The 2011 study ImagePower® Green Brands Survey, provides evidence that green consumers exist as a distinct market segment and that this segment is growing rapidly. Among the 9,000 respondents from 8 countries, five trends which are mostly impacting the consumer green behaviour were discovered.

The first trend reveals a significant concern over energy consumption among consumers. Of even greater importance to them is the means of energy production. What is noteworthy is that these concerns outweigh economic issues for a larger group of respondents than ever before.

The second identified trend is that consumers place great importance in the basic attributes of brands. This trend suggest that buyers are interested in environmental friendliness, but even more in value, quality, reliability or customer care. Consequently, companies should not sacrifice those brand qualities in the pursuit of greenness.

However, the next trend shows an increase in the desire to buy green product among the respondents. We can expect interest in green products for their ecological friendliness, but there are some conflicts in purchasing process. According to this study, the main obstacle to satisfying the need for the green products in Brazil, China and India can be a limited supply of green alternatives. In more developed countries, the main barrier was identified as price.

A willingness to make large green purchases characterised the fourth trend. Despite the fact that nowadays they are buying mostly green products for everyday use like cosmetics, groceries, food and beverages, consumers claim that they are ready to make a large purchase like green cars, green technology and green energy solutions.

The last trend is the consumer attention towards the packaging. Green buyers see packaging as the most important source of information about the greenness of products. However, they also think that the companies should use less material and make it recyclable (note [2]).

A lot of companies have tried to satisfy the needs of the green consumers according to these trends. However, a large proportion of them have failed. One of the reasons can be that the brands have not overcome the level of scepticism that can be deeply rooted in the minds of consumers. Some consumers perceive a lack of true ecological concern in the company's actions. Others sense that the ecological activities of the brands can reduce the focus on a brand's other conventional attributes. The solution for this can be a steady evolution from a conventional brand with a great image to merely a green brand (Ng, Butt, Khong and Ong 2014).

Furthermore, the brands should only communicate green activities if they engage in them sincerely and such activities are supported by reliable data. Otherwise, this communication can hurt the brand image because of the perception of greenwashing. The authors of this study also suggest that greenwashing can be a source of significant consumer scepticism, which can be a major obstacle in greener buying (Nyilasy, Gangadharbatla and Paladino 2012).

Moreover, consumers already know almost perfectly what is and what is not green about their purchasing behaviour. Their knowledge also goes hand in hand with the current definitions of

sustainability. They are not simply greenwashed and reject products with green label, but without greenness in their production or use. It seems that the consumers have enough information to be sceptical (Rettie, Burchell and Riley 2012).

It can be assumed that a customer identifies the environmentally friendly and the environmentally unfriendly options at the moment of the purchase. Then the customer may choose the one option that offers the greatest satisfaction. Even if the consumer is environmentally conscious, the personal outcome is more important than the impact on the environment (Mishal et al. 2017). However, this study is limited by its reach and should not be generalised.

Given the consumer's knowledge, it is also very important to present the green product properly. The main aspects should be energy and water efficiency, low emissions, recyclable, with long life cycle, biodegradable, renewable, ability to be reused, ideally ecologically certified and locally produced with no safety or health hazards. Products with these attributes should not be viewed sceptically (Mayank and Amit 2013).

It is also important for the companies with green strategies to focus on credibility, trust and reliability. These can help to increase the perceived green value and image and lead to the purchase of the green product. This goes hand in hand with the trends from 2012 (Delafrooz and Goli 2015).

Methodology

In order to study the green behaviour of Czech consumers, an online survey was employed. It was conducted via internet at the beginning of June 2018 through Trendaro, which is an application operated by a professional survey company called Behavio Labs, s. r. o. A total of 1,000 respondents were chosen so that a representative sample of the Czech population was obtained (i.e. the proportion of women and men in the sample is the same as the proportion of women and men in the Czech population; and the same is true for other socio-demographic characteristics that were observed. Besides gender these were age, education and the size of respondents' hometown).

Green behaviour of Czech consumers

We will present results of the provided research. With regards to recycling, the respondents were asked whether they recycle the following types of waste: bio-waste, carton, paper, plastic waste or other waste. It turns out that Czech people are used to recycling paper and plastic waste quite regularly as paper is recycled by 89% and plastic waste by 93% of respondents. On the other hand, fewer people recycle the remaining types of waste. (Overall 43% of all respondents recycle bio-waste; 53% recycle carton, and 40% recycle other waste). It is worth noting that only 5% of respondents do not recycle at all. We were interested in whether there is any difference in recycling behaviour if we look at specific socio-demographic characteristics, namely gender, age, education and the size of respondents' hometown.

No difference between women and men in terms of recycling behaviour was found (p-value of the corresponding Chi-square test is well above 0.5 for all types of waste). Similarly, no difference between different age groups was found providing bio-waste is considered (p-value of the corresponding Chi-square test is 0.68). Although the opposite is true for the remaining types of waste, which the youngest age group of respondents born in years 1996-2000 tends to recycle less than the other age groups. In particular, carton waste is recycled only by 23% of this age group. The proportion is significantly less than the overall average of 53% (p-value of the corresponding Chi-square test is 0.0002); paper is recycled only by 75% of those born between 1996-2000 inclusive. Once again, this percentage represents a total significantly less than the overall average of 89% (p-value of the corresponding Chi-square test is 0.009); plastic waste is recycled only by 86% of those born in the same period, with the total falling below the average of 93% (p-value of the

corresponding Chi-square test is 0.043); and finally other waste is recycled only by 29% of those born in these years, an amount which is significantly less than the overall average of 40% (p-value of the corresponding Chi-square test is 0.028).

Education level, however, proves to be an influence on recycling behaviour. People with only basic education recycle less than those with a university degree. As many 10% of respondents with basic education do not recycle at all, whereas this is the case with only 1% of respondents with university degree (p-value of the corresponding Chi-square test is 0.0006). Moreover, in Table 1 the results are summarised for all types of waste and all education levels.

Education	Basic ed.	High School w/o graduation	High School with graduation	University degree	p-value
Other	23%	23%	43%	57%	3×10^{-13}
Plastic	83%	88%	94%	98%	9×10^{-6}
Paper	71%	83%	91%	97%	6×10^{-13}
Carton	33%	50%	37%	61%	0.0016
Bio	44%	33%	46%	41%	0.01

Table 1: Influence of education on recycling behaviour

Source: Authors

Finally, when we consider the size of the respondents' hometowns, the results show that people from larger cities tend to recycle less bio-waste than people in smaller towns/villages, please see Table 2.

Size of hometown	< 2k	2k - 10k	10k - 50k	> 50k	p-value
Bio	56%	51%	35%	29%	7×10^{-11}

Table 2: Influence of size of hometown on recycling bio-waste

Source: Authors

Respondents were also asked whether they tried to reduce the waste coming from packaging of various products they buy in shops. Only 4% of respondents answered that they do their shopping in non-packaging shops; 49% of respondents buy products of a larger size or try to reduce the amount of packaging and bags, 44% of respondents claim they buy products packed in easily recycled materials (such as glass and paper), 30% of all respondents do not think about this at all. It is worth noting that a greater proportion of women (57%) try to reduce the amount of packaging more than men (42%) (p-value of the corresponding Chi-square test is 1.8×10^{-6}). Analogously as in the case of recycling, the data show that the higher the education level the respondent has, the higher the care for the amount and character of packaging, please see Table 3.

Education	Basic ed.	High School w/o graduation	High School with graduation	University degree	p-value
Fewer packaging	48%	48%	51%	58%	0.0001
Better packaging	33%	41%	42%	52%	0.014

Table 3: Influence of education on the amount and character of packaging the respondent uses

Source: Authors

It has been a rule for a few years already that plastic bags are provided only for a fee at all large grocery shops in the CR. 84% of respondents favour this practice, and the remaining 16% of respondents disagree with it. No difference can be attributed to gender, age or size of hometown, but the opinion clearly depends on the educational level of respondents. People with higher education approve of this rule more often than people with lower education, please see Table 4.

Education	Basic ed.	High School w/o graduation	High School with graduation	University degree	p-value
Approval	67%	80%	85%	90%	7×10^{-7}

Table 4: Influence of education on the approval rate

Source: Authors

Finally, respondents were asked about their consumption habits. In particular, one question asked about their usage of water and energy. The respondents had to choose on a scale from 1 to 7 where

“1” stands for “I monitor my consumption closely” to 7 which means “I do not consider monitoring over my consumption at all”. Please see Table 5 for the overall results which show that people tend to care a lot for their consumption of water and energy as 58.1% answered either 1 or 2 and only 7.3% answered 7 or 6. Also note that the overall average level is 2.66.

Scale level	1	2	3	4	5	6	7
Percentage	25.3%	32.8%	17.6%	9.0%	8.0%	4.8%	2.5%

Table 5: Consumption of water and energy

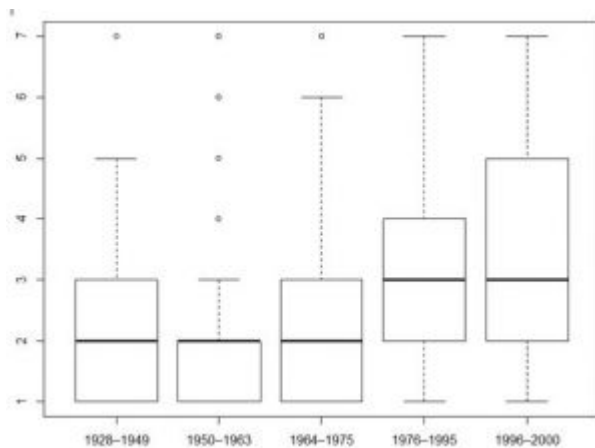
Source: Authors

Comparing women and men, the data shows that women care about their water and energy consumption more than men since women have an average result of 2.52 and men an average of 2.80. (The corresponding two-sample t-test has p-value equal to 0.0056.) Moreover, by comparing the average level for different age groups we can claim that older people tend to monitor their consumption more closely than younger people, please see Table 6 where you will find that the average is more or less increasing (the corresponding ANOVA test has p-value equal to 3×10^{-19}) and also the following picture which shows the boxplots for every age group.

Age group	1928 - 1949	1950 - 1963	1964 - 1975	1976 - 1995	1995 -
Average level	2.15	1.99	2.44	3.00	3.64

Table 6: Influence of age on the consumption of water and energy

Source: Authors



Graph 1: Influence of age on the consumption of water and energy

Source: Authors

As far as education and the size of respondents’ hometown are concerned, no statistically significant differences were found using ANOVA tests (p-value of 0.36 for education and 0.22 for the size of hometown).

Respondents were also asked what the reason why they do not use more water and energy is. 72% of those who answered this question said the reason is that water and energy are expensive and they want to save money; 54% said it would not be ecological and they want to save the environment and 8% have other reasons.

Conclusions

According to Paco et al. (2008), a green consumer has specific characteristics, including a tendency to recycle. The results of provided research have confirmed that Czech consumers tend to recycle waste. 89% of respondents recycle paper and 93% plastics. The more highly educated the consumer

is, the more he/she tends to recycle. On the other hand, people from smaller towns recycle bio-waste more frequently than consumers from bigger towns. The reason why is the inaccessibility of a bio-container in a bigger town. Small town inhabitants have their own compost in their gardens. Green behaviour is connected with an interest in sustainable packaging. More highly educated Czech people are inclined to buy products in sustainable packaging and in a larger amount. People think about the problem of the overuse of plastics in packaging. It is better to purchase products in a larger amount or search for products in a sustainable packaging to reduce plastics and protect the environment.

Research was focused on energy and water consumption. It confirmed that women care more about saving energy and water than men. But the most frequently stated reason why they save energy and water was to save money, which was given in 72% of cases – energy and water is expensive. We call these green consumers “conservatives” (Ottman 2011). They save energy for the reason of saving money, not for environmental protection.

Czech consumers are more environmentally educated than 20 years ago and tend to protect the environment. The most frequent activity of environmental protection is recycling, primarily paper and plastics. Containers for paper and plastics are accessible in every town and village and educational system. Public administration amply promote recycling. The Czech population frequently consider the issue of packaging, too. But the question is whether the reason to buy a larger amount is not saving money, saving energy and water alike. Older Czech consumers are used to saving resources, a remnant of the immediate post-war period. They have educated their children to not overuse water and energy in order to save money. More and more young people have started to think about an ecological aspect of the saving of energy and water. They search for ecological solution and alternatives in their consumption.

The future research will be focused on the other aspects of green behaviour of Czech consumers. It is necessary to know the tendency to buy green products or new trends in an environmental protection.

Poznámky/Notes

[1] Earth Overshoot Day is marking the date we (all of humanity) have used more from nature than our planet can renew in the entire year.

[2] See:

<https://www.rankingthebrands.com/PDF/The%202011%20Image%20Power%20Green%20Brands.pdf>

This paper is one of the outcomes of the grant research SGS/2019/01 Jaderná at the Department of Marketing and Management at SKODA AUTO University.

Literatúra/List of References

[1] Bhatia, M. and Jain, A., 2013. Green marketing: A study of consumer perception and preferences in India. In: *Electronic Green Journal*. 2013, 1(36). ISSN 1076-7975.

[2] Chen, Y. S., Lin, Ch. Y. and Weng, Ch. S., 2015. The influence of environmental friendliness on green trust: The mediation effects of green satisfaction and green. In: *Sustainability*. 2015, 7(8). ISSN 2071-1050.

[3] Delafrooz, N. and Goli, A., 2015. The factors affecting the green brand equity of electronic products: Green marketing. In: *Cogent Business and Management*. 2015, 2(1). ISSN 2331-1975.

[4] Global Footprint Network, 2018. Our work: Ecological footprint. Footprint Network, 2018. [online]. [cit. 2018-08-31]. Available at:

<<https://www.footprintnetwork.org/our-work/ecological-footprint/>>

[5] Jaderná, E. and Příkladová, J., 2018. Green solutions in automotive industry. In: *Marketing Science and Inspirations*. 2018, 1(13). ISSN 1338-7944.

- [6] Kotler, P. and Keller, K. L., 2012. Marketing management. Essex: Pearson Education Inc., 2012. ISBN 978-0-13-210292-7.
- [7] Kotler, P. and Keller, K. L., 2016. Marketing management. Essex: Pearson Education Limited, 2016, pp. 103-104. ISBN 978-1-292-09271-3.
- [8] Krause, D., 1993. Environmental consciousness: An empirical study. In: Journal of Environmental Behavior. 1993, 25(1), pp. 126-142. ISSN 0013-9165.
- [9] Lee, Y. K., 2017. A comparative study of green purchase intention between Korean and Chinese consumers: The moderating role of collectivism. In: Sustainability. 2017, 9(10). ISSN 2071-1050.
- [10] Mishal, A., Dubey, R., Gupta, O. K. and Zongwei, L., 2017. Dynamics of environmental consciousness and green purchase behaviour: an empirical study. In: International Journal of Climate Change Strategies and Management. 2017, 9(5), pp. 682-706. ISSN 1756-8692.
- [11] Ng, P. F., Butt, M. M., Khong, K. W. and Ong, F. S., 2014. Antecedents of green brand equity: An integrated approach. In: Journal of Business Ethics. 2014, 121(2), pp. 203-215. ISSN 1573-0697.
- [12] Nguyen, T. N., Lobo, A. and Nguyen, B. K., 2017. Young consumers' green purchase behaviour in an emerging market. In: Journal of Strategic Marketing. 2017, 9(5), pp. 682-706. ISSN 1466-4488.
- [13] Nyilasy, G., Gangadharbatla, H. and Paladino A., 2014. Perceived greenwashing: The interactive effects of green advertising and corporate environmental performance on consumer reactions. In: Journal of Business Ethics. 2014, 125(4), pp. 693-707. ISSN 1573-0697.
- [14] Orzan, G., Cruceru, A. F., Balaceanu, C. T. and Chivu R. G., 2018. Consumers' behavior concerning sustainable packaging: An exploratory study on Romanian consumers. In: Sustainability. 2018, 10(6). ISSN 2071-1050.
- [15] Ottman, J., 2011. The new rules of green marketing: Strategies, tools, and inspiration for sustainable branding. Sheffield: Greenleaf Publishing, 2011. ISBN 978-1-906093-44-0.
- [16] Paco, A. M. F. and Rapaso, M. L. B., 2008. Determining the characteristics to profile the green consumer: an exploratory approach. In: International Review on Public and Non-profit Marketing. 2008, 5(2), pp. 129-140. ISSN 1865-1992.
- [17] Rettie, R., Burchell, K. and Riley, D., 2012. Normalising green behaviours: A new approach to sustainability marketing. In: Journal of Marketing Management. 2012, 28(3-4), pp. 420-444. ISSN 1472-1376.
- [18] Yang, C.; Wang, Y., Fong, L. and Hsieh, S., 2007. A study of the hospitality personal cognizance, attitude and behavior toward practice of green productivity. In: Journal of Tourism Studies. 2007, 13, pp. 165-192.
- [19] Zimmer, M. R., Stafford, T. F. and Stafford, M. R., 1994. Green issues: Dimensions of environmental concern. In: Journal of Business Research. 1994, 30(1), pp. 63-74. ISSN 0148-2963.

Klíčové slová/Key Words

green behaviour, consumer, environmental protection, recycling, waste reduction, packaging, energy and water consumption
zelené chování, spotřebitel, ochrana životního prostředí, recyklace, snižování odpadu, balení, spotřeba elektrické energie a vody

JEL klasifikácia/JEL classification

L62, M11

Résumé

Vybrané aspekty zeleného chování českých spotřebitelů

Článek pojednává o zeleném chování spotřebitelů v České republice. Na reprezentativním vzorku byl proveden výzkum, který dokazuje, že nejčastější zelenou aktivitou českých spotřebitelů je třídění odpadů. Navíc se prokázalo, že spotřebitelé přemýšlejí nad problematikou obalů, konkrétně se snaží nakupovat výrobky v udržitelných obalech a v co největším množství. Také je především pro ženy velmi důležitá otázka spotřeby energií a vody. Velmi často je ale důvodem k tomuto zájmu ekonomické hledisko. Energie a voda jsou drahé, proto nad jejich spotřebou uvažují. Nicméně zájem o ochranu životního prostředí má v České republice rostoucí tendenci a lze očekávat, že s dospíváním nové generace se zelenost stane životním stylem, také z mnoha dalších důvodů.

Kontakt na autorov/Address

Ing. Eva Jaderná, Ph.D., ŠKODA AUTO Vysoká škola o.p.s., Katedra marketingu a managementu, Na Karmeli 1457, 293 01 Mladá Boleslav, Česká republika, e-mail: eva.jaderna@savs.cz

Mgr. Radka Picková, Ph.D., ŠKODA AUTO Vysoká škola o.p.s., Katedra informatiky a kvantitativních metod, Na Karmeli 1457, 293 01 Mladá Boleslav, Česká republika, e-mail: radka.pickova@savs.cz

doc. Ing. Jana Přikrylová, Ph.D., ŠKODA AUTO Vysoká škola o.p.s., Katedra marketingu a managementu, Na Karmeli 1457, 293 01 Mladá Boleslav, Česká republika, e-mail: jana.prikrylova@savs.cz

Bc. Karel Samek, ŠKODA AUTO Vysoká škola o.p.s., Na Karmeli 1457, 293 01 Mladá Boleslav, Česká republika, e-mail: edu.karel.samek@savs.cz

Recenzované/Reviewed

15. september 2018 / 24. september 2018