Éva Kuruczleki (ed) 2024: Navigating the Future: Digitalization, Sustainability, and International Business, Szeged, DOI: https://doi.org/10.14232/gtk.nfdsib.2025.16

Consumer behavior factors in green purchasing of food and agriculture products in Hungary

Mahdi Imani Bashokoh – Amirmohammad Esmaeili Korani

In the contemporary world, the considerable increase in population, followed by the rise in food consumption and industrial production to meet the needs of society, results in environmental destruction. Since large industries carry out the majority of production with a monopoly on the market, the importance of paying attention to this issue is felt more by these companies to boost client satisfaction and green sales. In this study, consumer behavior factors in green purchasing of food and agriculture products in Hungary is discussed. The experts in this study include management and economics professors in Hungarian universities, scientific experts, and active managers in food and agricultural industries in Hungary. Based on the opinion of these experts, it is determined that 35 sub-final factors and 6 final factors can be considered by the managers of food and green agriculture production units to improve sales and increase customer satisfaction in Hungary.

Keywords: green purchasing, consumer behavior, food and agriculture products

1. Introduction

Nowadays, due to the increase in population and daily consumption, and air and environmental pollution from industrial production, environmentally friendly products have become more important. Since large industries carry out 75% of production with a monopoly on the market, the importance of paying attention to this issue is felt more by these companies, and customers expect a lot from these big businesses. Since the late 80s, the concept of green marketing has been used among companies to improve their position in the market, differentiate the company's philosophy, and provide green value propositions to attract satisfaction and retain customers for a long time (García-Salirrosas–Rondon-Eusebio 2022). Green marketing pays attention to the process of selling products and services, especially environmentally friendly products, and in general, the implementation of all processes based on environmental benefits and their effects on the health of society. This marketing model is used by companies that are committed to the environment and hold themselves responsible for environmental and social health (Chandra Sekhar et al. 2022). Green marketing is an emerging strategy for protecting society and the environment with a long-term vision for the future (Roh et al. 2022). Humans realized in the past that they had to take care of the environment to continue their survival, and not taking care of it would lead to their destruction. With the progress of industry and economy, despite the progress in income and standard of living, the environment has been significantly damaged, and the existing order in it has been endangered by the pollution created by products. To prove this claim, attention should be paid to the increase in the average global temperature of the environment that air pollution and reduction of natural rainfall are its results. These issues caused attention to be drawn to the preservation and care of the environment (Javidi Kermaninezhad et al. 2020,

Ahmed et al. 2023). Green shopping is a suitable solution in developed and developing countries. On the other hand, due to the stated problems, the attitude and behavior of consumers towards green shopping and environmentally friendly goods have flourished more than ever, so most of today's customers prefer to buy green goods from companies supporting the green environment that provide green services (Quach et al. 2022). In recent years, especially in the last decade, marketers have been adopting the philosophy of green marketing according to the environmental concerns of customers, so this attention to their concerns has created a competitive advantage in today's highly competitive market (Ahmed et al. 2023). From the studies on green marketing, it can be seen that it is divided into topics such as green distribution, green supply chain, green packaging, green advertising performance, green human resources, and green organization performance (Sun et al. 2021, Jermsittiparsert et al. 2019). Organizational performance is related to market share, profitability, customer satisfaction, customer loyalty, and long-term competitive advantage, so it is suggested that companies use environmentally friendly long-term strategies (Yusiana et al. 2021, Chen–Chang 2012). Researchers talk about the existence of a triangle including manufacturing companies, consumer society, and governments; these three sides are involved in the purchase of green products, and each of them has specific challenges. Governments and companies have an important role in preserving the environment, but it seems that customers and consumers have a more important role in preserving the environment, so raising awareness in this field is very important for customers (Dalir–Ghasemi 2020, Rahbar–Wahid 2011, Paul et al. 2016).

Therefore, according to the growing concerns and attentions of individual and industrial customers and society, as well as producers in all the links in the supply chain, from raw material producers to final producers, in this study – with the help of library and academic resources – we attempt to identify and investigate the effective factors of consumer behavior in buying green products in Hungary, to help to improve the performance of green product producers in sales, profit, and consumer satisfaction and to meet needs.

In this paper, we first provide an overview of studies about green consumers, purchase behavior, and green food and agriculture products. Then, previous studies are discussed to elaborate on purchasing behavior factors. After outlining the methodology and its stages, we describe our findings. Ultimately, we conclude what factors can affect consumer behavior in buying green agriculture and food products in Hungary.

2. Theoretical framework

2.1. Green consumer

The increase in environmental pollution and the endangering of the environment and the future of humanity – in the reduction of natural rainfall, the destruction of forests, air pollution, the increase in the temperature of the earth, as well as the destruction of the ozone layer – cause that a new type of concern in the decision making of customers in buying the goods has created (Javidi Kermaninezhad et al. 2020). Consumers are an essential element for the survival and growth of any service product in today's competitive market. In the past years, consumers did not know much about green

products. However, changing times, culture, and global relationships such as social networks, as well as increasing imports and exports, have created opportunities for green consumption in all parts of the world. Nowadays, customers are exposed to information, and manufacturers are well aware of their needs. Dissemination of information has created awareness of dos and don'ts. Broadly speaking, the support of eco-friendly systems and the environment has been aimed at achieving a sustainable future, and governments and policymakers have been obliged to implement this positive action to achieve customer satisfaction (Rutkowska et al. 2021).

Environmental concerns led to the introduction of a new concept called green consumers in recent decades. Green consumption is a thought and belief that is aimed at expressing a relationship between consumption and various factors including socio-demographic, psychological, attitudinal, and behavioral factors (Ogiemwonyi et al. 2019, Singh 2023). Green consumption has increased in developed and developing economies, and it means environmental protection by all classes of society, the current and future generations, like the use of organic products, clean and renewable energy, and products that have the least adverse effects on the environment, as well as low use of fossil fuels. Hence, this attention to the environment is the result of the green customer's attention (Haba et al. 2023). Green consumers are people who care about quality and price as well as brands and manufacturers that adopt environmental protection measures and respond to concerns (Martínez et al. 2020, Haba et al. 2023). Mulyono et al. (2023) believe that these consumers buy and consume goods based on their desire and opinion, not their needs. This means that, in general, ordinary customers buy goods without any reasonable and behavioral considerations and only based on the pleasure, need, and feeling of shopping. Researchers who first investigated green consumers classified them using sociodemographic factors such as gender, age, education, and income. They believed that the level of education and income is key in the acceptance of this issue, so it was believed that green consumers have a high level of education (i.e. university degrees or higher), and/or their household income is above average. Also, from a psychological and sociological point of view, these people have the characteristics of active self-control resource, perceived consumer efficacy and altruism, and from the perspective of attitudinal factors, they have environmental concerns and perceived environmental responsibility more than the general public (Lee–Haley 2022).

Green consumer efforts have important effects on the environmental performance of producers and help to achieve environmental sustainability, and for this reason, the main agenda of green marketing is to maximize sales and consumption of green products as well as green customer satisfaction (Martínez et al. 2020, Ogiemwonyi et al. 2019). Haba et al. (2023) believe that active managers in the green products industry should conduct research on green consumers and sustainability aspects, including environmental marketing and green consumption under sustainability to better identify green consumers.

2.2. Green purchase behavior

Due to the harmful effects that can be seen due to the uncontrollable consumption of goods and irresponsible behavior towards the environment, the balance of the ecosystem

and human life has been affected, so humans, as an essential part of this world, should have the responsibility of protecting the earth against any exploitation and unreasonable misuse of the environment. Therefore, the need to change habits from standard to green shopping is strongly believed to reduce the negative environmental impact. In recent years, green shopping behavior has received much attention due to its positive effect on the environment (Jaini et al. 2020, Moazzam et al. 2023). Green shopping behavior is called a behavioral and practical philosophy resulting from complete discretion by the customer, which affects the environment and ecology (Tawde et al. 2023, Lim–Lady 2023). Green shopping behavior is the purchase and consumption of environmentally friendly products, which are protective of the environment and can be kept and even recycled. This product is sensitive to environmental concerns and issues; in this case, customers have no problem paying more for these products; their environmental needs cause this behavior, and it is done based on the principles of sustainability, forward-looking, and social benefits (Liu et al. 2022, Setiawan et al. 2022, Sheikh et al. 2023, Mustikasari 2023).

The philosophy of green shopping behavior is mainly the attitude of consumers towards, the intention to buy, and the willingness to pay for a green product; these customers have a complete understanding of the environmental issue and the effects of the product they buy (Liu et al. 2022). Examples of green shopping behavior can be summarized as buying low-consumption products, avoiding over-packaged and non-biodegradable products, wanting to use recyclable products, and any activity that leads to pollution reduction (Sheikh et al. 2023, Lim–Lady 2023). Green purchasing behavior was considered in the agriculture and food sectors. The philosophy of green procurement behavior is mainly the attitude of consumers towards the intention to buy and the willingness to pay for a green product; these customers completely understand the environmental issue and the effects of the product they buy (Liu et al. 2022). The philosophy of green purchase behavior is strongly influenced by consumers' commitment and motivation to advance goals in the intention-behavior link, and this behavior or conscious intention eventually becomes their purchasing choice (Setiawan et al. 2022, Lim–Lady 2023, Tawde et al. 2023). On the other hand, primary research on green purchase behavior shows that consumers pretend that they intend to buy and keep buying throughout their lives. They try to convert intentions into behavior as well as convert it into action (Tawde et al. 2023). Green shopping behavior starts with intention. Purchase intention is influenced by several factors, including cognition, which includes knowledge and concern, as well as collectivism, environmental concerns, and the perceived effectiveness of the consumer (Mustikasari 2023). Based on the conducted research, green shopping behavior has a series of theories, including the theory of planned behavior, value-belief-norm theory, and attitude-behavior-context theory (Goh–Balaji 2016, Yadav–Pathak 2017, Chaudhary–Bisai 2018, Jaini et al. 2020). Its proponents have shown that beliefs about consequences, responsibility, and personal norms are critical factors that affect human behavior. Therefore, personal values, beliefs and norms are expected to be considered drivers of consumers' green purchasing behavior (Jaini et al. 2020). A person with a positive attitude towards green products is influenced by the social norms that support the desire to consume green products, is

aware of the positive factors surrounding this issue, and has a positive attitude towards this issue (Sheikh et al. 2023).

After using the green product, these consumers evaluate the product. Consumers will feel the benefits of products with green values, which, of course, play an essential role for consumers and the environment, and relate to their previous perceptions. This value is an essential factor that affects the purchase intention. When consumers feel that the product's value is high and can satisfy them, it positively affects their purchase intention; in contrast, when the value is low for consumers, it leads to reluctance. As a result, companies should be able to maintain the green value of new products and improve them to meet customer expectations or even exceed them so that consumers trust these products (Simamora–Graciafernandy 2023).

2.3. Green food and agriculture products

Food is one of the main constituents of human life and has an immediate and abundant impact on human health. The important parameters that show that a food is called green are the following. The raw materials are green, which means that green and organic methods and norms are used in production, cultivation, and harvesting techniques. In terms of agriculture, what can be mentioned is the reduction in the use of plants that require a lot of energy, water, and fertilizer. In the processing and distribution sector, reducing the use of preservatives and finally disposing of waste and reproducing are decisive. In terms of packaging, the rules of green packaging should be used, which can be called the use of environmentally friendly raw materials in packaging (Jindoliya–Nagra 2020). In recent years, the production of green products, especially in the agricultural and food sectors, has increased significantly due to the great increase in the demand for these products. The quality and safety of agricultural products and food are closely related to the health of human life. Green agriculture and its development will reduce agricultural pollution and improve the quality of food. In the field of market economy, the desire of consumers to buy agricultural products and green foods causes the increase of producers' motivation to develop and promote green agricultural products, and on the other hand, to improve the production technology in this field and increase competition in diversity and Production quality. These factors have caused managers to pay more attention to improving their brand image to increase customer satisfaction and meet their expectations. Therefore, it is very important to help companies create a good brand image for green agricultural products to improve the consumption intention of green agricultural products, promote green consumption, and achieve sustainable development (Yang et al. 2023).

3. Empirical evidence

Javidi Kermaninezhad et al. (2020) determined and obtained the variables influencing customers' green buying behavior by a systematic literature review on green purchase behavior to highlight its significance. All publications pertaining to this particular topic between 2000 and 2017 were included in the sample. Six main components, including psychological, personal, value–belief, marketing mix, sociocultural, and

product-related factors, and 59 sub-factors were extracted and categorized as factors influencing consumers' green purchase behavior.

Witek and Kuźniar (2020) investigated the effects of gender, age, education level, personal financial situation, and the number of children in the family on purchasing behavior toward green products. To achieve the goal, a survey among 650 Polish consumers was conducted. Findings suggest that all of the above-mentioned sociodemographic variables have an impact on awareness and purchasing behavior towards green products. Moreover, the results show that female consumers have more positive attitudes towards purchasing green products than male consumers. Young consumers are skeptical about green products. A positive relationship was established between education and the acknowledgment of the dominance of one's own needs over the needs of the environment. The better the personal financial situation, the more likely it was that people expressed their intention to buy green products.

Hasnain et al. (2020) investigated the effects of eco-labels and environmental attitude along with the moderating of gender to examine the impact of customer personality traits regarding their propensity for green purchases. They used survey method data from a sample of 434, which has been collected through a structured questionnaire distributed among employees of the different national and multinational companies. The results indicate that consumers' intentions to purchase environmentally friendly products are significantly influenced by the mediation of ecological labels, environmental attitude, and gender moderation.

Sobuj et al. (2021) evaluated the variables that affect young Bangladeshi consumers' purchase decisions for eco-friendly clothing. Data were collected through a survey among 198 respondents in Bangladesh in terms of consumer attitude, subjective norm, perceived behavioral control, environmental concern, environmental knowledge, and purchase intention. They stated that purchase intention is substantially influenced by attitudes, subjective norms, environmental concerns, and environmental knowledge of consumers.

Alavi Foumani et al. (2022) tried to determine factors influencing the implementation of green purchases behavior. Using purpose foul and snowball sampling methods, semi-structured interviews were conducted with 13 experts from among business researchers and environmental activists. The interviews revealed that causal categories (environmental belief, health concern, green attitude, and mental norm), causal categories (green purchase behavior), background categories (economic indicators, government support for capital Eco-friendly investments, the country's environmental policies, and the impact of green consumption culture), interventionist category (distribution of green products, financial and economic constraints of households and promotion, and encouragement to green purchase), strategies (Indian market strategies, prices, and innovation), and the consequence (at the macro-level including increasing the level of health in society, development, and growth of organizational performance and promoting green lifestyle, while at the micro-level including preference to buy environmentally friendly products and increase the repetition of purchases behavior) impact on the implementation of green purchases behavior.

Boca (2021) investigated factors influencing consumer behavior in sustainable fruit and vegetable consumption in Maramures County, Romania. For this

purpose, a questionnaire was applied to a sample of 1230 people from Maramures County, Romania. This study evaluates consumer behavior and attitudes toward sustainable healthy food consumption; determining factors of consumer behavior are established as the needs, knowledge, selection of quality products, and the degree of culture and education in health diet issues. This study has revealed that consumer behavior is not influenced by age, gender, and education.

Majeed et al. (2022) investigated the influencing factors on consumers' choice behavior and their environmental concerns while purchasing green products in Pakistan. This study aims to investigate the influencing factors on consumers' choice behavior for green products by applying the theory of consumption values in Pakistan. The data was collected from the consumers of green products in four metropolitan cities of Punjab Province (e.g. Lahore, Islamabad, Multan, and Faisalabad) using a structured self-administered questionnaire. The random sampling technique was employed. Based on the 480 responses, the empirical findings revealed that functional value-quality, emotional value, conditional value, and epistemic value have a positive impact on consumers' choice behavior and their environmental concerns. In contrast, the functional value-price, social value, and environmental concerns have a negative impact on consumers' choice behavior.

4. Methodology

To obtain the factors affecting consumer behavior in green buying in Hungary, we use research by Javidi Kermaninezhad et al. (2020), who identified the likely factors and investigated 407 papers related to this subject. Of the 407 initial results, 61 were examined, and 6 main components (namely psychological, personal, value–belief, marketing mix, sociocultural, and product-related factors), and 59 sub-components were identified as factors affecting the consumers' green purchase behavior. We utilized the fuzzy Delphi technique to screen the factors by distributing a semi-structured questionnaire with Likert scoring in one step. Experts who answered the questions are university professors of management sciences and economics active in Hungary and managers and specialists working in large factories producing agricultural and food products in Hungary. The fuzzy Delphi technique is a collaborative method to gather experts' opinions in a specific field, such that a group of experts in a specific field are selected as panel members and express their opinions on a specific issue using fuzzy concepts. It is a mathematical logic for modeling uncertainty and ambiguity in data and information. The snowball sampling method was used to identify research experts. A semi-structured questionnaire with a five-point Likert scale (very low = 1, low = 2, medium = 3, high = 4, and very high = 5) was sent to 20 experts. Excel was used to extract the results. Based on this method, all the sub-factors with a diffusion score of 0.7 or higher were considered verifiable factors, and the factors with a score lower than the specified number were excluded (Habibi et al. 2013).

Table 1. Triangular fuzzy numbers equivalent to a 5-degree Likert spectrum

Linguistic variable	Fuzzy number	Triangular fuzzy number
Very unimportant	1	(0,0,0.25)
Unimportant	2	(0,0.25,0.5)
Moderately important	3	(.025,0.5,0.75)
Important	4	(0.5,0.75,1)
Very important	5	(0.75,1,1)

Source: Habibi et al. (2013)

5. Findings

A total of 6 main indicators and 59 secondary indicators used as the likely factors affecting consumer behavior are demonstrated with the title of Main Factor and Secondary Factor in Table 2. Based on fuzzy score, 35 sub-factors out of 59 sub-factors under 6 main factors were accepted and confirmed (Table 3).

All sub-factors of marketing mix indicators are effective, including green product design, distribution, price, promotional activities, and green marketing. Perceived quality, brand name, convenience and durability, performance, safety and health, and green brand image are impressive as related product's sub-factors. In sociocultural factors, all of them, including social effects, peer group influence, environmental effects, reference groups, government stimuli, and culture are influential. Among psychological factors, attitude towards green product, emotions, attitude towards green packaging, trust in the green brand, environmental attitude, awareness of the green brand (green product), and environmental concern are effective. This means that around 30 percent of plausible psychological factors are substantial in Hungary. Price sensitivity, environmental protection, environmental awareness, environmental pragmatism, and saving resources, as the personal factors, affect green consumer behavior to buy agriculture and food products. All sub-factors of belief-value indicator are effective, including consumer opinions, values, collectivism-individualism, mental norms, freedom (liberalism), and religious beliefs.

Table 2. Fuzzy score of main factors and secondary factors

Main Factor	Secondary Factor	Fuzzy Score	Defined Symbol	Result
(1) Marketing mix factors	(1) Green product design	0.7333464345	C1	Acceptable
	(2) Distribution	0.7884179955	C2	Acceptable
	(3) Price	0.845739819	C3	Acceptable
	(4) Promotional activities	0.701675275	C4	Acceptable
	(5) Green Marketing	0.7004806065	C5	Acceptable
(2) Product-related factors	(1) Access	0.5440699155	*	Unacceptable
	(2) Perceived quality	0.7884179952	S1	Acceptable
	(3) Brand name	0.7237976105	S2	Acceptable
	(4) Convenience and durability	0.718407627	S3	Acceptable
	(5) Environmental label	0.578616642	*	Unacceptable
	(6) Loyalty to the brand	0.1079285195	*	Unacceptable
	(7) Packaging	0.5292101725	*	Unacceptable
	(8) Performance	0.759954526	S4	Acceptable

	(9) Safety and health	0.9001075515	S5	Acceptable
	(10) Green brand image	0.752161424	S6	Acceptable
	(11) Green image of the organization	0.4617225695	*	Unacceptable
(3) Sociocultural factors	(1) Social effects	0.707935498	P1	Acceptable
	(2) Peer group influence	0.749528934	P2	Acceptable
	(3) Environmental effects	0.7321418365	P3	Acceptable
	(4) Reference groups	0.7355546345	P4	Acceptable
	(5) Government stimuli	0.7538983225	P5	Acceptable
	(6) Culture	0.708149641	P6	Acceptable
(4) Psychological factors	(1) Attitude towards green product	0.7192244945	DS1	Acceptable
	(2) Perceived risk	0.526635018	*	Unacceptable
	(3) Perception	0.5931906545	*	Unacceptable
	(4) Emotions	0.710491857	DS2	Acceptable
	(5) Attitude towards green packaging	0.7360875135	DS3	Acceptable
	(6) Trust in the green brand	0.7139038835	DS4	Acceptable
	(7) Consumer's perceived value	0.5780185647	*	Unacceptable
	(8) Environmental attitude	0.730056252	DS5	Acceptable
	(9) Awareness of the green brand (green product)	0.72044894	DS6	Acceptable
	(10) Perceived behavioral control	0.540436536	*	Unacceptable
	(11) Perceptual importance of problems	0.573920173	*	Unacceptable
	(12) Doubts and doubts about buying green products	0.11727158	*	Unacceptable
	(13) Waiting	0.6938277815	*	Unacceptable
	(14) Perceptual environmental responsibility	0.5653060755	*	Unacceptable
	(15) Perceived effectiveness	0.530293083	*	Unacceptable
	(16) Worrying about impressions (personal image)	0.5443761805	*	Unacceptable
	(17) Attitude based on marketing activities	0.4588048795	*	Unacceptable
	(18) Environmental concern	0.739362329	DS7	Acceptable
(5) Personal factors	(1) Interpersonal effects	0.5088055655	*	Unacceptable
	(2) Previous experience	0.5222983965	*	Unacceptable
	(3) Environmental knowledge	0.3871537245	*	Unacceptable
	(4) Being thrifty	0.5352611665	*	Unacceptable
	(5) Conscious behavior	0.621020713	*	Unacceptable
	(6) Intention to buy green	0.5235297645	*	Unacceptable
	(7) Demographic factors	0.337120786	*	Unacceptable
	(8) Price sensitivity	0.7311088045	M1	Acceptable
	(9) General environmental behavior	0.6350735205	*	Unacceptable
	(10) Environmental protection	0.741900463	M2	Acceptable
	(11) Environmental awareness	0.7369485205	M3	Acceptable
	(12) Environmental pragmatism	0.717756953	M4	Acceptable
	(13) Saving resources	0.735587291	M5	Acceptable
(6) Belief-value factors	(1) Consumer opinions	0.721643235	F1	Acceptable
	(2) Values	0.72720843	F2	Acceptable
	(3) Collectivism and individualism	0.759949464	F3	Acceptable
	(4) Mental norms	0.7258738755	F4	Acceptable
	(5) Freedom (liberalism)	0.7495835645	F5	Acceptable
	(6) Religious beliefs	0.7129035815	F6	Acceptable

Source: own construction

Table 3. 35 sub-factors out of 59 sub-factors under 6 main factors

Main Factor	Secondary Factor
(1) Marketing mix factors	(1) Green product design
	(2) Distribution
	(3) Price
	(4) Promotional activities
	(5) Green Marketing
(2) Product-related factors	(1) Perceived quality
	(2) Brand name
	(3) Convenience and durability
	(4) Performance
	(5) Safety and health
	(6) Green brand image
(3) Sociocultural factors	(1) Social effects
	(2) Peer group influence
	(3) Environmental effects
	(4) Reference groups
	(5) Government stimuli
	(6) Culture
(4) Psychological factors	(1) Attitude towards green product
	(2) Emotions
	(3) Attitude towards green packaging
	(4) Trust in the green brand
	(5) Environmental attitude
	(6) Awareness of the green brand (green product)
	(7) Environmental concern
(5) Personal factors	(1) Price sensitivity
	(2) Environmental protection
	(3) Environmental awareness
	(4) Environmental pragmatism
	(5) Saving resources
(6) Belief-value factors	(1) Consumer opinions
	(2) Values
	(3) Collectivism and individualism
	(4) Mental norms
	(5) Freedom (liberalism)
	(6) Religious beliefs

Source: own construction

6. Conclusion

This study has aimed to investigate the existing literature in the field of factors affecting consumers' green purchasing behavior and to determine the influencing factors on consumer behavior in green purchasing of food and agriculture products in Hungary. In this research, the fuzzy Delphi technique was used via distributing a semi-structured questionnaire with Likert scoring in one step. Finally, 35 sub-factors out of 59 sub-factors under 6 main factors were accepted as influencing factors. Health and safety, price, distribution, perceived quality, and performance have the highest importance among the approved sub-factors, and all of them belong to the two main factors of marketing mix factors and product-related factors. The marketing mix factor

shows to managers that every business knows its potential better and guarantees its success by formulating an efficient strategy and preparing a detailed business plan. The product-related factor demonstrates that customers pay attention to the quality of product production first when buying a green product.

This study was conducted in Hungary, and the results can be utilized by firms in this country to pay more attention to consumer behavior and attitudes towards their products and to identify new innovative technologies for future products. This study offers opportunities for future research into consumer behavior and attitudes toward sustainable consumption of different products, suggesting companies and traditional producers develop and implement new market strategies. The approaches that managers and producers of green products can apply to guide the norms of customers and increase their productivity are as follows: (i) creating awareness among customers about the benefits and importance of green products and emphasizing their environmental effects; (ii) encouraging customers to perform positive environmental behaviors such as waste separation, saving energy, and supporting green-label products; (iii) providing solutions for participation in environmental protection and encouraging customers to feel social responsibility towards the environment and society; (iv) providing a positive and satisfactory shopping experience for customers of green products; and (v) establishing continuous and active communication with customers, better understanding their needs and expectations, and providing appropriate answers.

References

Ahmed, R. R. – Streimikiene, D. – Qadir, H. – Streimikis, J. (2023): Effect of green marketing mix, green customer value, and attitude on green purchase intention: Evidence from the USA. *Environmental Science and Pollution Research*, 30(5), 11473–11495. DOI: 10.1007/s11356-022-22944-7

Alavi Foumani, S. F. – Gholipour Soleimani, A. – Rezaee Kelidbari, H. (2022): Developing a model for implementing consumer green purchase behavior using grounded theory. *Environmental Education and Sustainable Development*, 10(4), 53-69. DOI: 10.30473/ee.2022.58102.2334

Boca, G. D. (2021): Factors influencing consumer behavior in sustainable fruit and vegetable consumption in maramures county, Romania. *Sustainability*, 13(4), 1812. DOI: 10.3390/su13041812

Chandra Sekhar, S. – Vemula, R. – Rana, S. (2022): Consumer awareness and perception towards green marketing: An empirical study in Bangalore City. *Journal of Positive School Psychology*, 6(5), 4240-4245.

Chaudhary, R. – Bisai, S. (2018): Factors influencing green purchase behavior of millennials in India. *Management of Environmental Quality: An International Journal*, 29(5), 798-812. DOI: 10.1108/MEQ-02-2018-0023

Chen, Y. S. – Chang, C. H. (2012): Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision*, 50(3), 502-520. DOI: 10.1108/00251741211216250

Dalir, E. – Ghasemi, M. (2020): An analysis of the green level of consumer behaviors in rural households and its effective individual factors (Case study: Khaf

County): *Consumer Behavior Studies Journal*, 6(2), 219-247. DOI: 10.34785/J018.2019.300

García-Salirrosas, E. E. – Rondon-Eusebio, R. F. (2022): Green marketing practices related to key variables of consumer purchasing behavior. *Sustainability*, 14(14), 8499. DOI: 10.3390/su14148499

Goh, S. K. – Balaji, M. S. (2016): Linking green skepticism to green purchase behavior. *Journal of Cleaner Production*, 131, 629-638. DOI: 10.1016/j.jclepro.2016.04.122

Haba, H. F. – Bredillet, C. – Dastane, O. (2023): Green consumer research: Trends and way forward based on bibliometric analysis. *Cleaner and Responsible Consumption*, 8, 100089. DOI: 10.1016/j.clrc.2022.100089

Habibi, A. – Izdiyar, S. – Serafrazi, A. (2013): Fuzzy multicriteria decision-making. Rasht: Katiba Gil.

Hasnain, A – Raza, S. H. – Qureshi, U. S. (2020): The impact of personal and cultural factors on green buying intentions with mediating roles of environmental attitude and eco-labels as well as gender as a moderator. *South Asian Journal of Management*, 14(1), 1-27. DOI: 10.21621/sajms.2020141.01

Jaini, A. – Quoquab, F. – Mohammad, J. – Hussin, N. (2020): Antecedents of green purchase behavior of cosmetics products: An empirical investigation among Malaysian consumers. *International Journal of Ethics and Systems*, 36(2), 185-203. DOI: 10.1108/IJOES-11-2018-0170

Javidi Kermaninezhad, M. – Forozandeh Dehkordi, L. – Hosseini, M. – Parhizgar, M. M. (2020): Identification and extraction of factors affecting consumers' green purchase behavior using a meta-synthesis method. *Consumer Behavior Studies*, 7(2), 48-73. DOI: 10.34785/J018.2020.442

Jermsittiparsert, K. – Namdej, P. – Somjai, S. (2019): Green supply chain practices and sustainable performance: moderating role of total quality management practices in electronic industry of Thailand. *International Journal of Supply Chain Management*, 8(3), 33-46. DOI: 10.59160/ijscm.v8i3.3247

Jindoliya, D. – Nagra, G. (2020): The impact of consumer's engagement in Pro-environment activities on the preference for green food products. *Ecology, Environment and Conservation*, 26, 281-285.

Lee, J. – Haley, E. (2022): Green consumer segmentation: consumer motivations for purchasing pro-environmental products. *International Journal of Advertising*, 41(8), 1477-1501. DOI: 10.1080/02650487.2022.2038431

Lim, I. – Lady, L. (2023): Factors that influence green purchase behavior by green purchase intention on green apparel. *International Journal of Indonesian Business Review*, 2(1), 1-17. DOI: 10.54099/IJIBR.V2I1.390

Liu, J. – Yang, W. – Cong, L. (2022): The role of value co-creation in linking green purchase behavior and corporate social responsibility: An empirical analysis of the agri-food sector in China. *Journal of Cleaner Production*, 360, 132195. DOI: 10.1016/J.JCLEPRO.2022.132195

Majeed, A. – Ahmed, I. – Rasheed, A. (2022): Investigating influencing factors on consumers' choice behavior and their environmental concerns while purchasing green products in Pakistan. *Journal of Environmental Planning and Management*, 65(6), 1110-1134. DOI: 10.1080/09640568.2021.1922995

Martínez, M. P. – Cremasco, C. P. – Gabriel Filho, L. R. A. – Braga Junior, S. S. – Bednaski, A. V. – Quevedo-Silva, F. – Correa, C. M. – da Silva, D. – Moura-Leite Padgett, R. C. (2020): Fuzzy inference system to study the behavior of the green consumer facing the perception of greenwashing. *Journal of Cleaner Production*, 242, 116064. DOI: 10.1016/J.JCLEPRO.2019.03.060

Moazzam, M. – Ahmad, M. – Hussain, A. – Akram, M. A. (2023): Examining the factors that shape green purchase behavior: The role of subjective norms, self-efficacy, attitude and intention. *Bulletin of Business and Economics (BBE)*, 12(3), 221-232. DOI: 10.61506/01.00027

Mulyono, K. B. – Murtini, W. – Hindrayani, A. – Totalia, S. A. – Ningsih, S. H. (2023): The way to save environment from green consumer behavior: The role of advertising, media, and lifestyle. *IOP Conference Series: Earth and Environmental Science*, 1248(1), 012020. DOI: 10.1088/1755-1315/1248/1/012020

Mustikasari, R. P. (2023): The effect of E-WOM on green purchase behavior. *Arkus*, 9(1), 291-297. DOI: 10.37275/ARKUS.V9I1.296 DOI: 10.37275/arkus.v9i1.296

Ogiemwonyi, O – bin Harun, A – Othman, B. A – Ismael, D. A. – Ali, R. (2019): Key issues and challenges of green consumer in consuming green product an insight from the emerging country: Malaysia. *International Journal of Psychosocial Rehabilitation*, 23(2), 514-528. DOI: 10.37200/IJPR/V23I2/PR190313

Paul, J – Modi, A. – Patel, J. (2016): Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, 29, 123-134. DOI: 10.1016/J.JRETCONSER.2015.11.006.

Quach, S – Septianto, F – Thaichon, P. – Nasution, R. A. (2022): The role of art infusion in enhancing pro-environmental luxury brand advertising. *Journal of Retailing and Consumer Services*, 64, 102780. DOI: 10.1016/J.JRETCONSER.2021.102780

Rahbar, E. – Wahid, N. A. (2011): Investigation of green marketing tools' effect on consumers' purchase behavior. *Business Strategy Series*, 12(2), 73-83. DOI: 10.1108/17515631111114877

Roh, T. – Noh, J. – Oh, Y. – Park, K. S. (2022): Structural relationships of a firm's green strategies for environmental performance: The roles of green supply chain management and green marketing innovation. *Journal of Cleaner Production*, 356, 131877. DOI: 10.1016/J.JCLEPRO.2022.131877

Rutkowska, M. – Bartoszczuk, P. – Singh, U. S. (2021): Management of GREEN consumer values in renewable energy sources and eco innovation in INDIA. *Energies*, 14(21), 7061. DOI: 10.3390/EN1421706

Setiawan, B. – Gendalasari, G. G. – Putrie, D. R. (2022): Analysis of consumers' green purchase behavior on bottled water through a green brand image approach. *Riset: Jurnal Aplikasi Ekonomi Akuntansi dan Bisnis*, 4(2), 001-011. DOI: 10.37641/RISET.V4I2.167

Sheikh, A – Mirzaei, M. – Ahmadinejad, B. (2023): Factors influencing green purchase behavior: Price sensitivity, perceived risk, and attitude towards green products. *Contemporary Management Research*, 19(3), 153–174. DOI: 10.7903/CMR.22824

Simamora, E. R. – Graciafernandy, M. A. (2023): Brand congruity with parent brand membengaruhi green purchase behavior? *Solusi*, 21(4), 847–857. DOI: 10.26623/SLSI.V21I4.796

Singh, S. (2023): Assessment of green consumer behavior and waste disposal pattern. *Pollution Research*, 42(3), 324–330. DOI: 10.53550/pr.2023.v42i03.003

Sobuj, M. – Khan, A. M. – Habib, M. A. – Islam, M. M. (2021): Factors influencing eco-friendly apparel purchase behavior of Bangladeshi young consumers: case study. *Research Journal of Textile and Apparel*, 25(2), 139-157. DOI: 10.1108/RJTA-10-2019-0052

Sun, Y. – Li, T. – Wang, S. (2022): "I buy green products for my benefits or yours": Understanding consumers' intention to purchase green products. *Asia Pacific Journal of Marketing and Logistics*, 34(8), 1721–1739. DOI: 10.1108/APJML-04-2021-0244

Tawde, S. – Kamath, R. – ShabbirHusain, R. v. (2023): 'Mind will not mind': Decoding consumers' green intention-green purchase behavior gap via moderated mediation effects of implementation intentions and self-efficacy. *Journal of Cleaner Production*, 383, 135506. DOI: 10.1016/J.JCLEPRO.2022.135506

Witek, L. – Kuźniar, W. (2020): Green purchase behavior: The effectiveness of sociodemographic variables for explaining green purchases in emerging market. *Sustainability*, 13(1), 209. DOI: 10.3390/su13010209

Yadav, R. – Pathak, G. S. (2017): Determinants of consumers' green purchase behavior in a developing nation: Applying and extending the theory of planned behavior. *Ecological Economics*, 134, 114-122. DOI: 10.1016/J.ECOLECON.2016.12.019

Yang, H. – Zhang, P. – Liu, H. (2023): The influence of the brand image of green agriculture products on China's consumption intention: The mediating role of perceived value. *Plos One*, 18(10), e0292633. DOI: 10.1371/journal.pone.0292633

Yusiana, R. – Widodo, A. – Hidayat, A. M. (2021): Green purchase intention: An investigation of green brand knowledge and green perceived value of bioplastic products in Bandung, Indonesia. *Inclusive Society and Sustainability Studies*, 1(2), 24-32. DOI: 10.31098/issues.v1i2.709