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SUSTAINABLE CONSUMPTION PRACTICES AMONG HOUSEHOLDS - EVIDENCE FROM BULGARIA

Abstract. *The concept of sustainable consumption refers to the use of goods and services that meet current needs without compromising the ability of future generations to meet theirs. There is a variety of researchers' viewpoints regarding sustainable consumer behaviour, and while some researchers see it as a manifestation of voluntary simplification of lifestyle or anti-consumption, others define it as the adoption of environmentally friendly living practices. The sustainable practices applied by Bulgarian households that are the research focus of the present study. The scientific paper analyses the perceptions of Bulgarian households towards the implementation of sustainable practices and the extent of their popularity among households. The main challenges to the introduction of sustainable consumption practices also fall into the focus of the research. Households around the world apply various practices for sustainable consumption, the most common being composting, recycling, use of sustainable transport, repair and reuse of various goods, consumption of goods of local origin, etc. These practices are analysed in the present paper, presenting the results of a survey conducted among 191 Bulgarian households. The article gives a clear idea of the prevalence of sustainable consumption practices in Bulgaria, and on this basis are formulated the main challenges and recommendations for their wider integration among the population.*

Keywords: *household behaviour, sustainability, sustainable consumption, financial literacy*

JEL classification: *D14, G53, Q56*

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მდგრადი მოხმარების პრაქტიკა შინამეურნეობებში - მტკიცებულება ბულგარეთიდან

აბსტრაქტი. *მდგრადი მოხმარების კონცეფცია გულისხმობს საქონლისა და მომსახურების გამოყენებას, რომელიც აკმაყოფილებს მიმდინარე მოთხოვნილებებს მომავალი თაობების შესაძლებლობის დაკმაყოფილების გარეშე. მკვლევართა თვალსაზრისი არსებობს მდგრადი მომხმარებელთა ქცევასთან დაკავშირებით და სანამ ზოგიერთი მკვლევარი მას ცხოვრების წესის ნებაყოფლობით გამარტივების ან მოხმარების საწინააღმდეგო გამოვლინებად თვლის, სხვები მას განმარტავენ, როგორც ეკოლოგიურად სუფთა ცხოვრების პრაქტიკის მიღებას. ბულგარეთში შინამეურნეობების მიერ გამოყენებული მდგრადი პრაქტიკა, რომელიც წარმოადგენს წინამდებარე კვლევის ფოკუსს. სამეცნიერო ნაშრომი აანალიზებს ბულგარეთის შინამეურნეობების აღქმას მდგრადი პრაქტიკის დანერგვის მიმართ და მათი პოპულარობის ხარისხს შინამეურნეობებში. მდგრადი მოხმარების პრაქტიკის დანერგვის მთავარი გამოწვევები ასევე ხვდება კვლევის ფოკუსში. ოჯახები მთელს მსოფლიოში იყენებენ სხვადასხვა პრაქტიკას მდგრადი მოხმარებისთვის, ყველაზე გავრცელებულია კომპოსტირება, გადამუშავება, მდგრადი ტრანსპორტის გამოყენება, სხვადასხვა საქონლის შეკეთება და ხელახალი გამოყენება, ადგილობრივი წარმოების საქონლის მოხმარება და ა.შ. ეს პრაქტიკა გაანალიზებულია წინამდებარე ნაშრომში. ბულგარეთის 191 ოჯახში ჩატარებული გამოკითხვის შედეგები. სტატიაში მოცემულია მკაფიო წარმოდგენა ბულგარეთში მდგრადი მოხმარების პრაქტიკის გავრცელების შესახებ და ამის საფუძველზე ჩამოყალიბებულია ძირითადი გამოწვევები და რეკომენდაციები მოსახლეობაში მათი უფრო ფართო ინტეგრაციისთვის.*

საკვანძო სიტყვები: *საყოფაცხოვრებო ქცევა, მდგრადობა, მდგრადი მოხმარება, ფინანსური ცოდნა*

JEL კლასიფიკაცია: *D14, G53, Q56*

Introduction and review of literature

Fundamentally, the concept of sustainable consumption refers to the use of goods and services that meet current needs without compromising the ability of future generations to meet their own needs. Sustainable consumption represents a departure from conventional consumption patterns that are widespread in the Global North and prioritise economic growth and individualistic materialism and requires a more conscious and responsible approach to consumption that seeks to minimise environmental impact, promote social justice, and improve overall well-being. To date, the integration of sustainable consumption as a consumption model is gaining in importance and popularity and is an integral part of global discussions on solutions to climate change.

There are many different perspectives in the field of sustainable consumption behaviour (Linde & Philippov, 2021). Some researchers view it as a manifestation of voluntary lifestyle simplification or anti-consumerism (Black, 2010), while others define it as the adoption of environmentally friendly living practices (e.g., Gilg, Barr, & Ford, 2005). The diverse range of views and explanations associated with sustainable consumer behaviour makes it a complex phenomenon to understand and predict. Some marketers and policy makers emphasize the need to understand the social and institutional actions that can promote environmentally friendly behaviour among consumers (Phipps et al., 2013), while others suggest examining the role of personal values on sustainable behaviour (Sener and Hazer, 2008). Therefore, an important question arises: do consumers engage in sustainable consumption behaviour due to intrinsic motivation, social pressure, or both? The existing literature provides an ambiguous answer to this question.

Studies show that most people still believe that the economy is primarily about the production and consumption of products and services, even though researchers have shown that people are consuming products and services faster than the natural ecosystem can be regenerated, reprocessed, or recycled (Wackernagel et al., 2002). The current culture of consumption must change to enable a transition to a circular economy; otherwise, policies at EU level, such as the European Green Deal (European Commission, 2019) and the Circular Economy Action Plan (European Commission, 2020), will remain only theoretical instruments that will not change the course of the current unsustainable economic paradigm.

Understanding household consumption patterns is rooted in understanding human behaviour. Numerous factors contribute to consumption habits, including rising incomes, the globalisation of the economy, technological advances (such as the internet and mobile phones), widespread advertising, smaller household sizes and an ageing population. However, the expansion in the volume of goods and services we consume often counteracts the efficiency gains achieved through improvements in production technologies and processes. This phenomenon, known as the Jevons paradox, highlights how technological change is driving increased production and consumption, with correspondingly increased pressure on the environment. At the household level, housing, food and drink, and mobility have the most significant environmental impacts in terms of greenhouse gas emissions, acidification, ozone depletion, and resource and energy consumption (EEA, 2005, 2010). These activities are closely intertwined with lifestyles and daily habits that shape household consumption behaviour and practices, ultimately determining energy and water consumption and waste generation (Shopova, Petrova & Todorov, 2023). Such routine activities cover comfort aspects such as home heating and lighting, hygiene practices such as bathing and laundry, food storage and meal preparation, as well as communication, entertainment, education, and transport. Because these routines are deeply rooted, they fit into the social, cultural, and physical infrastructure. Consequently, when seeking to effect change, overcoming the resistance to change arising from social and cultural embeddedness becomes critical. This perspective is essential for pursuing changes in household practices for sustainable consumption as it recognizes the importance of social and cultural factors in both the consumption and.

Policy measures, consumer education and information play an essential role in achieving sustainable consumption patterns that enable consumers to act sustainably and adopt more sustainable consumption practices (EEA, 2010). Promoting sustainable household consumption requires a multifaceted approach involving public policy, market innovation, mobilisation of consumer groups by NGOs and voluntary initiatives (Todorov, Aleksandrova, & Marinov, 2023). Creating an educational, training and information-rich environment that motivates and empowers consumers to take action is necessary to establish a framework for ESC.

In 2008, the Organisation for Economic Co-operation and Development (OECD (2008a)) reviewed empirical evidence on the determinants of sustainable consumption and household behaviour in key areas of economic development and environmental policies, such as waste generation and recycling, personal transport choices, residential energy use, food consumption and household water use (Todorov, Aleksandrova, & Ismailov, 2023). These categories serve as a basis for improving the effectiveness and efficiency of those policies that affect household consumption, while also addressing social issues, national economic development, etc. It is these determinants that underpin in-depth research and analysis on sustainable household consumption.

Main body

The main body of this article analyses sustainable consumption practices implementation among Bulgarian households. One hundred ninety-one Bulgarian citizens of different age groups with different household profiles participated in the survey. The survey was conducted online (Google form) and was self-administered by the authors of the paper. A hyperlink to the questionnaire was sent to over 250 potential respondents with 191 willing to complete the survey. These 191 respondents formed the sample of voluntary responses to the survey. The survey was conducted in the first half of 2023 and provides up-to-date and relevant information and data to the economic situation.

The anonymity of the respondents is guaranteed during the survey as according to the Personal Data Protection Policy applicable in the territory of the Republic of Bulgaria, before starting the survey, the respondents are informed that their answers will be processed and used for the purposes of the survey in compliance with the principles of data protection and academic ethics. It is also mentioned that completing the survey does not entail any subsequent commitments for the respondents related to the survey.

The questionnaire consists of 26 questions of different types, including single-answer, rating scale, and Likert-type questions. The introductory questions focus on the socio-demographic profile of the respondents, with the first three questions collecting information on the age group of the respondent, the type of household to which the respondent belongs and the average monthly disposable income of the household. Next, the respondents' level of awareness of the concept of sustainable consumption is explored through self-assessment. The main challenges to the adoption of sustainable consumption practices, the relationship between household income levels and sustainable consumption, its economic benefits, and its impact on the local and national economy were also the focus of the questions. Special emphasis is placed on the consumption of non-food commodities such as heating, energy, household appliances and vehicle fuels over the last 10 years as these are the commodities that are fundamental in defining consumption as sustainable or not. A significant proportion of the questions are of the 'rating scale' type as they look at household attitudes towards the implementation of sustainable practices and consumption choices in the context of transport, reducing the use of plastic waste, reuse of goods, waste reduction, recycling, etc. The survey also contained questions on government policies and practices in the area of sustainability, and in addition to household awareness, also explored their attitudes on taking advantage of government initiatives or incentives. Finally, respondents' views on the

place of sustainable consumption and financial literacy (Aleksandrova & Ismailov, 2021) in the school curricula were explored (Aleksandrova & Ismailov, 2021).

The following questions in the survey direct respondents to the specific sustainable consumption practices they apply in their households. The answers to these questions are essential for the study, as so far, their attitudes, understanding of the concept of sustainable consumption and their views on the income-sustainable consumption relationship have been explored, while the focus of the following questions will provide a clear insight into whether or not households are implementing such in practice.

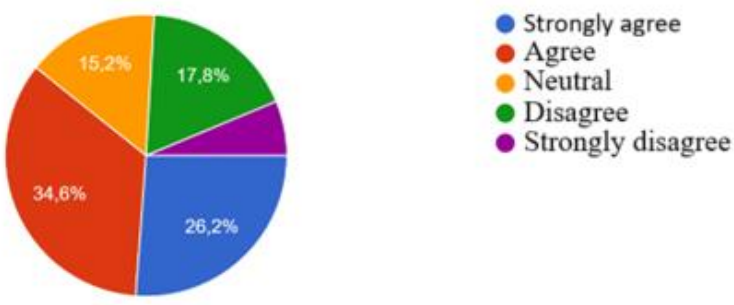
Households around the world apply different practices to sustainable consumption. Some of these are related to waste reduction, recycling, and composting. Recycling leads to a number of economic benefits for households. Firstly, it helps to reduce the cost of waste disposal, as recyclable materials can often be reprocessed and reused at a lower cost than in the production of new materials. This can lead to potential savings on waste management fees or waste collection services. Secondly, recycling can create economic opportunities by supporting the recycling industry and creating jobs in areas such as collection, sorting, processing, and manufacturing. In addition, recycling saves resources by reducing the need to extract raw materials and the associated costs. This can lead to cost savings for industry and potentially contribute to lower prices for some products, which benefits households as consumers. Overall, recycling can provide economic benefits by saving waste management costs, creating jobs, and promoting resource conservation. For the above reasons, the next question in the survey focuses specifically on recycling.

Of the 191 individuals who participated in the survey, 34.6% stated that they tend to agree with the statement, "In my household, we separate recyclables (e.g., paper, plastic, glass, metal) from our household waste," and 26.2% strongly agree. 17.8% of respondents disagreed somewhat with the statement and 6.3% strongly disagreed (See Fig. 1).

Fig. 1. Adoption of recycling as a sustainable practice among Bulgarian households (Q: To what extent do you agree with the following statement, "In my household, we separate recyclables (e.g., paper, plastic, glass, metal) from our household waste.")

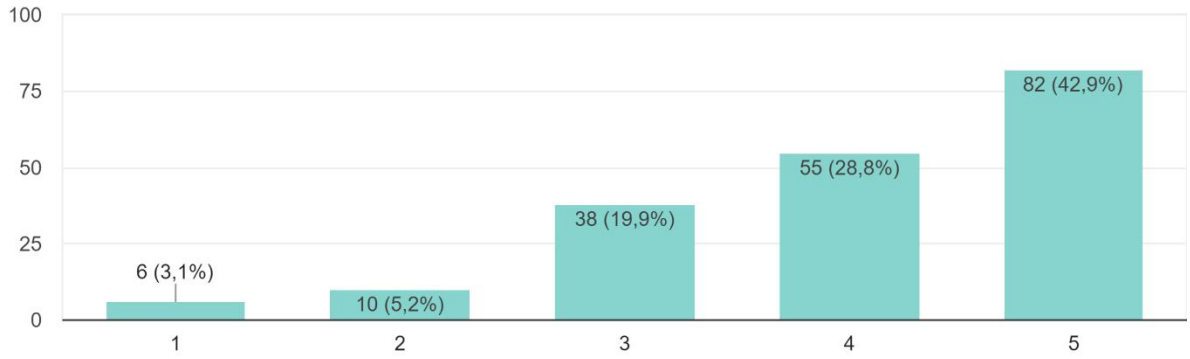
It can be concluded from the above responses that more than half or 60.8% of the Bulgarian households participating in the survey separate recyclable materials from their household waste.

Next, the authors raise the question of the application of energy saving practices. As already clarified energy consumption is of fundamental importance when considering the concept of sustainability and sustainable consumption. Energy consumption questions are asked several times in this study with the specific one requiring respondents to rate on a scale of 1 to 5 the extent to which their household implements energy saving practices such as: using energy saving appliances, turning off lights when not in use and adjusting thermostat settings.



Survey results. Source: the authors.

Fig. 2. Adoption of energy saving practices among Bulgarian households (Q: On the scale of 1 to 5, how often your household applies sustainable energy practices such as: using energy saving appliances, turning off the lights while not used, regulating thermostat etc.)



Survey results. Source: the authors

When asked this question, the respondents convincingly answered that they apply energy saving practices with 82 persons or 42.9% strongly confirming that they orient their energy consumption towards saving and 28.8% stating that they do so frequently (See Fig. 2). Only 6 of the respondents stated that they never implement energy saving practices and 5.2% stated that they do so very rarely. Based on the responses indicated by the respondents and analysed by the authors, it can be argued that 71.7% of the representatives of the households covered by the survey implement sustainable energy saving practices.

Another globally widespread sustainable consumption practice implemented by households is sustainable transport. It guarantees various economic benefits for households. Choosing sustainable transport options such as public transport, cycling or walking can significantly reduce a household's transport costs. Public transport often provides more affordable fares than owning and maintaining a private car, saving households money on fuel, insurance, parking, and maintenance costs. Cycling or walking are virtually free modes of transport, completely removing the need for fuel.

Next, sustainable transport can help improve air quality and reduce health care costs. By reducing reliance on private vehicles and promoting alternatives that produce fewer emissions, households can help reduce air pollution, which can lead to lower levels of respiratory illness and associated health care costs.

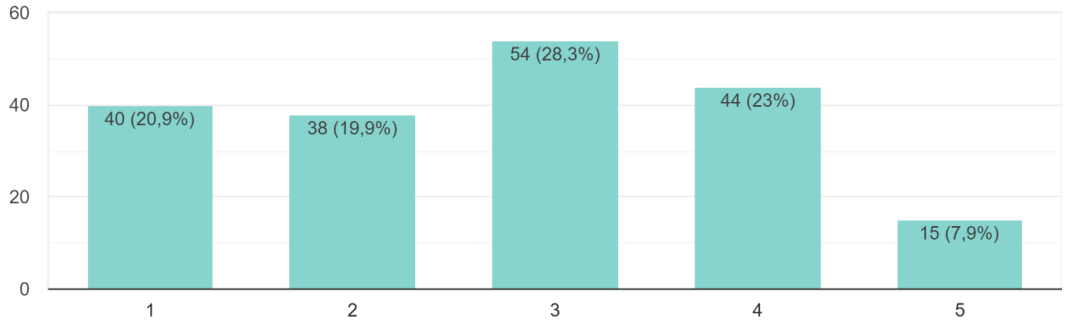
In addition, sustainable transport can improve overall accessibility and mobility. Investing in public transport systems and infrastructure for pedestrians and cyclists can improve connectivity by making it easier and more affordable for households to reach essential services, employment opportunities and recreational activities.

In addition, promoting sustainable transport supports the local economy. It can create jobs in industries related to public transport, cycling infrastructure and maintenance. Investment in sustainable transport also stimulates economic growth by attracting businesses and tourists to areas with well-developed public transport systems and pedestrian-friendly infrastructure.

The economic benefits and their effect on both the macro environment and individual households are the prerequisite for the authors to explore the frequency of this practice in this paper. The question posed to respondents asks them to rate on a scale of 1 to 5 how often their household

applies sustainable transport practices such as using public transport, carpooling, or cycling with 1 suggesting a response of 'never' and 5 suggesting 'always'.

Fig. 3. Adoption of sustainable transport practices among Bulgarian households (Q: On the scale of 1 to 5, how often your household implements sustainable transportation practices such as: public transport,



Survey results. Source: the authors.

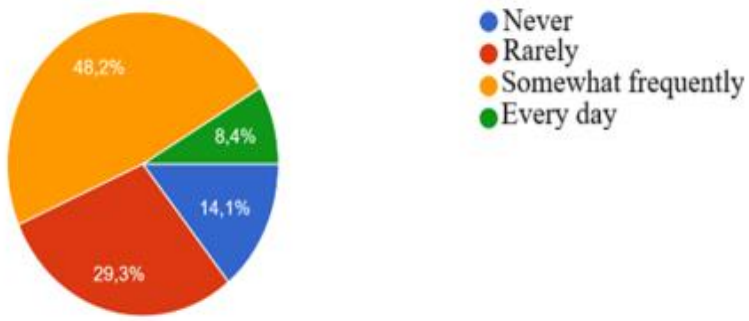
In contrast to the previous two questions, which focused on the implementation of sustainable practices, the responses to this question show that only 30.9% or 59 of the 191 respondents often or always use sustainable transport. Of these, only 7.9% do so always (daily). In contrast, 41.8%, of which 20.9% never and 19.9% rarely use the mentioned modes of transportation (See Fig. 3).

These responses are explained by the fact that the popularity and adoption of sustainable transport among Bulgarian households varies under the influence of different factors. The availability and quality of sustainable transport infrastructure, such as cycle lanes, pedestrian paths, and efficient public transport networks, can have a significant impact on its popularity. If infrastructure is lacking or poorly developed, this can discourage people from choosing sustainable transport options. Lack of awareness and understanding of the benefits of sustainable transport options can hinder their popularity. If households are not aware of the benefits, cost savings or environmental impacts of sustainable transport, they may be less likely to choose these options.

However, the most significant factor in the non-use of sustainable transport among Bulgarian households is social norms. In this case, there is a strong car-oriented culture or preference for private vehicles in Bulgaria. This factor, the lack of so-called "green lanes" for transport, combined with the insufficient promotion of alternatives among the public, build serious barriers to the transition to sustainable alternatives.

Having addressed the issue of organic food and locally sourced products, the authors turn the study to sustainable consumer choices such as buying second-hand goods, reusing, and refurbishing products and supporting eco-certified brands.

Fig. 4. Frequency of implementation of sustainable consumption choices (Q: How often your household implements sustainable consumption practices and choices such as: buying second-hand goods, reusing, repairing, supporting eco-certified brands)

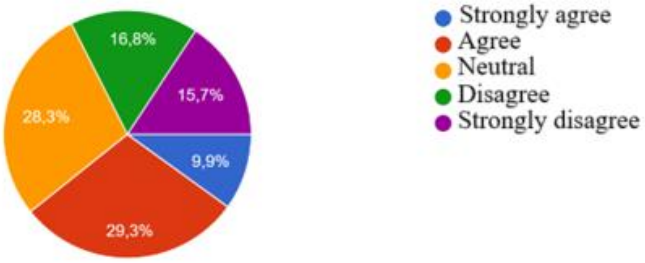


Survey results. Source: the authors.

The answers to this question differ substantially from most related to the implementation of sustainable practices. Only 8.4% of respondents answered that they make sustainable consumer choices daily. 14.1% strongly reject this possibility, and 29.3% say they do so rarely. The largest proportion of respondents, 48.2% or 92 people, said they sometimes implement the options listed (See Fig. 4). Again, as with the question posed about sustainable transport, social norms and understanding of the issues among the public are the most significant factors in the poorly expressed sustainable consumer choice over the listed alternatives. The association that Bulgarian households make with the consumption of second-hand goods, reuse and refurbishment is linked to low social status and several social prejudices (Hristova, 2019). As with the issue of sustainable transport, a possible solution to encourage the implementation of these practices is to raise awareness among households (Bulgarian society).

The next alternative on the spectrum of sustainable consumption that the authors consider is composting. This is closely linked to sustainable consumption as it contributes to waste reduction, resource conservation and the creation of nutrient-rich soil.

Fig. 5. Adoption of composting as a sustainable consumption practice among Bulgarian households (Q: To what extent do you agree with the following statement, "In my household we compost organic waste, for example food scraps or garden waste.")



Survey results. Source: the authors.

When asked, "To what extent do you agree with the following statement: 'In my household we compost organic waste, for example food scraps or garden waste'", 9.9% of respondents answered strongly in the affirmative, while 29.3% or 56 persons said they rather agreed. Fifty-four of the respondents or 28.3% felt that they could not decide how to answer the question posed, 16.8% of people disagreed rather strongly with the statement and 19 people (9.9%) disagreed strongly. This means that less than half of the sampled households compost organic waste. In fact, this response is not surprising, as even if we assume that most Bulgarian households are aware of the benefits of this practice and are willing to do so, there is a lack of a targeted and adequate policy by the state and local administrations to promote it.

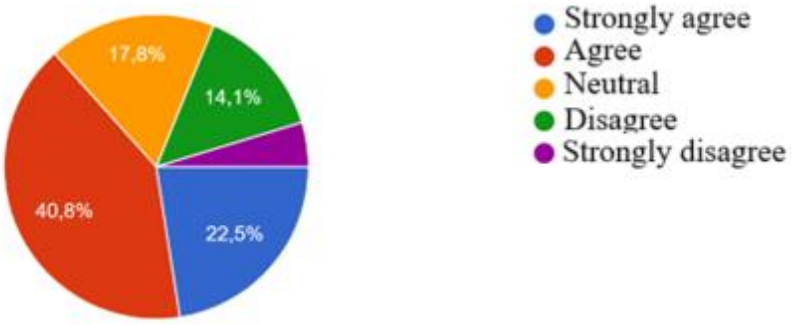
In many of the European member states, composting initiatives have been financed experimentally through the EU Structural Funds. Several European countries have made significant efforts in the field of composting and show high levels of implementation of this sustainable practice. These include Austria, Germany, the Netherlands, Switzerland, Denmark, Belgium, Finland, and Sweden (María Pilar López-Portillo, Guillermo Martínez-Jiménez, Eva Ropero-Moriones, María Concepción Saavedra-Serrano, 2021). Austria is a leader in the field and has achieved high levels of composting. The country has well-established composting systems and infrastructure. Germany, for its part, has made significant investments in composting facilities and has a rich culture of waste separation and recycling. Composting is widespread at household and community level.

Switzerland has a comprehensive waste management system that includes extensive composting. The country promotes composting through education, infrastructure, and waste management policies. The Netherlands implements successful composting programmes, especially in organic waste management. Denmark shows a high level of composting, with composting practices being widespread at different levels, including households, communities, and farms. Belgium, Finland, and Sweden have made significant investments in composting infrastructure over the last two decades and therefore record high levels of organic waste recycling.

It is important to note that composting practices and feasibility rates can vary within countries and regions. However, the countries mentioned above have earned international recognition for their achievements and commitment to composting as part of their waste management strategies. Currently, this issue is not widely discussed among the Bulgarian public and the efforts made by the state in terms of policies, strategies, plans, etc. are insufficient. This aspect of the need for government policy and intervention to establish and promote this sustainable practice will be addressed later in this study.

Next, the question of reducing and minimizing the consumption of single-use plastics was raised in the survey. The economic benefits for households of implementing this practice can be mainly reduced to cost savings. Reducing plastic consumption, i.e., choosing reusable alternatives such as water bottles, shopping bags and food containers, reduces the need to repeatedly purchase single-use plastic items. This can lead to long-term cost savings, as reusable products are more durable and have a longer lifespan. Next, plastic packaging often increases the final cost of products. By choosing products with minimal or plastic-free packaging, households can potentially save money, especially when buying in bulk or choosing products with eco-friendly packaging alternatives. Also, many of the plastic-free or low-plastic alternatives available on the market are manufactured with a priority on durability and quality. By choosing products that are built to last, households can benefit from longer-lasting goods, reducing the need for frequent replacement and associated costs.

Fig. 5. Reducing and minimising the consumption of single-use plastics as a sustainable consumption practice among Bulgarian households (Q: To what extent do you agree with the following statement, "In my household, we are taking steps to reduce and minimize single-use plastics in our daily lives.")



Survey results. Source: the authors.

Considering the listed economic benefits for households of minimizing the consumption of single-use plastics, the authors posed the next question in the survey. 22.5% of respondents strongly agreed and 40.8% somewhat agreed with the statement that their household is taking such steps. Only 4.7% or 9 of the 191 respondents strongly disagreed and 14.1% rather disagreed. This makes it possible to summarize that on the issue of limiting and minimizing the consumption of single-use plastics, the representatives of Bulgarian households who participated in the survey are definitely taking steps. More than half of the respondents (63.3%) confirm the statement.

To a large extent, this is due to the policy pursued by the state, in line with European regulations and legislation, to limit the use of this type of plastics. Directive (EC) 2019/904 on the reduction of the environmental impact of certain plastic products aims to: 'prevent and reduce the environmental impact of certain plastic products, and to promote the transition to a circular economy across the European Union (EU) through a combination of measures tailored to the products covered by the Directive, in particular by ensuring that single-use plastic products (SUPs), for which more sustainable alternatives are available at affordable prices, cannot be put The Directive has been ratified by Bulgaria and implementation measures are in place from 2022.

Conclusion

In summation, sustainable consumption encompasses utilizing goods and services meeting current needs while guaranteeing resources for future generations. Analysing perceptions and prevalence, the paper explored challenges hindering sustainable practices adoption among Bulgarian households. Examining 191 Bulgarian households, the survey illuminated prevalent sustainable practices. In summary of the above analysed responses to the questions posed in the survey on the applicability of sustainable practices among Bulgarian households, it can be concluded that regarding the separation of recyclable materials from household waste, more than half (more specifically - 60.8%) of the respondents stated that they apply this sustainable practice, while 71.7% of the representatives of the households included in the survey also apply sustainable energy saving practices in their daily life. In contrast to the two aforementioned practices, the responses to the question posed about the use of sustainable transport show that only 30.9% of Bulgarian households make use of sustainable transport, and of these, only 7.9% do so on a daily basis. In relation to the consumption of second-hand goods, reuse and refurbishment as alternatives and applicable sustainable practices, only 8.4% of respondents answered that they use them daily. This is largely due to the negative attitudes that

Bulgarian households have, as these practices are more associated with low social status and societal prejudices. In both cases, a possible measure to promote this type of practices in Bulgaria is to raise households' awareness of sustainable consumption. On the issue of limiting and minimizing the consumption of single-use plastics, Bulgarian households have a strongly positive attitude with 63.3% stating that they implement this practice.

The research also underscored the significance of education and awareness in fostering a broader and more consistent embrace of sustainable living practices It might serve as a roadmap, shedding light on Bulgaria's sustainable consumption landscape and charting a course towards broader adoption.

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