

Original Research

Consumer Demand for Environmental Friendliness as a New Round of Modern Marketing Development

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Abstract

Research into the consumer demand for environmental friendliness is highly relevant. The growing attention of consumers to environmental issues creates new opportunities for businesses that can use this demand as a new stage of development. In addition, marketing strategies aimed at increasing the environmental awareness of consumers and offering environmentally friendly goods and services can increase the competitiveness of companies and their profits. The purpose of this study was to investigate the correlations and interdependencies of the main “green” consumption motivations in the countries of the post-Soviet economic space to determine effective strategies for the production and promotion of eco-products in these markets. The purpose of the study was achieved through the implementation of a comprehensive multi-country research project based on the collection and analysis of primary information (research of consumer motivations). The testing result of the proposed methodology on the example of urban consumers in Kazakhstan, Azerbaijan, and the Russian Federation showed insufficient readiness of consumers in the post-Soviet economic space to adopt “green consumption”. At the same time, the formed mathematical models of the readiness to purchase dependencies confirmed the greatest readiness of consumers to purchase goods that can be used without harm to human health, while purchasing goods whose disposal does not harm the environment was the least appealing to consumers. The analysis of two-dimensional distributions according to the residence countries did not reveal statistically significant differences by country, confirming the representativeness of the results

for urban residents in the post-Soviet economic space. The practical significance of the study is that it allows businesses to evaluate their environmental concept and adapt it to the needs of consumers. Thus, companies can improve their products and services in terms of environmental safety and develop an effective marketing strategy.

Keywords: consumer behavior, eco-friendly products, green marketing, green technology, responsible consumption

Introduction

Nowadays, the resilience of food systems is being tested by the effects of political shocks, economic crises, and pandemics, such as COVID-19. With such serious shocks, the consequences are different: some spheres are failed, others adapt, reorganize, and conquer the local or global market [1]. Some especially do so with the benefit for society, especially when the context is about sustainability and sustainable consumption. Today, consumers worldwide are becoming more environmentally oriented, and the price of goods can now hardly be called the main criterion of their choice. Many people of today's society are prepared to pay more for eco-friendly goods. This concerns both new products and those that have long been on the market [2]. Potential benefits of environmentally sound and sustainable goods lie in that they are created with eco-friendly materials, conserve resources due to the possibility of being recycled, and have a minimal negative environmental impact throughout their life cycle. It is obvious that most current approaches to resource consumption exert a dreadful impact on the environment and deplete non-renewable natural resource potential [3]. In this respect, concentrating upon the production of eco-friendly products, promoting green industries, and forming and stimulating the development of a class of "green consumers" are especially relevant points nowadays. The role of green production is particularly important as many environmental projects have been initiated to eliminate the harmful effects of carbon emissions, minimize the carbon footprint of producers, and rethink consumer habits and, as a result, restore balance to the planet. European countries are focused from 2019 on the implementation of the Green Deal with targets for decarbonization and climate neutrality by 2050 [4].

Along with the terms "green marketing", "socially responsible business", "environmentally friendly", and "eco-friendly", the economic lexicon was enriched with the concept of "green consumer" as a separate category of users. Green consumers are not only those behaving as environmentally conscious inhabitants of the planet and preferring green products, but they also pay close attention to the methods and technologies of their production. The growing conviction is that environmental protection is a task not only of the government, environmentalists, and business representatives but also of every member of society [5]. Realizing that consumer behavior directly impacts a considerable part of environmental problems, people

are beginning to change their preferences towards ecologically compatible goods and eco-services. In addition to the characteristics of the product itself, consumers now pay particularly close attention to, for example, the product's packaging, biodegradability, and reuse. In the context of saturated markets, consumer's call for socially responsible businesses is becoming more and more pronounced. Thus, to improve the image and strengthen competitiveness, companies need to adapt to changes in consumption priorities and meet an increasing demand for eco-friendly and safe products [6].

The direct aim of green marketing is to strengthen the environmental benefits of the product and their perception by consumers. The consideration of environmental requests in marketing strategies can be a source of competitive advantage for companies. Improving the safety and eco-friendliness of goods and services is one of the main factors for the companies' competitiveness growth. In general, the change in the development priorities and activities of enterprises as the main polluters of the environment will also contribute to the achievement of additional objectives. These include reduction of claims from the regulatory authorities, increase in the efficiency of all types of resources, progress in passing international certification for compliance with quality and environmental management standards, creating positive goodwill, and increasing brand value [7-9]. For this reason, the development of green marketing as part of a modern business strategy is now one of the core trends in production-consumer relations.

The concept of green marketing is comparatively new. It is aimed at simultaneous solution of economic and socio-environmental issues and corresponds to the vision of sustainable development. As such, green marketing concentrates upon the needs arising from the environmental crisis and/or environmental degradation. By satisfying the desire of consumers to save the environment, producers realize their ultimate goal, profit, and consumers gain the possibility to improve their quality of life [7]. Table 1 summarizes the positive and negative aspects of green marketing.

Analysis of the Strengths and Weaknesses of Green Marketing

In the technological age of globalization, it is very difficult to simultaneously keep consumers and the natural environment safe, which is a major contemporary

Table 1. Strengths and weaknesses of green marketing, based on data adapted from Ülkü and Hsuan (2017), Jaiswal and Singh (2018), Groening et al. (2018), and Jacobs et al. (2018).

| Strengths | Weaknesses |
|--|--|
| Product | |
| <ul style="list-style-type: none"> - Product/service (including packaging, transportation) causes minimal harm to the environment at all stages of its life cycle (including recycling and reuse); - Product/service meets international environmental standards while possessing improved properties, which positively affects public health and welfare; - Suppliers of raw materials for goods production are environmentally responsible. | <ul style="list-style-type: none"> - Eco-friendly products are often less attractive; - More expensive or complicated production technology; - Constant control of compliance with established product/service provision standards is required; - Difficulty in finding resources that meet environmental standards; - Fewer number of suppliers; - Product may have a slightly worse taste. |
| Promotion | |
| <ul style="list-style-type: none"> - Advertising campaign explicates the eco-friendliness of the product/service; - Truthfulness of promotional messages about the safety and eco-friendliness of goods; - Promotional campaign of products/services causes minimal harm to the environment; - Products' packages have eco-friendly labels; - Quality of services is confirmed by the relevant certificates. | <ul style="list-style-type: none"> - Consumers often do not trust the eco-friendly initiatives of the enterprises or simply ignore them; - Emphasizing the eco-friendliness of a product/service sometimes irritates consumers and results in suspicions of speculation; - Additional costs on environmental labeling/certification; - Additional costs on maintaining an appropriate level of eco-friendliness and safety of a product/service. |
| Place | |
| <ul style="list-style-type: none"> - Distribution of products/services is carried out with the help of eco-friendly transport modes; - Distribution scheme minimizes goods' movement; - Products/services are sold by environmentally responsible companies. | <ul style="list-style-type: none"> - Use of eco-friendly transport slows down the transportation process and may reduce the volume of goods being carried; - Fewer wholesale and retail companies are willing to purchase the product or receive the service. |
| Price | |
| <ul style="list-style-type: none"> - Price paid for products/services supports other eco-friendly projects of the enterprise. | <ul style="list-style-type: none"> - Increased product price due to improvement of all the production steps to meet certain environmental standards. |

challenge for manufacturers and consumers alike. Today's manufacturers, in developing business strategies for expanding markets and introducing new products, take into account that consumers are well aware of environmental issues, such as global warming and the impact of pollution. Green marketing is a concept and strategy for promoting sustainable development [10].

Background to the Study of Green Consumption

In the early 1990s authors drew attention to the fact that environmental aspects have a significant impact on consumers, so the marketing concept and the resulting business strategies must be rethought. The concept of social marketing as a long-term marketing perspective rather than as a short-term showcase used by marketing departments is taking shape [11].

Development of the Theory of Green Consumption

As the environmental awareness of consumers and the natural innovation of green manufacturing increased, companies, seeking to maintain leadership positions, introduced new products with a "green concept" to the

market to win a larger share of the market. Thus, an experiment with a survey about energy-saving lamps as innovative means of cleaning up the environment led to important conclusions. Consumers' awareness of eco-friendly marketing influences their perceived quality and perceived value, which in turn influences their intention to make a purchase. Consumers' perceptions of energy-saving lamp innovations mainly affect their perceived quality, price, and value, while consumers' perceptions of environmental cleaner innovations mainly affect their perceived quality and value, which in turn affect purchase intentions. The results for two products show that the impact of environmental marketing on purchase intent is greater than the direct impact of innovation [12].

Current research by the authors examines the gap between consumer attitudes and actual buying behavior toward green products and identifies key issues such as personal factors influencing green buying, green buying, and the green marketing mix. Caring for the environment, eco-labeling, past experience, and perceived usefulness are identified as the main factors influencing green consumer behavior. Lack of environmental knowledge, prices, risks associated with lack of knowledge, company image, trust, and willingness to pay have been identified as barriers

that create a gap between consumer attitudes and actual purchasing behavior toward green products [13].

Generalization and systematization of the modern experience of promoting green consumption allowed determining the typical marketing tools used for influences on consumer behavior. By and large, they can be divided into the following groups.

Theoretical Approaches to Green Marketing Depending on Marketing Tools

For instance, some researchers focus on cognitive tools aimed at influencing consumer behavior using understanding drawn from psychology, sociology, and cultural studies [12-15]. In the works of the 1990s, the image of the environmentally conscious consumer is formed, such consumers are convinced that they can solve environmental problems through an effective action [15].

In the context of green altruism theory, the authors identify the effect that green brand awareness and perceived trust in a green brand have on consumers' green choice behavior. The interactive effect of green altruism with ESA and ESC impacts consumer choice. In addition, this study encourages organizations to focus on consumers' perceptions of self-reliance and social responsibility to engage them in choosing eco-friendly brands [13].

Girish et al. [16] and Marini et al. [17] analyzed information and communication provision tools: eco-labeling, provision of additional information about the product, marketing policy, and promotion of green consumption. Many authors have concluded that labeling products made from environmentally friendly substances, conveying a sense of concern for the environment from the manufacturer to the consumer awakens consumer interest in purchasing environmentally friendly products. Promoting the reduction of the volume and toxicity of pollutants, promoting consumer awareness of the product's environmental impact and encouraging environmentally conscious consumer behavior are predictors of environmental protection [17].

Peattie [18] and Lavuri [19] studied economic tools like central instrument influencing people's choices since the price of goods, quality, and income are often the influencing factors for purchasing decisions. Current publications have examined the influence of green skepticism factors, altruistic and egoistic values, perceived consumer efficacy, and the influence of environmental involvement on intention to purchase environmentally friendly products with the mediating effect of "green" attitude and the mitigating effect of price sensitivity and environmental protection emotions. Price sensitivity and emotional environmental protection have a positive relationship between green attitude and intention [19].

The regressive effects of higher prices for eco-friendly goods can be mitigated by providing households

with temporary or permanent taxation benefits. Normative and regulatory tools to a large extent have a prohibitive nature (e.g., a ban on plastic bags effectively applied in the US) [8, 20]. The papers empirically establish the relationship between eco-advertising and the ban-on-plastic (BOP) as an environmentally friendly practice of corporate social responsibility (CSR) and consumer green purchase intention (GPI), and BOP is seen as one of the factors in the formation of consumer behavior [20].

In the meantime, green marketing communication incorporates focus on the development of people's willingness to purchase eco-friendly goods; concentration primarily on consumers with high and middle-level incomes; attempts to form sustainable fashion (predominantly successful); tolerance and positive attitude towards various consumer groups; high potential to manipulate the consciousness of consumers; and emphasis on the importance of informal marketing communications and direct marketing tools related to salespeople's activities (e.g., a vegetarian salesperson in a vegan condiment store will encourage their friends to come and buy there) [21-23].

A Study in the Literature of the Portrait of the Green Shopper

According to the modern interpretation, a green customer is a person who wants to purchase goods made in a way that does not negatively affect the environment [24]. Researchers assume that the main reason to consume eco-friendly products for such an individual is the desire to increase their social status and join a group of people who exert a certain impact on society [21]. At the same time, the motives for purchasing green products are represented by consumers' expectations, perceptions, and subjective norms [6, 25].

Green consumers are characterized by peculiar behavioural decisions and patterns [6, 9, 26]. For example, Yang and Zhao [27] examined decisions to buy a product based not on an advertising campaign but on comprehensive information about it (materials from which it was made, environmental friendliness of production, packaging features, possibilities of further recycling). Boycott of producers of environmentally "dirty" or dangerous goods and participation in environmental campaigns were also studied. A consumer's environment and social networks have the most significant influence on the choice of eco-friendly products [28]. Eco-friendly personality of a consumer is manifested in the free ecological will based on the prioritization of natural environment preservation [29].

Consumers' eco-friendly orientation is important to achieve sustainable development, presupposing the transformation of their consciousness at a level of outlook installations, beliefs, and personal acceptance of green values [30]. Public concern about environmental pollution is increasingly reflected in environmentally conscious market positioning [31]. In recent times,

most consumers have come to the understanding that their behavior in the past has a direct influence on the emergence of many environmental problems of today. Numerous research on the matter confirms that green consumers' perception and attitudes towards eco-friendly goods, knowledge of the product and its manufacturer, and various related contextual factors play a dominant role in decision-making on whether to buy a specific product or not. The data on the increase in the number of people ready to pay more for eco-friendly goods are the most convincing evidence of what contributes to the growth of environmentally oriented consumer behavior [32]. Such a state of affairs has resulted from a number of reasons. First of all, our society is becoming more informed about environmental issues as far as environmental culture and education constantly improve. Secondly, consumers massively express a need for safe products, which forces corporations and governments to popularize green business. Thirdly, the quality of environmental goods and services is increasing, and, accordingly, the industry becomes more attractive and competitive, and environmental products and services themselves become more affordable in price [25]. The peculiarities of green consumers' world perception determine the degree of their awareness of existing environmental problems' severity. Besides, precisely the perception of the general situation in the world influences the agreement or refusal to consume environmentally dangerous goods and services and take responsibility for unsustainable consumption [18]. On the other hand, the willingness to buy green products does not mean their actual purchase; that is, there is the so-called "green gap" (the divide between green attitude and green consumption) [22].

To date, the most significant number of green consumers is observed in the middle class [33]. Since they are likely to feel involved in the solution of urgent problems of society, their satisfaction with the purchase is often more intense than that of individuals paying less attention to the consumption eco-friendliness [28, 34]. While talking in terms of individual countries, researchers note that the concepts of green consumption and green marketing are predominantly spread in developed states. Green marketing and public interest in solving environmental problems significantly change economic environment and financial markets and encourage governments and businesses to redistribute financial flows into promising eco-friendly sectors of the economy.

Exploring the Relationship between Green Consumption and Public Policy and Corporate Sector Development

As concerns the state support of green reforms, it is mostly carried out in three directions: formation of a strategic framework for policies related to the economic activity greening; integration of strategic environmental assessments into the system of country

development plans and programs at the national, local, and sectoral levels; and implementation of pilot projects directed at spreading the principles, business practices, and technologies of organic agriculture and resource-efficient and green production [35].

The preliminary analysis of scientific sources devoted to the question under consideration showed that the related research works are mainly concentrated upon the motivation of green consumers, while the determining factors in this field are rather the dominant social paradigm, a common system of values, and a collective vision of solving environmental problems [36]. Provided that the feature of global eco-friendly goods market's functioning is the activity of small and medium-sized enterprises using low-budget strategies for product promotion (social media marketing), the experience of applying proper marketing strategies to promote environmentally friendly goods has been investigated rather scantily. What is more, consumer demand for green marketing and the economy as a whole is considered only for developed states which include European countries, the USA, Canada, some large economies of the Asia-Pacific region [37]. This is due to the fact that most modern industries are involved in the markets of Western countries. These areas range from agriculture, when companies explore and implement new technologies for the collection and processing of waste within the framework of "green" standards, ending with public relations campaigns to introduce and popularize organics in the general industry, spurring competition for the environmental friendliness of the product. For example, many fashion retailers such as M&S, H&M, Nike, and Timberland have taken part in the competitive game of using organic cotton in products to increase sustainable materials in the market [38]. In the 21st century, the environmental issue is the most important challenge to sustain human civilization [39].

Eco-Consumer Issues in the Post-Soviet Space

At the same time, the global nature of the problem forces us to focus not only on developed economies, but also on other regions that have colossal natural resources. This is about the post-Soviet space, in particular, consumer demand for bio-products from Russia and Central Asian countries. According to the level of economic development, the countries of the region have the status of economies in transition, which have already practically introduced market mechanisms.

Unlike the population of Western European countries, in Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan, the share of organic products in the market of these countries is still insignificant, not exceeding 1%, despite the fact that the population of these countries is aware of organic products [40]. Being familiar with the internal situation, some authors propose to pursue an information policy for the gradual full transition of countries to the production of environmentally friendly products [41]. However, given the economic situation

of recent years, few segments of the population can financially afford the consumption of these products despite the declared high quality. Therefore, the entities of organic product production and supply should build a strategy for eco-labeling to retain its potential according to this article. At the same time, a strategy should cover the markets of countries with transition economies, including the countries of the post-Soviet economic space.

Here, the aspect of environmental friendliness is taken into account only in several areas. These are food production, development of new and improvement of existing chemical industry technologies, informatization of production and sales, use of non-traditional energy sources, and waste processing [35]. The market segment of everyday green goods (furniture, electrical appliances, wallpapers, floor coverings, toys, and the like) is only beginning to form. In many cases, the price of eco-friendly products appears to be higher than the price of their alternatives. The reasons for this are many and varied, from high cost of environmentally safe materials to the expense of specialized equipment and a large amount of research and development work needed for such production [42].

The success of the promotion of a particular type of eco-friendly product depends largely on the proper consideration of the personal characteristics of existing and potential consumers and of their attitude to the very issue of environmental friendliness. Therefore, the research interest of this work is concentrated on distinguishing those areas (production, packaging, transportation, and processing) for which people are willing to pay an extra price. The practical interest in eco-friendliness is transformed into certain priorities on the part of eco-friendly goods, i.e., one can confidently speak about prioritization of ecologization of specific sectors and product life cycle stages. Here it is reasonable to find out, firstly, how the surcharge to the cost of eco-friendly products is perceived, and, secondly, what is the degree of this perception's sensitivity.

Despite the significant scientific contributions of predecessors, the personal characteristics of actual and potential buyers in relation to the degree of environmental friendliness of products and the motives that guide them to pay a price premium for environmental friendliness have not yet been sufficiently studied. Of value are an in-depth analysis of buying behavior, the classification of types of environmentally conscious consumers, and the stratification of the spheres of value proposition that generate consumer surpluses and, accordingly, the willingness of a consumer to pay above a set price. Identifying the most sought-after areas of the value proposition will help companies focus resources, innovations in production and marketing, all their competitive advantages on strengthening the consumer properties of these areas, minimizing costs, optimal pricing, and attracting more consumer demand.

The study of the consumer demand for environmental friendliness can be an important and innovative step

in the development of modern marketing. Careful consideration of environmental aspects in marketing strategies and products can have a positive impact on the environment. In addition, it can increase competitive advantage in the market, meet consumer demand, and ensure business sustainability.

At the same time, this demand research can allow marketers to understand the consumers' opinions on the most important environmental aspects. These data may be vital in creating new marketing strategies. The research may also serve as the basis for developing new products that meet consumer demand for environmental friendliness, as well as advertising campaigns that pay attention to the environmental friendliness of the product.

The purpose of this study was to investigate the correlations and interdependencies of the main "green" consumption motivations in the countries of the post-Soviet economic space to determine effective strategies for eco-product production and promotion in these markets. To achieve this goal, the following tasks had to be solved: (1) identify the consumers' priorities about specific aspects of environmentally friendly products; (2) determine how the premium for environmental friendliness is perceived and what is the degree of consumer sensitivity to it; (3) identify eco-consumers' internal motivation to choose eco-products, willingness to pay a premium to the price; (4) determine the main types of eco-consumers according to their willingness to pay a price premium for a new eco-product; (5) develop recommendations on the use of various marketing strategies to promote environmentally friendly products.

Kazakhstan, Azerbaijan and the Russian Federation were selected to test the developed methodology. The choice of countries for testing was due to the following factors: (1) insufficient research on the problem of consumer demand for environmental friendliness for countries with economies in transition; (2) significant GDP volumes for the CIS countries and a comparable level of socio-economic development; (3) the availability of the countries to conduct the "field" stage of research. Thus, the hypothesis of the study is the assumption that the propensity of consumers to eco-friendly goods is not a guarantee of real consumer demand for them, and the increase in the premium for environmentally friendly products is inversely proportional to the number of consumers willing to pay it.

Materials and Methods

The research process was carried out in two stages and lasted about three months – April-June 2022. The first stage implied email search and conducting an online survey to determine the dependence of demand on the possible premium on eco-friendly products with respect to their various life cycle aspects (production, packaging, transportation, and recycling). The study covered 1,515 consumers in Shymkent, Yekaterinburg,

and Baku. The decision to consider these cities is due to a relatively high population density (about 0.8 – 1.4 thousand people/sq. km), moderate compactness (1-2.1 million people), close level of development, and similarity of geographical location as well as environmental problems. The main common feature of these cities is the similarity of environmental problems, actualizing the role of eco-oriented production and consumption: insufficient amount of green spaces, destruction of forests, poisoning of water resources and poor quality of drinking water, problems of disposal of domestic and industrial waste.

The sample was formed randomly. The Finder Expert search service was used to retrieve more than 2 thousand e-mail addresses of individuals living in the cities in question. Invitations to participate in the Google Forms survey, the rationale for the survey, and the questionnaires were sent to their email addresses. Out of 2050 requests, 1515 positive responses were received with the consent to participate in the study.

The questionnaire of an eco-friendly consumer was developed within the framework of the study. The Questionnaire consisted of closed, open, and combined (closed-open) questions (Appendix 1). The original questionnaire was in Russian, and then it was translated into Kazakh and Azerbaijani languages for better perception by consumers. The filter question was whether they use eco-friendly products. The group of consumers who answered positively on the filter question was characterized by the following socio-demographic characteristics. The vast majority of respondents (70.77%) were between the age of 18 and 25, a fairly substantial group was aged under 18 (14.95%), and only 10.99% of research participants were between 26 and 35 years old. About 3% were respondents aged 35-45. As concerns gender distribution, the majority of respondents were women (56.26% were females and 43.74% – males). The predominant share of interviewees was formally employed (51.10%). The second-largest group in terms of occupation and social status was students (37.47%). Other groups were too few in number to be mentioned separately. The main limitation of this study was the possible inconsistency of actual data with that stated in social networks.

The data quality control was ensured by means of the following measures: (1) survey data were compared with profiling data; (2) restrictions were imposed on participation within a certain period (7 days after consent to participate); (3) multiple registrations were checked using built-in features of Google Forms. Sampling error did not exceed 5%. Next, the types of consumers depending on the degree of environmental motivation were identified. Environmental motivation can have varying degrees of influence on the willingness to pay a premium price. The highest degree of such motivation is evident in the propensity to overpay for a completely new environmental product without expecting other consumers to recognize it (super innovators). A high degree of motivation can manifest

itself in the rapid transition to the purchase of a new eco-product with an overpayment for eco-friendliness with prior deliberation (innovators). A medium degree of motivation is when new eco-products and the decision to pay a premium for them are perceived more slowly while remaining faithful to traditional habits rather than new ones (conservatives). The low degree of motivation is manifested in the active non-acceptance of new eco-products, the absolute unwillingness to pay a premium for them (super-conservatives). During the second study stage, recommendations on the use of different marketing strategies by green products' manufacturers for the promotion of eco-friendly goods were developed.

All the data obtained were statistically processed. To analyze the results for reliability, the study used the multivariate analysis of variance (MANOVA), Microsoft Excel, and the Statistica 10 software package. Differences in the results obtained were possible at the significance level $p \leq 0.05$ according to the Student's test.

Results and Discussion

According to the survey outcomes, 90% of all respondents think it is necessary to give preference to eco-friendly goods, but only 76.4% really use them. Among the people, who actually buy green products, 38.6% are focused on the degree of their usefulness and 33.4% on the absence of harm to health. A considerable part of those not buying eco-friendly goods does so due to a lack of money (72%). In the meantime, the predominant share of respondents (36%) gets information about them directly from packaging (all other information channels have almost the same degree of data richness).

Table 2 shows the results of the respondents' subjective assessment of their readiness for the premium "for environmental friendliness" of products, the production, use, and disposal of which do not harm the environment and human health.

Fig. 1 graphically illustrates the dependence of consumers' readiness for an additional premium "for environmental friendliness" on the premium amount (in % of the price of a product similar in consumer characteristics, but not eco-friendly). It also presents the trend models calculated based on the results of the study.

All calculated trend models are represented by linear trends, while a high correlation coefficient ($R^2 > 0.9$) indicates a high compliance of the models with the presented dependencies, their adequacy, and the possibility of using them for forecasting. As the analysis shows, all the presented models are descending, in other words, an increase in the premium for environmental friendliness causes a decrease in the number of consumers. At the same time, the analysis revealed significant differences in price elasticity for different groups of eco-friendly products. Thus, a statistically significant number of consumers are ready to pay higher premiums for goods that do not harm human health

Table 2. Percentage of consumers who are ready to pay a price premium for environmental friendliness.

| Price premium, % | Readiness to pay for... | | | |
|------------------|---|---|--|---|
| | Goods production of which does not harm the environment | Goods use of which does not harm human health | Goods use of which does not harm the environment | Goods disposal of which does not harm the environment |
| 0 | 31.10 | 22.30 | 30.00 | 40.30 |
| 10 | 24.00 | 20.10 | 25.60 | 25.30 |
| 20 | 18.90 | 15.90 | 18.80 | 17.80 |
| 30 | 12.00 | 14.10 | 12.70 | 9.40 |
| 40 | 7.90 | 9.90 | 8.80 | 3.65 |
| 50 | 3.10 | 7.30 | 2.30 | 2.25 |
| 60 | 2.10 | 4.50 | 1.35 | 0.90 |
| 70 | 0.87 | 3.60 | 0.40 | 0.35 |
| 80 | 0.03 | 2.30 | 0.05 | 0.05 |

($y = -3.9362x + 30.792$), while they are less ready to pay the same for goods whose disposal does not harm the environment ($y = -4.6133x + 34.178$).

The survey was further deepened by adding motivational factors for willingness to pay a premium for eco-products. According to the survey results, the motives of long-term contribution to health (89% of

respondents), the potential use of natural resources (66%), and conscious participation in solving global environmental problems (75%) should be considered the most significant for products related to environmental care. Concerning health-related goods, the most significant were the motives for reducing healthcare costs (54%), taking care of health as a contribution to

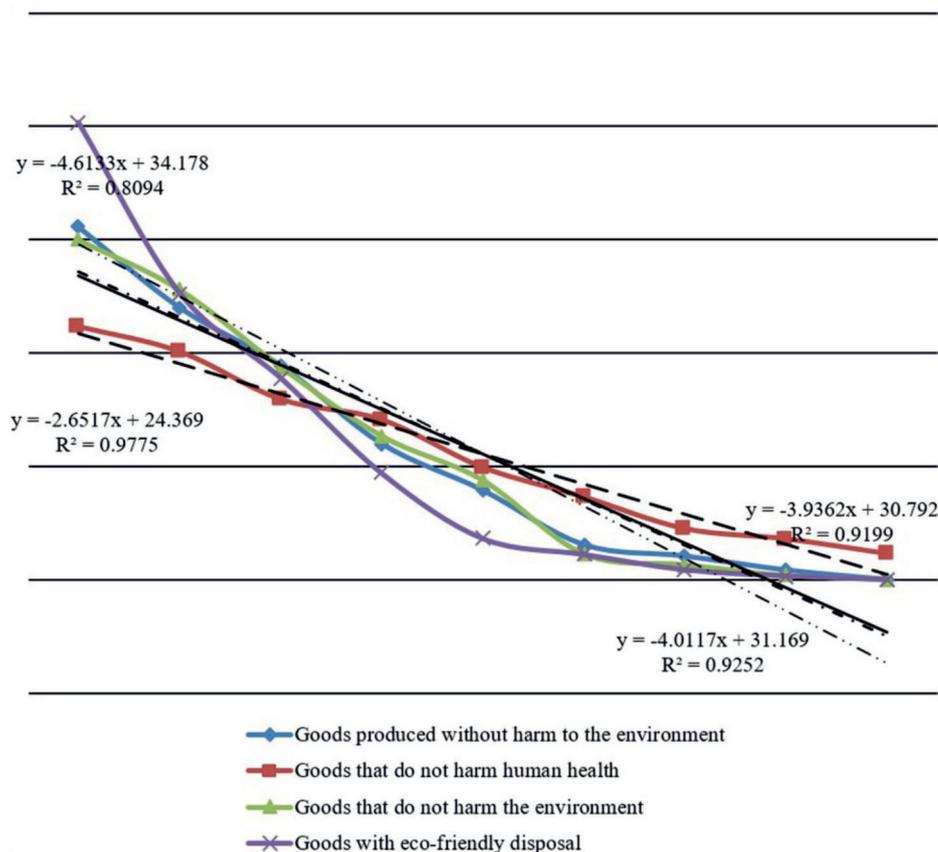


Fig. 1. Percentage of consumers who are ready to pay a price premium for environmental friendliness, as a function of the size of the price premium.

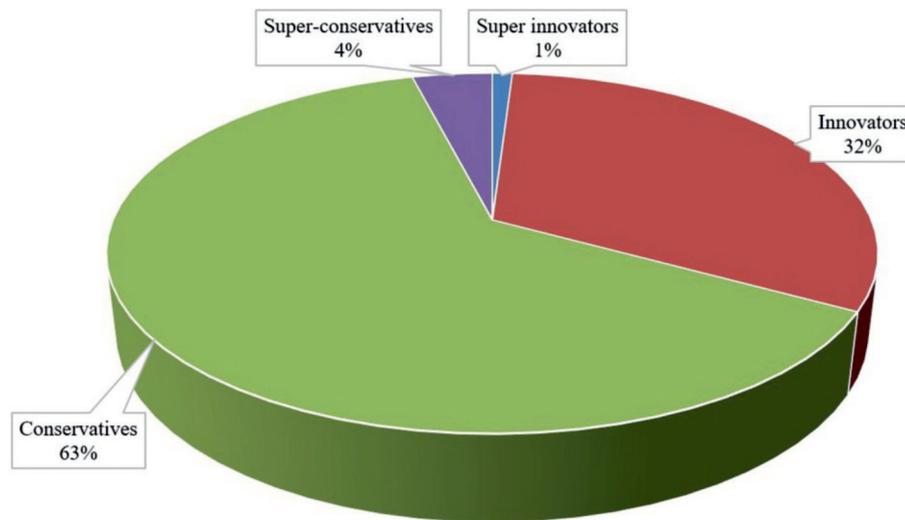


Fig. 2. Distribution of respondents according to their willingness to pay a price premium for a new eco-product.

longevity (96%), and the health of future children (68%). The general motivator was the life quality factor (more than 70% in each group of products, respectively).

Fig. 2 shows the results of the respondents' subjective assessment of their willingness to purchase innovative eco-products and pay a premium for them. The results are the following:

- the respondents who admitted their willingness to pay a premium to the price for a new eco-product without waiting for its preliminary acceptance by other consumers were identified as super-innovators;
- the respondents who expressed their willingness to promptly buy a new eco-product and overpay for it with preliminary recognition were defined as innovators;
- the respondents who prefer proven products and make decisions slowly and deliberately were

identified as conservatives;

- finally, those who do not accept new eco-products and who admitted their lack of willingness to pay a premium for environmental friendliness were defined as super-conservatives.

Identification of consumer types according to the degree of willingness to pay a premium for new eco-products revealed that 63% of them are conservatives, 32% are innovators, 4% are super-conservatives, 1% are super-innovators. Fig. 3 shows the two-dimensional distribution by consumption type and age of respondents.

The vast majority of super innovators are in 18-25 (90%) and 26-35 (75%) age groups. People of the older generation of 35-45 years are more conservative in their willingness to overpay for a new eco-product, among them there are no super innovators (55% of conservatives, 25% of super-conservatives, and 20% of innovators).

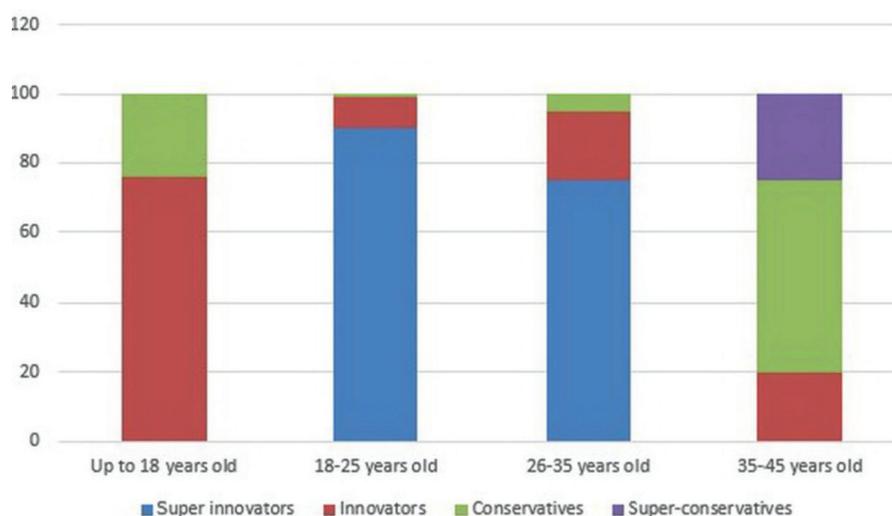


Fig. 3. Age distribution of consumer types by propensity to pay a premium for a new eco-product.

As can be seen from the data above, a large proportion of consumers is not willing to invest in reducing the destructive environmental impact of the manufacturing process. Completely opposite is the case with the readiness to pay a price premium for a product, the consumption (use) of which does not cause harm to human health – their share is the largest. Buying products not detrimental to the environment did not gain such considerable support. This implies that to date, a substantial portion of people is not likely to pay a significant price for a product whose disposal does not cause damage to the ecosystem. On the whole, the survey outcomes outlined that modern consumers are willing to spend extra money mainly on goods that do not have an adverse effect on their own health (or the health of others) and are of high quality and useful. Almost identical consumer attitudes were observed relative to goods whose production, use, and disposal are not harmful to the environment: for these aspects, people are willing to pay a price premium in a much smaller amount. Such a state of affairs can be explained by the poor quality of life and that consumers have a variety of personal problems, among which the state of the environment is far from being the most important.

At the second research stage, recommendations on the use of various marketing strategies for the enterprises-manufacturers of green products were developed. As evidenced in earlier studies [32], the influence of such a factor of price elasticity of demand as consumers' income is especially critical in the given context as the first population strata becoming the subject of demand for green products is represented by people with high- and medium-income levels.

Given the knowledge of the relationship between the size of the price premium for an eco-product and the demand for it, one can distinguish two types of pricing. The pricing policy for green products may have many nuances. As of this day, there are two main approaches to the pricing policy: high pricing policy and moderate pricing policy. The first one is possible in conditions of a high degree of ecological novelty of the goods. The higher the novelty, the higher may be the price

with which the company enters the market. The second one is often a transformed high pricing policy when competitors have managed to copy the newly designed product and are trying to retain and then gradually expand the circle of customers. The main goal of the company becomes market penetration and customer retention.

It is possible to form advertising strategies and position an eco-product from different sides, taking into account the psychology of eco-consumers and their intrinsic motivation to pay more for an eco-product (concern about health, longevity and quality of life, health of future children, awareness of personal contribution to environmental care and involvement in global eco-problems, a desire to use the preserved natural resources in the future, etc.). With reference to inclinations to be willing to pay more for a new eco-product, two variants of the basic green marketing strategy of the enterprise can be distinguished:

Adaptive marketing – it provides a flexible response of the enterprise to changes in the importance of green properties of goods for consumers. In this event, the enterprise does not offer significant eco-friendly innovations but rather tries to move its commodity policy synchronously with market changes. It is a moderate strategy that is not associated with substantial innovative actions or advancement;

Expansionist marketing – it is a riskier strategy directed at meaningful improvement of the green properties of the product offered and even hard work on eco-friendly innovations' development. Under this strategy, the manufacturer forms the market (segment, niche) for its product on its own. The basic strategies of pricing, marketing and advertising are in the plane of dependence on the study of consumer attitudes, motivations, and types (Fig. 4).

Thus, the conducted research confirms the insufficient consumer readiness in the post-Soviet economic space to adopt "green consumption". It follows from the survey results that the greatest willingness to purchase eco-goods is in the market of goods that do not harm human health, and the least willingness is

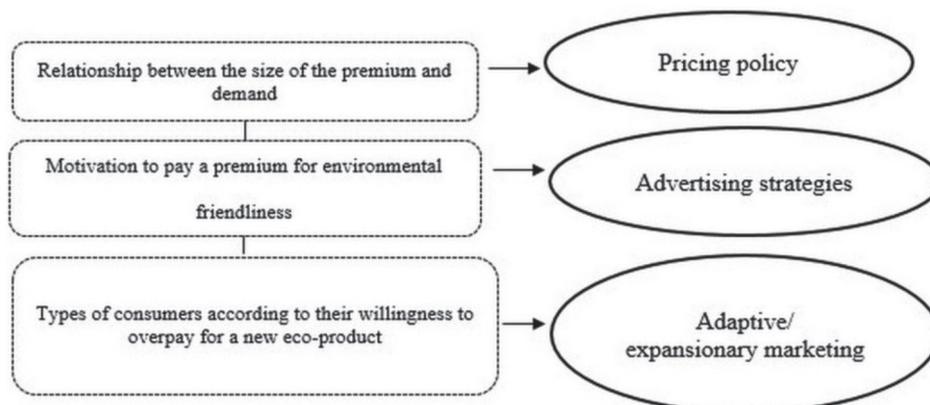


Fig. 4. Basic pricing and green marketing strategies based on the study of consumer demand for environmental friendliness.

in the market of goods whose disposal does not harm the environment. At the same time, the typology of consumers by a new product acceptance type indicates the predominant share (63%) of conservatives in the consumption structure. This creates additional difficulties in promoting environmentally friendly goods and services to promising markets of countries with a transition economy. In addition, the analysis of two-dimensional distributions according to the residence countries (Kazakhstan, Azerbaijan, and the Russian Federation) did not reveal statistically significant differences by country. Therefore, the results of this study are representative of the urban resident totality in the post-Soviet economic space, regardless of the residence country. However, it is important to note that the motivation of rural residents may have significant differences and requires additional research.

It should also be noted that one of the factors that influenced the choice of cities for testing the study was the factor of environmental disadvantage. In other words, all the respondents lived in cities burdened with specific environmental problems, but most respondents were not willing to pay a higher price for goods that do not harm the environment. This determines the relevance of additional research on the main consumers' motivations in the selected cities.

In general, the findings of this research on consumers' decisions on the acceptance or rejection of environmentally friendly products in countries with transition economies coincide with the facts identified in other works in this field [23, 32]. Numerous authors confirmed a tendency to pay extra for eco-friendliness is inherent predominantly in people of high and above-average income levels [8, 12, 21]. This concerns only those goods that directly impact their health in the short term. The present research is based on the knowledge that today's consumers are well aware of the importance of green product manufacturing and its relationship to global environmental issues [10], and today's companies need to rethink traditional business strategies and develop long-term and effective pricing and marketing strategies [11].

As a rule, the improvement of ecological safety of products is considered costly, but the world's leading companies have proposed and successfully implemented innovative business strategies that combine the reduction of destructive impact on the environment with the growth of their own revenues [8]. Effective implementation of these strategies requires reforming the traditional marketing complex and effective marketing tools, which reasonably incorporate marketing techniques reflecting specific ways to achieve enterprise goals.

At the same time, in contrast to some studies, where the main factors of environmental behavior of consumers are concern about the environment, eco-labeling, their past experiences [13], in the present work such factors are the concern for personal health, moreover among respondents who were willing to pay

a premium for not harming the environment, most were guided by the motivation to preserve their health.

Similar studies on consumer demand for environmental friendliness have a relatively large scope and cover various business sectors. Thus, the researchers investigated the field of food, electronics, fashion, construction, and other industries. Studies into the food industry found that consumers are increasingly paying attention to the composition of products, their production, and packaging. Consumers are more likely to purchase products made using eco-friendly materials, as well as products with a reduced content of harmful substances. The electronics industry consumers are more attentive to the energy efficiency and toxicity of materials used by producers. Consumers also demand more transparent information about the production and disposal of electronic devices. In the fashion industry, consumers tend to be more attentive to the working conditions and environmental responsibility of manufacturers. In this case, consumers require more detailed information about the production conditions and the use of eco-friendly materials. In the construction industry, consumers are increasingly paying attention to the energy efficiency and environmental friendliness of building materials. Consumers are more likely to purchase building materials made using eco-friendly materials, as well as materials with a reduced content of substances that are harmful to health [14-16, 36 48].

According to many scientists, the study of consumer demand for environmental friendliness can have a significant impact on the development of modern marketing. The growing attention to environmental issues and the focus on sustainable development are changing consumer behavior. Therefore, consumers more and more frequently check the environmental friendliness of the products they buy [22, 26, 30]. This statement was also confirmed by the present study.

At the same time, some scientists argue that research into the demand for environmental friendliness can help businesses understand which products are in high demand among consumers. The research also allows businesses to reveal the values that consumers respect and the factors that influence their purchase decisions. It can help companies stand out from their competitors and develop marketing strategies that meet the demand for environmental friendliness [18-20, 25]. Various studies have also shown that identifying demand for environmental friendliness can also help companies improve their products and production processes, reducing their environmental impact. Thus, companies may start using more environmentally friendly materials, limiting energy use, and reducing waste [14-16, 36, 48].

Comparing the green markets of countries with transition and market economies made several significant differences obvious. The reason for these differences lies in that all markets vary in development stages due to dissimilarities in legal frameworks regulating the production of organic food, development

programs designed for the organic sector, number of trading and processing companies, range of green products manufactured, infrastructure, demand for eco-friendly goods, and the presence of large retailers using aggressive strategies to popularize environmentally safe products. In the USA, Germany, France, Italy, and Denmark, green markets are at a stage very close to maturity, whereas in Spain, India, China, Australia, and the countries of the post-Soviet economic space they are only in their infancy [43]. The environmentally friendly product market in the countries of the post-Soviet economic space is represented only by local players, whereas the global market is characterized by product structure diversification and a significant share of gluten-free, protein, hypoallergenic and vegan products. The share is growing due to healthy lifestyle promotion and the introduction of new product segments (environmentally friendly, non-dairy, etc.) and services (U-pick, organic agrotourism, box delivery). In addition, in the countries of the post-Soviet economic space, unlike the European Union, the level of real state support for eco-good producers and the development level of “green” infrastructure is significantly lower. One of the effective mechanisms for green market development is designing and implementing special development programs. In this context, the world community uses such tools to support the organic sector as subsidies (Paramparagat Krishi Vikas Yojana), separate initiatives (European Network for Rural Development), investment in the Organic Science Cluster and technical/institutional support (League of Organic Agriculture Municipalities and Cities), public procurement (Sweden – Policy for Sustainable Development and Food) national/regional development plans (the National Organic Action Plan, Organic Action Plan for Ireland (2019-2025)), and insurance or partial coverage of certification costs (US Farm Bill). Moreover, some innovations are also being implemented in the post-Soviet countries. Thus, in 2015, Kazakhstan adopted the Law “On the production of organic products”. The document states that producers of organic products are obliged to exclude the use of synthetic substances, pesticides (toxic chemicals), hormones, antibiotics and food additives, with the exceptions provided for by the rules for the production and circulation of organic products. The use of genetically modified organisms (GMOs) is also excluded. In addition, organic producers must go through a confirmation procedure to obtain a certificate of conformity, after which they have the right to use the national mark of conformity for organic products [44]. How effective the control mechanism is depends on the impartiality of the regulator and the existing management systems, resistance to corruption, and the situation with dependence on material resources; the issue continues to be relevant in the field of improving the living standards of the population [45].

Some provisions on the development of organic production were noted in the Decree of the Government of Kazakhstan “On approval of the Concept for

the development of the agro-industrial complex of the Republic of Kazakhstan for 2021-2030” [46]. In particular, according to paragraph 4 of the Vision for the Development of the Sphere, the development of ecosystems in priority areas of the agro-industrial complex, as well as assistance to the development of the industry by the state, will become a catalyst for the growth in productivity and quality of agricultural products based on the use of reserves of vertical and horizontal integration. It is assumed that the implementation of such a policy can begin with the creation of cooperatives of small peasant farms at the level of rural areas, ending with monitoring and revising the criteria for classifying the provision of a quality mark for environmental cleanliness to a product (Resolution No. 960). Although as a result of this, various development roadmaps may be adopted by the government and competent departments, it is still difficult to talk about real results in the near future. In addition to the realities of law enforcement practice, the difficulties of implementing programs can be caused by the global problems of our time associated with the country’s foreign economic activity.

It should be noted that the active participation of civil society in environmental issues and the work of NGOs to promote the agenda of sustainable development affect the opinion of many people in the choice of products. In addition, ramifications of agro-industrial food production appear in the debate about genetic modification [47]. Therefore, businesses should also consider partnering with community platforms to further spread the environmental agenda and promote their products, while increasing their responsibility to consumers [48].

Thus, the situation with the agricultural market of Kazakhstan will depend not on the demand from the buyer, but on the economic recovery from the consequences of the COVID-19 pandemic, the disruption of supplies from other countries due to the closure of borders, the situation with the disease of animals and poultry in the summer of 2021 [49]. Despite the demand and desire of a large number of Kazakhstanis to consume high-quality, environmentally friendly products, the industry requires a long recovery period to satisfy not only domestic consumers, but also launch exports. Thus, the study of consumer demand for environmental friendliness can have practical implications for marketing, promote the development of new products and services, provide a competitive advantage in the market, and maintain business sustainability.

Conclusions

According to the study results, 90% of participants believe that it is important to buy eco-friendly products. Nevertheless, only 76.4% of them actually make these purchases. Of those who buy green products, 38.6%

pay attention to their usefulness and 33.4% take into account the absence of harmful properties. Most of the participants (72%) do not buy eco-friendly products due to lack of funds. At the same time, 36% of respondents receive information about products directly from the packaging, while other sources had almost equal amount of information.

As a result, it was found that consumers are ready to pay extra for those goods that have a direct impact on their health in the near future rather than solve the world's ecological problems in the long run. At the same time, it was noted that consumers are more willing to pay more for environmentally friendly production, rather than for packaging or recycling.

To find the relationship between the share of consumers ready to pay over for a certain aspect of eco-friendliness and the value of the eco-friendliness premium, linear dependencies were built. They showed an inverse correlation between these two factors suggesting that the number of people ready to pay an extra price decreases with an increase in the price premium. Since the correlation coefficients of the developed models were high, their adequacy and the possibility to use them for forecasting were confirmed.

The data obtained allowed coming up with recommendations for eco-friendly goods manufacturers on the application of relevant marketing strategies. The study proposed two basic options for a company's basic green marketing strategy: gradual adaptation to changes in consumer demands and expansion of the product line by appealing to green solutions. The limitations of the present study naturally include possible inconsistency of actual data with respondents' answers. The second source of concern is that this research was performed based on the example of green products with an eco-friendliness price premium varying from 0 to 80%. The last point of uncertainty is that, broadly translated, the inferences made cannot be directly applied to the market promotion of green goods, the price of which is much greater than that of their analogues or which have significantly cheaper non-ecological equivalents.

The results of this study imply that the creation and development of environmental marketing should cover: (1) The information aspect (analysis of important environmental issues affecting the enterprise and

assessment of market opportunities and threats, as well as advantages and disadvantages of the current marketing strategy); (2) Analytical aspect (development and analysis of alternatives, identification of target consumer groups, definition of competitive strategies, development of positioning plans for environmentally friendly products); (3) Coordination aspect (modification and integration of marketing tools to comply with the principles of environmental marketing in the course of competition); (4) The control aspect (monitoring, analysis and regulation of marketing activities within the framework of strategic management).

The main scientific contribution of this article is the developed consumer typology of the post-Soviet economic space by the environmental motivation and the level of innovative eco-product acceptance. The study also resulted in recommendations for the use of marketing tools in promoting eco-products to the markets of countries with economies in transition. The results of this study may be in demand by marketers of the real economy sector for developing business strategies to adapt to fluctuations in demand and expand the product line through eco-innovations aimed at improving health. Knowledge of the most preferred areas of the value proposition (production, packaging, transportation, processing, as well as environmental motivation) will assist in the development of optimal resource, product, advertising and pricing strategies. Additionally, the results of this study may be valuable for academic researchers, including in the context of forming promising areas for future research on the production and promotion of "green" products to the markets of countries with transition economies.

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Conflict of Interest

The authors declare no conflict of interest.

Appendix 1

Questionnaire of an eco-friendly consumer №

Unless otherwise specified, only one answer option must be selected

1. You are:
 - man
 - woman
 - other
2. Your age is:
 - less than 18
 - from 18 to 25
 - from 26 to 35
 - from 35 to 45
 - over 45
3. Define your employment:
 - officially employed
 - student
 - retired
 - unemployed
 - other option
4. Do you consider it necessary to use environmentally friendly products?
 - Yes
 - No
5. Do you use environmentally friendly products?
 - Yes
 - Her
6. What do you pay attention to when using eco products?
 - Usefulness
 - Harmless to health
 - Contribution to ecology
 - Your answer _____
7. What can prevent the purchase of eco-products?
 - Low income
 - Personal preferences
 - Your answer _____
8. What sources do you use to obtain information about a specific eco-friendly product?
 - Your answer _____
9. What premium “for environmental friendliness” to the price of the product is acceptable for goods produced without harm to the environment?

Choose one option:

 - 10%
 - 20%
 - 30%
 - 40%
 - 50%
 - 60%
 - 70%
 - 80%
10. What premium “for environmental friendliness” to the price of the product is acceptable for goods that do not harm human health?

Choose one option:

 - 10%
 - 20%
 - 30%
 - 40%
 - 50%
 - 60%

- 70%
- 80%
11. What premium “for environmental friendliness” to the price of the product is acceptable for goods whose use does not harm the environment?
Choose one option:
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
12. What premium “for environmental friendliness” to the price of the product is acceptable for goods whose disposal does not harm the environment?
Choose one option:
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
13. What factors influenced your willingness to pay a premium to the price for products related to environmental care? (choose no more than 3 options)
- long-term contribution to health
- thrifty use of natural resources
- preservation and revival of natural wealth and diversity of the environment
- participation in solving global environmental problems
- striving for conscious consumption
- the impact of joint consumption (family, social group)
- improving the life quality
- another _____
14. What factors influenced your willingness to pay a premium to the price for health-related goods? (choose no more than 3 options)
- reducing healthcare costs
- taking care of health as a contribution to longevity
- the health of future children
- improving the life quality
- another _____
15. Are you ready to pay a premium to the price for a new eco-product (choose only 1 answer option):
- without waiting for its preliminary acceptance by other consumers
- with preliminary recognition by other consumers
- making a decision slowly and deliberately, giving preference to proven products
- absolutely not ready to pay a premium for environmental friendliness

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