

Factors Influencing Green Purchase Behavior: Evidence from Kazakhstan

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ABSTRACT

As awareness about environmental issues increases around the globe, consumers are gradually engaging in environmentally friendly behavior and supporting businesses that engage in green strategies. However, environmental awareness among Kazakhstan's consumers and their buying behavior towards green products are not fully understood due to the scarcity of research conducted in this area. This study intends to change this situation and examines the green behavior of young consumers in Kazakhstan using the Motivation-Ability-Opportunity (MAO) model developed by Olander and Tøgersen. According to this model, a positive attitude of consumers leads to the desired behavior only when they have the ability and opportunity to execute the expected behavior. The goal of this paper is to find the main reasons why environmentally friendly intentions of people do not translate into green behavior and to examine the influence of moderating variables on the relationship between people's intention to buy green products and their purchase behavior of green products. In addition, the role of education level and gender in the relationship between green purchase intention and behavior are also examined.

Keywords: Consumer Behavior, Green Purchase Behavior, Intention-Behavior Gap, Kazakhstan.

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I. INTRODUCTION

The rise in the standard of living of the population and the desire to increase consumption, undoubtedly, lead to an increase in environmental issues. This highlights the growing role of environmental marketing aimed at implementing the principles of environmentally responsible consumption and production (at all stages of the product life cycle) (Kozlova, 2011). The concept of "environmental marketing" and the regulatory framework in the field of environmental certification of products in Kazakhstan is in the process of formation, just as the market for environmentally friendly goods (Akimova, 2014).

One of the main problems is the low awareness of the population (consumers) about the properties of certified environmentally friendly products, the types and meaning of markings, as well as places of sale of such products. Probably in Kazakhstan it is too early to speak about the ecological consciousness of the population as a complex phenomenon (Zhibbayev & Moiseeva, 2016). After all, it implies not only respect for nature in everyday life, but also a change in the behavior of our society. So far, we are more concerned about the presence of smog in cities and litter in recreational places. Therefore, it is important to differentiate our country from others and analyze it separately, since the attitude of our people does not correspond to the beliefs of people from more developed states. Attention to the concept of environmental marketing by Kazakhstani and foreign companies is

constantly growing, which is due to both social and economic benefits that both individual organizations and society as a whole receive. During the last thirty years, this concern has intensified, and a major debate has arisen about the relationship between marketing and the environment. Marketing can be considered as both a major villain for its role in inciting unsustainable levels of demand and consumption, and also as a possible rescuer via the use of market mechanisms that can be applied to deal with social and environmental problems. For Kazakhstan's market, environmental marketing is a relatively new and insufficiently studied marketing concept. Theoretical and practical developments in the field of environmental marketing are largely based on scientific and methodological developments of foreign authors.

Among all the generations, the millennial generation constitutes the largest demographic group which grew up during the time of increased attention for sustainability (Price, 2018; Nielsen, 2015). As a result, this generation might be the one which is concerned about social and environmental issues the most (Naderi & Steenburg, 2018). A large-scale study from Nielsen (2015) showed that almost three quarters of the millennials were ready to spend more money for brands which position themselves and act as environmentally friendly in comparison with baby boomers among whom just 51 percent have this intention. This shows that millennials anticipate pro-environmental engagement from companies. Thus, the next question is whether the social consciousness of millennials has an influence on their buying behavior.

Even though most consumers have positive attitudes towards sustainability and green products, they are not as popular among consumers as one would expect. This gap between consumer's concern about the environment and the actual purchase behavior of green products is called the "green attitude-behavior gap." The goal of this article is to find out main reasons why this gap still persists, and to examine the influence of moderating variables that can reduce this gap.

II. LITERATURE REVIEW

In foreign scientific works, the development of the concept of environmental marketing is called "green marketing" and "marketing of sustainable development". The term "Green Marketing" has been coined to describe marketing activities that attempt to reduce the negative social and environmental effects of existing products and production systems, and which promote fewer damaging products and services (Peattie, 2001). Green purchase behavior implies a complex ethical behavior in decision-making and is thought to be socially responsible behavior. Green products make use of materials that are safer to the environment, are recyclable, and need less packaging (Chen & Chai, 2010). Examples of green products are organic products, lightbulbs that are energy efficient, eco-friendly devices, herbal products, etc.

Before the implementation of the concept of green marketing, it is important to understand the explicit and implicit needs of consumers. So, if an organization wants to sell "green" goods at the time of product design, it must evaluate whether consumers see the real value of the product and its new properties. Factors that have a positive influence on the purchase of green factors were identified as environmental concerns, product characteristics, environmental knowledge and subjective norms of the population (Smith & Paladino, 2010). In this research, these factors will also be taken into account as a part of the decision-making process. Similarly, there are some factors that can hinder the decision of a consumer to buy green products. The authors Young *et al.* (2010), Yue *et al.* (2020) and Tsakiridou *et al.* (2008) believe that companies offering green products should not consider charging high prices for their products only on the basis of being green. The reason is that overpricing does indeed reduce the purchasing power of the consumer.

When it comes to sustainable shopping, the similarity between millennials and previous generations is that they generally value the affordability and quality of products. However, these products are often considered more expensive. Although millennials generally take an environmental stance, this phenomenon might negatively affect their purchases of sustainable products (Naderi & Steenburg, 2018). Compared to previous generations, millennials are less wealthy and have less purchasing power (Hoolachan & Mckee, 2018; Kurz *et al.*, 2019). Nevertheless, we can see that climate-friendly movements have spread among the youth, highlighting the key role of young people in protecting the environment (Pickard, 2020). According to the research done by Calculli *et al.* (2021), younger generations believe more than adults that they can reverse

environmental degradation with the help of responsible environmental practices, including recycling, purchasing green products, reducing waste, or taking public transport along with other environmental practices.

When it comes to the situation in Kazakhstan, Akimova (2014) notes that attempts undertaken in Kazakhstan to solve environmental problems with the help of administrative-legal and economic methods of state regulation have not yet led to a noticeable improvement of the environment. Without the demand for green products among their consumers, most companies do not see the point in changing their business model to include more environmental practices. Therefore, it might make sense to firstly educate consumers about the reasons to support pro-environmental practices. On the other hand, business owners themselves may lack sufficient knowledge in this topic, which can make the process of transitioning to sustainability much more difficult. Research findings of Dlimbetova *et al.* (2016) reveal that employers in Kazakhstan hardly understand the importance of "green skills" for business and it is difficult to explain the importance of having "green skills" for the majority of them. Even though we can find some research by Kazakhstani authors written on the topic of ecological marketing, such as the study by Sadikhanova and Rysbayeva (2020), their research is only descriptive of the situation and does not include any quantitative analysis of the consumer's green behavior. To conclude, many business owners and consumers in Kazakhstan do not fully understand the benefits of green products. Therefore, if we want people to display pro-environmental behavior, educating them about environmental issues and sustainable products is a necessary step. For now, it is difficult to say that people here follow sustainable practices, partly due to the insufficiency of the research conducted among Kazakhstan's consumers.

III. THEORETICAL FRAMEWORK

In order to rationalize consumers' green purchase behavior, most previous findings have used the theory of reasoned action (TRA) by Ajzen and Fishbein (1980) and the theory of planned behavior (TPB) by Ajzen (1985). The former theoretical approach suggests that an individual's behavior mainly depends on two main factors-individual attitude and social norms. The theory of planned behavior has added one more factor as a basis of individual behavior - perceived behavioral control which a person has over his purchasing activities.

Various studies have been conducted with the use of TPB for exploring consumer attitudes, intentions and actual buying behavior in relation to green products (Arvola *et al.*, 2008; Smith & Paladino, 2010; Tanner & Kast, 2003). Nonetheless, most of the studies detected a weak relationship between the positive attitude of consumers regarding purchasing green products and their actual purchase behavior. This phenomenon is commonly referred to as the attitude-behavior gap (Tanner & Kast, 2003; Wheale & Hinton, 2007).

Olander and Thøgersen (1995) presented the Motivation-Ability-Opportunity (MAO) model to understand consumer behavior. The MAO model uses two constructs: ability and opportunity, as prerequisites for sustainable consumer

behavior. The first construct includes habit and knowledge about tasks, while the construct of the opportunity includes facilitating situations for the fulfillment of such behavior. According to this model, a positive attitude of consumers translates to the desired behavior only if they have the ability and opportunity to perform the expected behavior. For example, without easy access to green products it would be very unlikely for a person with a positive attitude towards the environment to buy those products. Thus, consumer behavior depends not only on his attitude, but also on other personal and situational factors.

The MAO model is potentially an extended form of Ajzen's TPB, consisting of three main components: motivation, opportunity and ability. Motivation means the interest, readiness and desire to buy sustainable goods. Olander and Thøgersen's (1995) model describe this component as constituting of three parts, such as beliefs, attitude towards behavior and social norms, all of which determine a person's intention to act in a specific way. The second element of the MAO model is opportunity, which refers to the degree to which situational factors moderate or inhibit someone's behavior (Olander & Thøgersen, 1995). Situational factors have an impact on whether customers buy green products or not (Joshi & Rahman, 2015). The third element of the model is the ability to buy green products, which includes the knowledge of the task and habits of an individual. These two components (i.e. knowledge and habits) moderate the link between intention and actual behavior (Thøgersen, 2005). As a consequence, only a person who has required capabilities can translate his motivation into real behavior (Olander & Thøgersen, 1995).

The description of the MAO model's three elements shows the relevance of this model for this paper. The motivation element of the model is used to describe the independent variable "Intention to buy green products" and shows us whether an individual exhibits an environmentally friendly attitude and has the intention to buy green products. The ability and opportunity elements are used as moderating variables and help us to explain the reason young people do or do not buy eco-friendly products.

Summarizing the above-mentioned arguments, the following hypotheses are formed:

H1: Intention to buy green products has a positive effect on people's purchase behavior of green products.

H2: Availability has a positive moderation effect on the relationship between people's intention to buy green products and their purchase behavior of green products.

H3: Willingness to pay higher prices has a positive moderation effect on the relationship between people's intention to buy green products and their purchase behavior of green products.

H4: Quality of the product has a positive moderation effect on the relationship between people's intention to buy green products and their purchase behavior of green products.

H5: Recognition of environmentally friendly products has a positive moderation effect on the relationship between people's intention to buy green products and their purchase behavior of green products.

H6: Perceived consumer effectiveness will positively moderate the relationship between people's intention to buy green products and their purchase behavior of green products.

IV. METHODOLOGY

A. Descriptive Statistics

This research relies on a cross-sectional study design which is the most commonly used format in business and management studies. The method allows us to investigate the relationship between variables at a specific point in time. Data is collected using a survey at a short period of time (Bryman, 2012). For this study a non-probability sampling method was chosen. Specifically, the survey was administered among people who were born from 1985 to 2005 and live in Kazakhstan. Overall, there were 190 people who decided to answer the survey. As the participation in the survey was on a voluntary and anonymous basis, we have expected the respondents to give us trustworthy answers.

Intention to buy a green product is the independent variable in the regression. First, respondents were asked to answer using a 1-7 Likert scale, with 7 showing strong agreement with a statement and 1 meaning the opposite. The variable is formed by taking the equally weighted average of those three questions. The mean of those questions was 4.99. Purchase of a green product is the dependent variable which represents the purchase behavior of people. Just like the independent variable, it is created by averaging the answers based on a Likert scale for 3 related questions. The mean of the variable is 4.98, which shows that most people who answered this survey are also willing to buy green products.

In addition, five moderators were created as an interaction in order to measure the influence of the independent variable on the dependent. Availability is a variable which shows us how respondents perceive the situation with the availability of green products in stores. A mean of 3.12 suggests that people predominantly think that there are not enough available products to buy. A moderating variable Price tells us whether people are ready to pay more for sustainable products. The mean of 3.92 shows that many young people from the survey are willing to spend extra amount of money to stay more sustainable. The variable Quality which represents the importance of products' quality has the highest mean of 5.19. This indicates how young people perceive quality to be one of the key factors when purchasing a product. Next variable, Recognition reveals the ability of participants to recognize sustainable products among the others. It has a mean of 3.46, which reveals that respondents are not very confident about their ability to recognize green products. Perceived Consumer Effectiveness shows the extent to which the respondents believe their actions can influence the environment. The mean of the variable is 3.41.

B. Reliability and Validity Test

To measure the reliability of the data, Cronbach alpha coefficients of every construct were measured. The alpha coefficient can be rated from 1, which means full internal reliability, to 0, which means no internal reliability. According to George and Mallery (2003), a general recognised rule is that α of 0.6-0.7 shows an acceptable degree of reliability, and 0.8 or greater indicates a very good level. As explained earlier, for each construct, Cronbach's alpha is checked, the results of which are disclosed in Table I. The Cronbach's alpha is labeled in the table by the letter " α ".

TABLE I: RESULTS OF FACTOR ANALYSIS

Factor	Indicator	Factor loading	α
	1-strongly disagree, 7-strongly agree		
Intention to buy a green product (IV)	I intend to buy products that are environmentally friendly because they are less harmful to nature.	0.569	0.780
	I will think about changing brands for ecological reasons.	0.421	
	I plan to purchase products that are eco-friendly.	0.571	
Purchase of a green product (DV)	When I have a choice, I intentionally pick the product which is environmentally friendly.	0.796	0.878
	When I have a choice between two comparable products, one which is sustainable and one which is unsustainable, I will always buy the first one.	0.772	
	When I have a choice, I always pick the product with an eco-label.	0.802	
Availability	The availability of sustainable products in grocery stores is always sufficient.	0.557	0.723
	If I am looking for a specific product in a grocery store, then there is always the option to choose the alternative green products that are less harmful for the environment.	0.566	
Price	I am ready to pay extra for ecological goods.	0.597	0.898
	If I choose between two analogous products, one of which is environmentally friendly and the other is not, I pick an environmentally friendly product, even if it has a higher price.	0.625	
Quality	When there is a choice between two similar products, one which is sustainable and one which is unsustainable, I buy the green product only if it has at least the same level of quality.	0.394	0.389
	The quality of the product is more important to me than its eco-friendliness.	0.559	
Recognition	When I buy products, I can easily differentiate ecological products.	0.728	0.832
	I can identify environmental products by environmental claims or eco labels applied to them.	0.740	
Perceived Consumer Effectiveness	One person's choice of what to buy cannot make a discernible difference in helping the ecology.	0.396	0.474
	I think that the consumer is not obliged to buy ecological products.	0.392	

Multiple regression analyses were done using different moderators which affect the relationship between independent and dependent variables when it comes to buying green products. In each regression two moderators which represent gender and education are included together with a control variable and an independent variable which is the intention to buy sustainable products. In all of the regressions, the dependent variable is the purchase of a product. From the correlation table, it can be seen that there are no extremely high levels of correlation which can lead to multicollinearity.

The results of the first model suggest that intention to buy and price have a significant positive influence on purchase behavior. From these models, we can observe that while price has a positive impact on purchase at 0.1% level, recognition and availability are only significant at 5%. The questions that were used to form the variable "Price" mean that people are ready to pay more for a sustainable product. The interaction variable formed from "Intention to buy" and "Price" is significant at 5%, which signifies the presence of a moderation effect. Other variables, on the other hand, do not substantially affect the dependent variable. Therefore, we can conclude that the readiness to pay higher prices is a good predictor of the purchasing decision. Moreover, in almost all models, with the exception of the 5th one, the independent variable "Intention" has a strong positive influence on a purchase of a sustainable product.

C. Hypotheses Test Result

According to the results of multiple regressions, several hypotheses which were proposed before will be evaluated. Hypothesis 1 cannot be rejected, since all regressions showed that the intention to buy a sustainable product has a strong positive effect on the purchase. When it comes to the price of a green product, we hypothesized that it would have a positive impact on purchasing. As expected, many people with the intention of buying a sustainable product also claimed that they are ready to buy them despite comparatively higher prices. It needs to be mentioned that questions were constructed in a manner that shows the willingness of customers to buy a product despite its higher price. The price itself has a strong influence on the behavior even at a 0.1% significance level, whereas the moderation effect is only significant at a 5%. To sum up, hypothesis 3 is accepted, which means that most consumers who intend to buy sustainable products do not mind buying more expensive alternatives.

Recognition and availability have a weak positive impact on the purchase, while the interaction variables created with the intention do not bring any significant results. Therefore, hypotheses 2 and 5 are rejected. According to the results of the correlation matrix, the variables "Perceived consumer effectiveness" and "Quality" had a weak relationship with the independent variable. Similarly, those variables and their interaction terms did not have a significant influence on the purchasing behavior of respondents.

TABLE II: RESULTS OF FACTOR ANALYSIS

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Intention (IV)	0.781***	0.583***	0.565*	0.720***	0.618***
Gender (1=female)	0.327	0.404*	0.424*	0.440*	0.431*
Education	0.424*	0.271	0.444*	0.406*	0.446*
Availability	0.482*	-	-	0.482*	-
Intention * Availability	-0.052	-	-	-0.052	-
Price	-	0.671***	-	-	-
Intention * Price	-	-0.059*	-	-	-
Quality	-	-	0.04	-	-
Intention * Quality	-	-	0.026	-	-
Recognition	-	-	-	0.367*	-
Intention * Recognition	-	-	-	-0.039	-
PCE	-	-	-	-	-0.106
Intention * PCE	-	-	-	-	0.017
<i>F-Value</i>	39.12	50.96	34.64	37.65	33.36
<i>Adjusted R²</i>	0.502	0.569	0.471	0.492	0.461

*p-value < 0.05, **p-value < 0.01, ***p-value < 0.001

Therefore, it can be concluded that hypotheses H4, H6 should be rejected. The fifth hypothesis was proposed to identify whether recognition has a positive moderation effect on people's buying behavior of green products. Even though the Spearman correlation table showed strong effect, its interaction term and the variable itself were not significant. Therefore, the hypothesis can be rejected.

V. CONCLUSION

Previous findings suggested that there is a gap between the intention to buy and actual purchase behavior. The goal of this research was to identify the reason for this inconsistency. Therefore, the research question was formed in the following way: "What are the factors which influence the purchase behavior of young people towards green products?". To answer this question, a modified version of the MAO model was developed using variables that could influence the relationship between intention and behavior.

Young people who are surveyed have their unique features that can differentiate them from other generations. On the one hand, they grew up during the period of increased coverage and awareness of ecological issues. Therefore, their exposure to this could lead to more responsible behavior towards the environment. On the other hand, they may lack financial stability and focus on buying inexpensive products without regard to its sustainability. After analyzing their answers, we can see that young people of Kazakhstan are motivated to purchase sustainable products and do not mind paying extra money for them. Availability itself proved to influence the behavior of consumers, which means that people who know where to find those things are more inclined to behave accordingly.

At the same time the interaction variables formed from recognition, availability, perceived consumer effectiveness, quality and intention were insignificant, therefore, we summarize that there is not enough evidence to prove that they either strengthen or weaken the relationship between intention and purchase behavior. The only moderating variable that was significant in the regression was price. Surely, finding the moderators between the intention and behavior is a challenging process and more variables can be exploited in future research to understand why people might not realize their intentions. Overall, there is a positive attitude among young people toward buying sustainably, even though

many of them are not ready to sacrifice quality.

This study analyzed the intention-behavior gap using Ajzen's Theory of Reasoned Action and the Theory of Planned behavior. Before, the theory was used for a wide range of studies to predict behavior, including the study on the adoption of medical technologies (Salgues, 2016), artificial intelligence and human behavior modeling (Silverman *et al.*, 2016), peer influences on addiction (Neighbors *et al.*, 2013) and others. However, the attitude itself may not be the only contributing factor for behavior. Olander and Thøgersen (1995) proposed the Motivation–Ability–Opportunity (MAO) model which uses constructs of ability and opportunity. Without those facilitating factors a person may not end up performing the action even with a strong positive attitude towards it. Therefore, their theories were used to develop the model of this research. This model seems suitable not only for studying green purchase behavior but also other types of research that focus on the intention-behavior gap.

The following study is also useful for practical situations. For example, brand managers and product managers can use this knowledge to implement new marketing strategies, make decisions about pricing, packaging design, product development. etc. Additionally, the findings could be helpful for store managers who can use the knowledge about factors that influence purchase behavior in order to decide on the best promotion strategy. The willingness of millennials to pay more for green products can motivate store managers to sell more of those products in their stores. Also, it is useful to know their attitude when regulating prices for these products in shops. Moreover, findings suggest that many people have low recognition when it comes to sustainable products and their labels. Therefore, supermarket chains can raise awareness of their customers through different programs and implement a variety of ways to highlight their sustainable qualities. Eventually, these actions could change people's behavior and help the environment.

REFERENCES

- Ajzen, I., Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Springer, Berlin, Heidelberg.
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.

- Akimova, D. (2014) Development of green marketing in the republic of Kazakhstan. *Journal Bulletin of KEU*, 4 (35).
- Arvola, A., Vassallo, M., Dean, M., Lampila, P., Saba, A., Lähteenmäki, L., & Shepherd, R. (2008). Predicting intentions to purchase organic food: The role of affective and moral attitudes in the Theory of Planned Behaviour. *Appetite*, 50(2), 443-454.
- Bryman, A. (2012). *Social research methods*. 4th ed. Oxford: Oxford University Press.
- Calcutti C., Maria D'Uggetto A., Labarile A., Ribecco N. (2021). Evaluating people's awareness about climate changes and environmental issues: A case study, *Journal of Cleaner Production*, 324.
- Chen, T. B., & Chai, L. T. (2010). Attitude towards the environment and green products: Consumers' perspective. *Management science and engineering*, 4(2), 27-39.
- Dlimbetova, G., Zhylbaev Z., Syrymbetova L., and Aliyeva, A. (2016). "Green Skills for Green Economy: Case of the Environmental Education Role in Kazakhstan's Economy." *International Journal of Environmental and Science Education* 11(8), 1735-42.
- George, D., & Mallery, P. (2003). *SPSS for Windows Step by Step: A Simple Guide and Reference. 11.0 Update*. (4th ed). Boston: Allyn & Bacon.
- Hoolachan, J., & Mckee, K. (2018). Inter-generational housing inequalities: 'Baby Boomers' versus the 'Millennials'. *Urban Studies*, 56(1), 210-225.
- Joshi Y., Rahman, Z. (2015). Factors Affecting Green Purchase Behaviour and Future Research Directions. *International Strategic Management Review*, 3(1-2), 128-143.
- Kozlova, O. A. (2011). Ecological marketing: a new conceptual approach and the strategic potential of producers. *Bulletin of Omsk University. Series "Economics"*, 1, 146-155.
- Kurz, C. J., Li, G., & Vine, D. J. (2019). Are millennials different? *Washington: Board of Governors of the Federal Reserve System: Finance and Economics Discussion Series*.
- Naderi, I., & Steenburg, E. V. (2018). Me first, then the environment: young Millennials as green consumers. *Young Consumers*, 19(3), 280-295.
- Neighbors, C. & Foster, D. & Fossos-Wong, N. (2013). Peer Influences on Addiction. *Principles of Addiction*, 323-331.
- Nielsen. (2015, October). *The Sustainability Imperative. New Insights On Consumer Expectations*. <https://www.nielsen.com/wp-content/uploads/sites/3/2019/04/global-sustainability-report-oct-2015.pdf>
- Olander, F., & Thøgersen, J. (1995). Understanding of consumer behaviour as a prerequisite for environmental protection. *Journal of consumer policy*, 18(4), 345- 385.
- Peattie, Ken. (2001). Towards Sustainability: The Third Age of Green Marketing. *The Marketing Review*, 2, 129-146.
- Pickard, S. (2020). The Nature of Environmental Activism among Young People in Britain in the Twenty-first Century. *Political Ecology and Environmentalism in Britain*, 1, 89-109.
- Price, T. (2018). 'Generation Green': how millennials will shape the circular economy. <https://environmentjournal.online/articles/generation-green-how-millennials-will-shape-the-circular-economy/>
- Sadikhanova G.A., Rysbaeva B.B. (2020). Ecological marketing and features of its application. *Economics: the strategy and practice*, 15(2), 203-211.
- Salgues, B. (2016). Acceptability and Diffusion. *Health Industrialization*, 53-69.
- Silverman, Barry & Hanrahan, Nancy & Huang, Lina & Flores, Emilia & Lim, Samuel. (2016). *Artificial Intelligence and Human Behavior Modeling and Simulation for Mental Health Conditions*. Academic Press.
- Smith, S., & Paladino, A. (2010). Eating clean and green? Investigating consumer motivations towards the purchase of organic food. *Australasian Marketing Journal*, 18(2), 93-104.
- Tanner, C., & Wölfling Kast, S. (2003). Promoting sustainable consumption: Determinants of green purchases by Swiss consumers. *Psychology & Marketing*, 20(10), 883-902.
- Thøgersen, J. (2005). How May Consumer Policy Empower Consumers for Sustainable Lifestyles? *Journal of Consumer Policy*, 28, 143-178.
- Tsakiridou, E., Boutsouki, C., Zotos, Y., & Mattas, K. (2008). Attitudes and behaviour towards organic products: an exploratory study. *International Journal of Retail & Distribution Management*, 36(2), 158-175.
- Wheale, P., & Hinton, D. (2007). Ethical consumers in search of markets. *Business Strategy and the Environment*, 16(4), 302-315.
- Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: green consumer behaviour when purchasing products. *Sustainable Development*, 18(1), 20-31.
- Yue, B.; Sheng, G.; She, S.; Xu, J. (2020) Impact of Consumer Environmental Responsibility on Green Consumption Behavior in China: The Role of Environmental Concern and Price Sensitivity. *Sustainability*, 12(5), 1-16.
- Zhilbaev Z.O., Moiseeva L.V. (2016). From environmental protection to sustainable development and «green economy»: national project of education greening in Kazakhstan. *The Education and science journal*, 6(135), 62-74.