St. Petersburg State University
Graduate School of Management


Master's in management Program


**INVESTIGATING THE DETERMINANTS IN CONSUMER CHOICE FOR ECO-PRODUCTS**


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St. Petersburg
2020

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# Introduction

## Relevance of the study

The market of environmental products has increased significantly over the past decades. The reason for this is growing trend for eco-friendly lifestyle and ecological products. In all the world economies, the focus on eco-products has been increasing due to the significant grow of consumers' ecological awareness (Paul et al., 2016). The society is cluttered with new goals and objectives for the environment preservation, while long-term environmentally friendly companies are getting a bigger amount of public approval than their harmful competitors. The problem of sustainable ecological situation has reached the widest audience and the outgoings of environmental degradation become clear. Moreover, the importance of ecological issues is increasing not only for manufacturers but also for customers and society (Altenburg& Assmann, 2017).

Eco-friendly approach of companies is not only an answer to the needs of society, but also a strong directive for business development and marketing. In the vast majority of economically developed countries "green marketing" has become one of the most relevant tools to promote a wide range of products and services. All variety of products from foods to electric automobiles faced a need to be adapted to new requirements of consumer expectations.

Furthermore, "green marketing" tool can cause controversial reactions among customers. In the recent past, references to the environmental friendliness of the product and its "green" origin caused confusion and skepticism among consumers (Ottman, 2006). With the increased need of environment protection people became more loyal to the eco-production, moreover, many of them have taken the path of sustainable consumption.

However, besides the fact that some consumers tend to choose products that contain clear ingredients or were created with minimal negative impact to the environment, others do not trust eco-labeling and manufacture promises. Certain part of consumers still put at the head of their purchasing other values such as price, habits or design preferences. Quite often, customers face a "green washing" phenomenon and this factor subsequently affects their negative attitude to the eco-industry.

# Research gap

A large number of interrelated and random factors influence the buyer's decision to purchase environmentally friendly products. Previous studies examined influence of such factors in different countries. Despite this fact, that green marketing and environmental issues are widely discussed in actual non-fictional and academic literature, in conditions of the actual Russian market these types of studies faced a research gap due the limitation of academic researches. The **research gap,** which will be described in further study, is a need for the systematic analysis of the Russian market reality with its relation to the green marketing phenomenon. This work has a need to study the main features of Russian green consumers, analyze specific features and determinants of their green purchasing behavior. Currently, there is a gap of works that are devoted to studying the buyer's behavior regarding the eco-products in the Russian market. The situation on the Russian market fundamentally differs from the economy of others global market players.

# Research questions and aims of the study

**The aim of the given research** is to find out as well to examine those factors that nudge and affect openly the consumer choice for eco-products in Russia. Moreover, it is important for us to find out which product characteristic as well as environmental factors are significant in terms of green purchasing behavior.

1. **Subject:** Determinants affecting green consumer behavior.
2. **Object:** Consumer behavior in terms of "Green Marketing" in the Russian market.

    Therefore, the **research questions** will be the following:

    - ***What are factors effecting consumer's eco product purchase decision in Russia?***
    - *What are distinctive features of Russian consumers?*
    - *What are the main expectations of Russian green consumer related to the environmentally friendly product?*

# Chapter 1 LITERATURE REVIEW

## 1. Green Marketing Phenomenon

### 1.1. Towards a definition for eco-product

"Green" is a term that became common inside the marketing field in late 1980s–mid 1990s and it turned out to be mainstream, on the grounds that it corresponded with the ecological arousing of buyers (Tseng and Hung, 2013). Therefore, green took a big part in marketing strategies and became commonly used ubiquitously. From the common perception "green" includes not only products that were made from natural and non-harmful materials and manufacture techniques, but also organic and not genetically modified products. This opinion often turns out to be wrong because "green" products are not only products consisting of environment-friendly ingredients, but also, they can products that were produces at enterprises with minimal environmental damage. In order to avoid misunderstanding and mistakes in research that is necessary for future study to identify the most important definitions.

From the definitions that were created during previous studies can reveal the fact that such concepts as "green products", "eco-products", "environmental-friendly product" and "sustainable product" are synonymous and fall into the similar category of products. For example, (Biswas and Roy., 2016) colligate the definitions of green product with environmentally compatible and sustainable products and defined it as product that cause several protentional benefits to the environment due to the reason that it is made using sustainable and planet friendly recourses. Moreover, environmentally friendly product can be recycled and have a potential of recourse conservation or, in other words, these products do not have strong environmental footprint or negative impact at each phase of its existence. In addition, green goods are determined as products that provide ecologically, social and also economic advantages and protect environmental safety, public well-being and people' health.

According to (Palevich, 2012), the eco-product concept is associated with sustainable production as well as supply chain management. These processes should refer to environmentally oriented, humanity friendly practices, which should not harm plant. The green concept in general is extended to each stage of the technological process from the procuring of raw materials to production stage, storage of the product, its packaging and allocation (Maniatis., 2016).

Ecologically friendly product can be tangible as well as intangible good with that understates during all phases of its existence ecological direct and indirect influence on the environment (Sdrolias & Zarotiadis, 2018). Overall, it is important to mention that environmentally friendly or green product has three general stages of its lifestyle: before use – use – after use stages (Dangelicao & Pontrandolfo,2010).

Green product design – is a systemized process that connect consumer's satisfaction, the marketplace and the environment through products (Fred Lemke and João Pedro Pereira Luzio, 2014). Companies create and product innovative eco goods that are appealing for the future consumption. The emergence of product design as a field of marketing inquiry within the scope of this study is explained because of the relevance of updating the product's form and function (Fred Lemke and João Pedro Pereira Luzio, 2014) to the new needs imposed by sustainability. Previous studies concerned that translating customer's needs into product design is a challenge due to its complicity. It is true that very often buyers are unaware of their latent needs.

## Green Consumer Segmentation

Environmentally friendly consumers were defined by Peattie, 2001 as individual buyers who prefer to avoid using goods that have a negative effect on the health of others, try to avoid a usage of material that were derived from engaged species, those products that could be a reason of environmental waste existence and require to use a huge variety of nature resources.

In terms of green purchasing, environmentally oriented customers show their willingness to pay a price premium for sustainable goods as it helps them to achieve pro-environmental values and benefits (Casadesus-Masanell, Crooke, Reinhardt & Vasisht, 2009). Thus, green consumption intentions were originated from moral obligation in relation to the nature and ecology and they were interacted to the consumers' personality using their habits, personal values, traits and extending beyond purchasing behavior (Soron, 2010).

Not only theoretical frameworks that define eco/green products were developed in previous studies, but also Jacquelyn A. Ottman created a Green Consumer Segmentation Model for US market. In the model, author identified 5 main groups of eco-product buyers (Ottman, 2006).

*Figure 1: Green Consumer Segmentation Model*
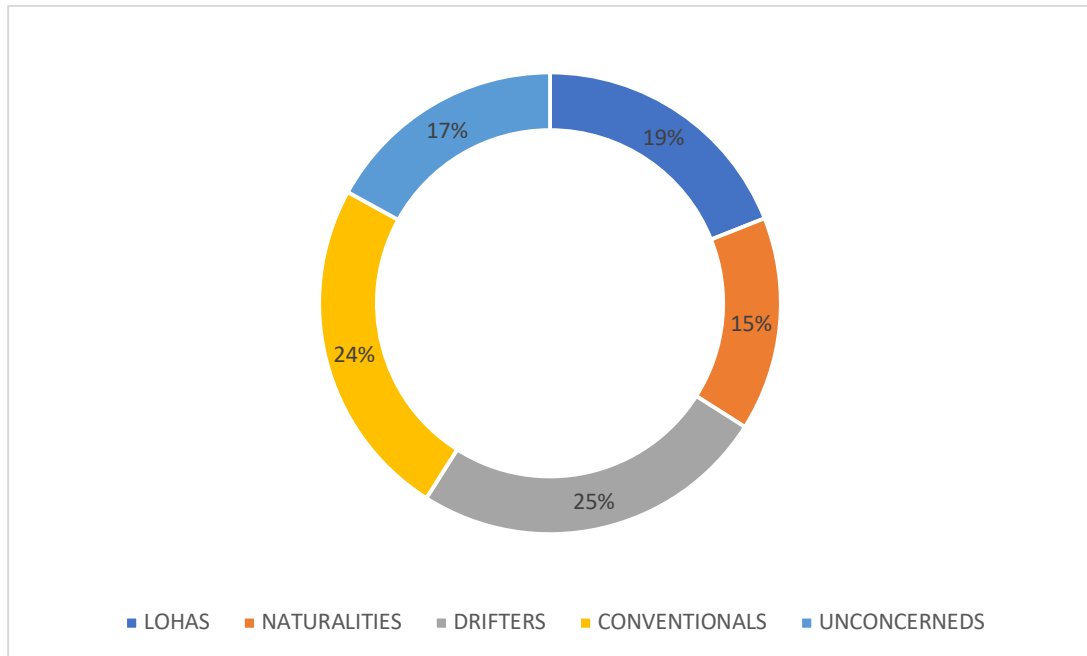


- **Lohas –** are the most active type of eco-consumers. They see a real connection between health and global preservation. They use green products to support their future well-being, seeking out information to ensure that products they buy fit to their personal environmental standards. They are generation of the newest technologies, active users of electronic devices and social networks.

- **Naturalities –** tend to achieve healthy lifestyle and believe in mind-body-spirit philosophy. They are concerned about harmful production effect on such products as food and cosmetics. They are not so concentrated on environment problems as Lohas, have lower income than others and usually do not have a high education.

- **Drifters –** consumers that have not yet integrated their values and ethics with a style of their lives. They are younger than Lohas do not know the nuances of eco-behavior, but particularly tend to behave ethically to the environment buying eco-friendly products.

- **Conventionals –** this group of consumers use recycling and try to avoid waste and extra spending. Usually, they are aware about environmental problems, but they are not going to spend money for eco-food or organic products.

- **Unconcerneds** – the least environmentally concerned group. They are not interested in environment problems and do not tend to recycle or boycott harmful brands. However, sometimes they purchase green products (Ottman, 2013).

## 1.2 Motivation of green consumerism

The green consumption approach is usually used in different meanings and context that include a green consumer segmentation, ecological footprint, decisions to change to the environmentally friendly transport, logistic and responsible consumption of natural resources (Diego Costa Pinto, Walter Meucci Nique, Marcia Maurer Herte, Adilson Borges, 2016). Ecologically oriented buyers are people who represent a certain group of consumers giving a preference to the products with green features such as eco or green label during their online or offline shopping routine. Environmentally oriented consumers make a decision to purchase responsibly due to their intention to diminish negative influence on the ecological environment (van der Westhuizen, 2018).

Fair-trade consumers, according to Ma and Lee (2012) have higher of self-transcendence intentions than those who does not purchase fair-trade products. Previous researchers also have found that customers who prefer self-transcendence intentions have more information about the nature protection and feel a stronger moral passion for the environment protection. Self-transcendence intentions were better tools to predict eco-consumption behaviors. Ecologically oriented customers tend to reuse products, they used to bring goods for recycling and make donations to the nature support more than those who following self-enhancement intentions. Moreover, it was found out that society has a better relation to the transcendence intentions neither to the self-enhancement intentions (Diego Costa Pinto, Walter Meucci Nique, Marcia Maurer Herter and Adilson Borges, 2016). Purchasing green customer expect not only make a decision towards non harmful for the environment product but also to fulfill personal expectations. Overall, previous researchers argue that green consumers are able to find their personal benefits in green consumerism and purchase these products because of their need to perceive themselves as eco-consumers (Barbarossa and De Pelsmacker, 2018).

Consumer motivation to purchase sustainable is a significant part of the green marketing strategy. Previous studies related to this topic demonstrated repeatedly that while green environmental attitudes and values contribute to a human's acting in a responsible manner (Rindell

*et al.*, 2014), the link between internal motivating factors and actual customer behavior can be limited (Carrington *et al.*, 2010). It showed that not only internal environmental attitudes, values and norms can make an impact on the green purchasing behavior but also there is a social factor that names symbolic consumption. Social influence prospectively on green consumer' behavior, when people are observed not only as individualists, but also as a group driving by social interactions. Some buyers with a several social positions tend more to purchase environmental-friendly products and use an opportunity to communicate an identity to their peers (Ulf Aagerup, Jonas Nilsson, 2016).

As stated by the theoretic framework of symbolic purchasing behavior environmentally oriented people used to have a positive attitude towards eco-brand and its reputation. For customers it is necessary to achieve a balance between their personal values and behavioral intentions (Butt, 2017). With it these buyers experience self-expression benefit when they purchase fair-trade products in accordance with their positive expectations about brand image, also they are able to generate a symbolic recognition (Erifili Papista and Sergios Dimitriadis, 2018). Succeeding the socialization benefit buyers can anticipate on the social acceptance from their external environment, family and friends. Frequently, consumers tend to be involved in social groups and be identified with its values. In situations when consumers' self-image and values are similar to the green ideology of their social groups, they facilitate shopping based on these factors (Narula and Desore, 2016).

In accordance with study of et al. Erifili Papista and Sergios Dimitriadis, 2018, several groups of consumers prefer environmentally friendly products because of the altruistic benefits they can get from the shopping. With this orientation the altruism became the most significant reason of sustainable buying behavior. When consumer behave and purchase in accordance with his intrinsic value, he experiences individual motivation caused by a kind desire to share and support (Sanchez-Fernandez, 2009). Altruism forces people to buy ethically due to their obligation to contribute and their responsibility to the environment. Previous discussions accepted the effect of altruistically consumer value to the consumer loyalty towards environmentally oriented brands (Erifili Papista and Sergios Dimitriadis, 2018). Finally, the confidence benefit plays its role in green purchase motivation of consumers. As it was discussed in the work of et al., Erifili Papista and Sergios Dimitriadis, 2018, buyers are always in search of benefits that reflect the usefulness of the products and its ability to perform functional indicators. These ideas explain that consumers believe in quality and strong competitive advantages of green products, their functionality and ethical attributes. The real need and high expectations towards fair-trade products motivate consumers to purchase green values and direct benefits (Lin, 2017).

Two previous researchers (Lee Johnstone & Stephanie Hooper, 2016) were focused on the study on the environmental factors that affect consumers intentions and motivate them to purchase sustainable. They argued that there are two main types of external community influence on green purchasing behavior: normative attitudes and informative attitudes. In accordance with a theoretic background social attitudes are significant determinants of environmental behavior, because consumers are social as they are people and all their life cycle are linked to the maintenances of their social identity. In this way people tend to be similar with their close to the values of their social structures and to avoid public punishment.

*Figure 2*
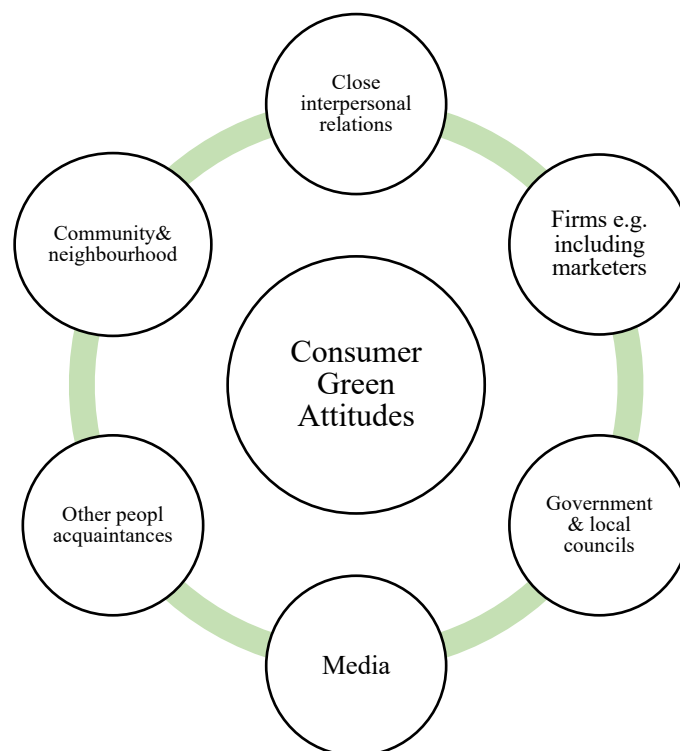


Normative attitudes are addressed to the human need to follow positive expectations of community and this behavior can be controlled in two ways: through the utilitarian or throw the value expressive influence. In the first case, people are trying to support community expectations driving by fear of punishment or rejection. While value expressive social influence takes a place in situations when individual consumer has a personal wish to support and protect the concept with people who share similar to them ideology. In this case, consumers will try to identify themselves with a positive reference group (Mangleburg et al., 2004).

Informative social influence or attitudes represent all the information that can be obtained from others and affect their green consumer awareness. Moreover, media services can contribute to the consumer' environmental awareness and knowledge, make them to ensue in subsequence intentions (Lee, King&Reid, 2015). For instance, consumer can conduct several insightful

observations based on his previous experience or create his personal opinion based on plausible resources that he or she trusts. It was found that ideas and thoughts that was provided by close impersonal people' communities had a significantly positive interaction with future individual choice of sustainable products (Park&Lessing,1977; Johnstone & Hooper, 2016).

Consumer green attitudes and behavior, according to previous researchers, conducted are influenced by their external social circle. The figure *3* depicts the model of external environment on consumer green purchasing attitudes and models. These factors were examined by Johnstone and Hooper, 2016, on the basis of experiments and in-depth interviews of different focus groups. Authors also concluded that during experiment participants tend to use different technics in order to affect opinion of others, for example some of people tried to promote environmental oriented behavior and even nadging.
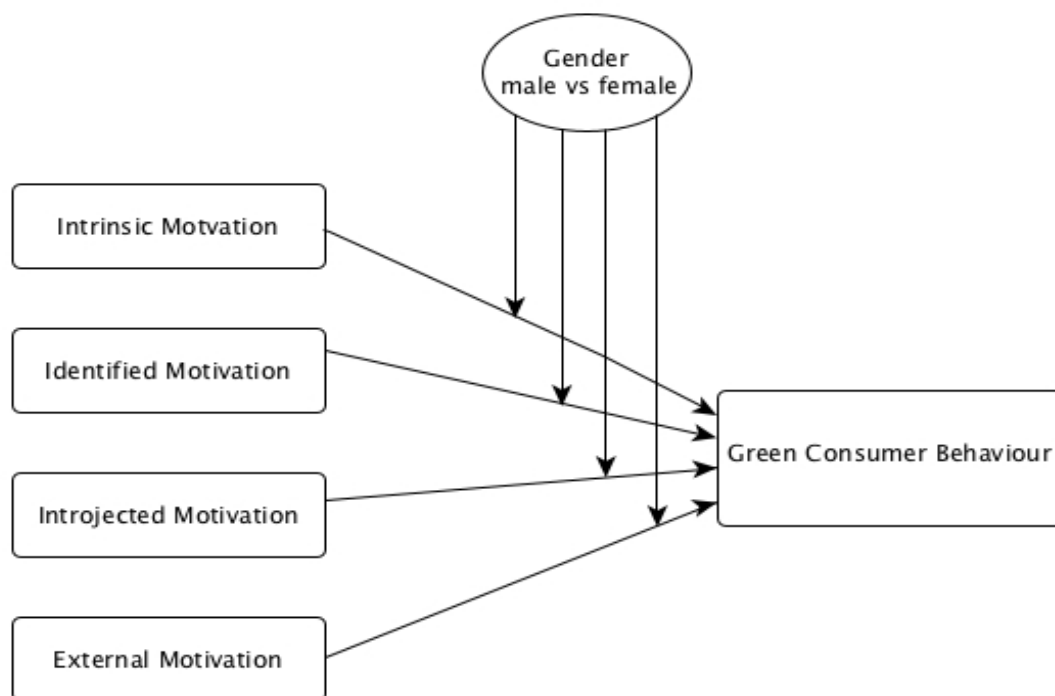
*Figure 3*



The organismic integrational theory of self-determination theory described on the *figure 3* claims that consumers are driven by different sources of purchasing motivation and classify these motivation factors as external, introjected, identified and intrinsic. Consumers face intrinsic motivation in situations when they see their intentions in the positive light and these activities make them experience pleasurable feelings (Gilal, 2019). This type of motivation is the most natural and independent in comparison with external or introjected. Introjected motivation is similar to consumer' behavior influenced normative environmental attitudes when the opportunity

to be punished or misunderstand by the environment make consumers to behave in a certain way. External motivation takes a place when consumer tend to react on his external demand. For example, person realizes that his closest circle has several expectations about his behavior and tries to behave in accordance with these expectations. While an extrinsic motivation is occurring when consumers are able to analyze deeply the significance of environmental behavior (Chandani and Gilal, 2019). Important to mention, that according to the studies on consumer motivation stimuli, the gender difference is significant basis of market targeting and segmentation and should be consider as one of general moderators (Amawate & Deb, 2019).

## Value-attitudes framework

In the last decade eco customers became highly aware about environmental situations and sustainable consumption as well as potential negative outcomes of buying habits to the nature. However, in previous theoretical studies customers' green values were estimated as important factors of environmental purchasing behavior (Khan&Mohsin, 2017). The approach of value-attitude consumer behaviors claims that all the customer has their attitudes, values, norms and perceptions organized into a cognitive hierarchy. In this case, values are the most valuable part of value-attitudes-behavioral concept is operating by consumers while doing green purchasing decisions (Kautish and Sharma, 2019). Some authors, such as (Ajzen and Fishbein, 2005) determine consumer attitudes as the scale to which consumer has positive or negative behavioral evaluation in internal questions. The study of value-attitude behavior can be significant in analysis of the situation when several customers perceptions are explained by the construct of environmental attitudes (Cheung and To, 2019). Moreover, some of theoretical experts have developed different behavioral models toward green purchasing behavior in order to estimate the dependencies of consumers values, attitudes and behavioral intentions. For example, the correlation between such factors were examined by Lee in 2011. Mainly all studies conclude that strong value orientation stimuli cause increase in the level of environmental attitudes. Moreover, strong environmental attitudes cause greater intensity of ecological intentions.

Since 20th century consumers' values were described in different manières as "guides for the greatest level of living" to "guide actions or standards". However, in accordance with existing theoretical base there are two main types of green consumer values: terminal and instrumental. Speaking about terminal value, it is important to mention that terminal values and attitudes depict values that are important by their existence. Examples of such values can be peace, love, kindness or beliefs about important end state, while instrumental values can be considered as ideas about

the action mode. The main difference between terminal and instrumental values are in the way how consumers react to the environmental product and which goals they want to achieve. In terms of terminal value consumers imply on the final stage of their consumption, but instrumental value is needed to achieve final goal using different smaller tasks. Thus, instrumental value determines in the better way people' self-attributes and -enhancements and according to some researchers claim consumer who are experiencing higher level of instrumental value will analyze the pros and cons of green purchase in detail. But in some cases, such detailed analysis makes consumers to behave not sustainable due to the higher personal costs that exceed consumer' benefits (Steg, 2016).

## 1.3 The background of green consumer-brand relationship

In accordance with theoretical findings some researchers claim that buyer-brand relationship is very challenging task in sustainable business. These ides can be considered with specific barriers and challenges which green customers face doing their purchasing routine. The amount of greenwashing is growing in the same temp as green markets, thus, consumer meet skepticism and have more and more questions to the eco manufactures (Leonidou and Skarmeas, 2016). Another factor aggravating the relations in the reluctance of some groups of eco consumers to purchase regularly as a way of expressing their environmentally friendly position of informed sustainable consumption (Garcia-de-Frutos, 2018). These factors depict how it is significant to mark-up factors affecting green purchasing behavior as well as grown up consumer loyalty towards eco brands. Sustainable companies offer specific value to customers, for this they use different types of consumer motivations from the attractive and sustainable product design to altruistic stimuli that affect positively green buyer' loyalty towards producer (Chen, 2010). Because of these reasons brand knowledge and brand popularity among consumers has been named as one of the most important determinants of sustainable buying behavior. Researchers made a study towards green trust and satisfaction of consumers and concerned that consumers meet their expectations when they achieve pleasurable level of purchase-related performance in order to satisfy their green desires, ecological needs and expectations. Moreover, they depend on readiness to imply on goods which are created on the basis of beliefs coming from environmental credibility, benevolence and ability about environmental results (Martinez, 2015).

While, buyers spend their money on brands with positive or negative symbolic meaning, green branding strategies work as social tools while creating a communication channels between customers and their references. All consumers are people; however, people have a need to make a social comparison and pay attention to the differences they have. Previous researchers have found influence of social situations on the green consumer behavior in situations with a high and low involvement (Ulf Aagerup, Jonas Nilsson, 2016). During the previous studies it was figured out that development of the relationships between people and green brands is a challenging task. The main case for this is several numbers of barriers that consumer faced making a purchase in this market. Demanding consumers are used to be very skeptical because they have a previous experiences and information about the future of different outcomes.

From the marketing point of view consumer skepticism can be studied as a stage of a dynamic understanding of cognitive, affective and behavior components. Moreover, these needs to be perceived by buyers as value-driven or altruistic efforts (Skarmeas and Leonidou 2013), this need can be a particularly difficult achievement in the case of already alienated or hostile customers (Chylinski and Chu 2010; Shrum et al. 1995). Very often consumer's mind set, and behavior is affected by such factors as misleading and greenwashing.

Also, this affect can be reached with repeated incongruence between sustainable corporate image of brands and few clearly articulated benefits of environmental products. In past decades it became easier for companies to solve this task due to the bigger amount of public information and grow of educational resources. Customers have more fact-based and product-oriented claims. The idea of sustainable consumption became a visual image for consumers, they tend to reduce wastage and make energy use lower. People do not have a direct impact over how products are manufactured and designed, however, they may influence the informed market demands (Morris and Matthews 2015). Because of the high demand of green products corporations have a high benefit from the eco-product manufacture processes (Peattie and Charter, 1992Green). This type of products satisfies needs of buyers and very often has less negative impact on the environment (Charter et al., 2002). Previous studies, that already became fundamental, tell us that people with self-transcendence show more willingness to pay for the environmentally friendly products than those with self-enhancement intentions (Stern and Dietz, 1994; Stern et al., 1995, 1998, 1999; Karp, 1996; Schultz and Zelezny, 1999; Follows and Jobber, 2000; Schultz, 2001; Nordlund and Garvill, 2002; Doran, 2009, 2010; Pepper et al., 2009; Verain et al., 2012).

*Figure 4*
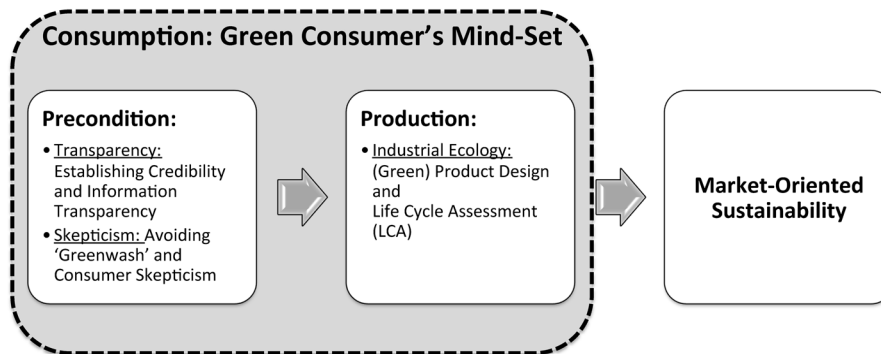


This graphic shows the areas that are actual for the analysis of the emerging market-oriented sustainability paradigm. The green consumers' mind-set is a starting point of consumer behavior paradigm in the area of green consumption. It covers particularly preconditional aspects including barriers of green purchase. This figure lead previous researches to market-oriented sustainability (Fred Lemke and Joãʼo Pedro Pereira Luzio, 2014).

From the theoretical perspective an opportunity of consumers to have an actual and credible information about the market is a necessary condition for the decision-making process. Also, this transparent market data supports a freedom condition not only on the competitive green markets, but also create a pleasant atmosphere for all markets in general. The open access to this kind of information as well as the disclosure life cycle cost information reduce barriers of the market and support a purchase of environmental-friendly products that have superior qualities comparing with others. Green products very often have ecological long-term cost advantage.

The information about these factors influence strong green consumers as well as mainstream customers (Kaenzig and Wustenhagen 2010). The process of increasing green purchases also supported with media education sources and eco-labels adaptation. Ecolabels support the green consumer's behavior by reducing cognitive efforts and costs on informational search. Unfortunately, the response of buyers to ecolabeling is moderating with different factors such as ideological perceptions of different markets and mentality contexts (Leonidou et al. 2013). The input to the ecolabeling sustainability has been made by certifying organizations (Thogersen et al. 2010).

# RUSSIAN MARKET

## 1.4 Development of eco-industry in the Russian Market

The phenomenon of green marketing is a conceptually new for the Russian market and it is not common for the use in official governmental and economical documentation. However, the Russian Federation has started to achieve environmental goals over the last decade corresponding green marketing strategies into the Russian reality. At the current stage, that is significantly important for Russia's industrial economy to stabilize its medium as well as long-term targets. Moreover, that is critically important for Russia to come out from the natural resource-based model of economy. This direction became common with the concept of a "environmental economy". The documentation of Russia's strategy development contains official norms of law such as Concepts of Long-Term Development and Long-Term Socio-Economic Development of Russia as well as Russian Basic Principles of State Environmental Development Policy (Bobylev & Perelet, 2013).

Russia's business functions are related to extractive industries and energy-intensive low-tech manufacturing. The industrial production system from historical perspective always has been very energy intensive. In fact, Russia's energy saving potential has been calculated as 45% of its total energy consumption. The potential of energy saving is similar in its quantity to the almost all of annual energy consumption in France (Mokveld et al., 2011).

The protection of the environment has never been the main topic of Soviet politician's discussions until 1986 when the atomic disaster in Chernobyl region happened. From this time, the Soviet State Committee on the Environment has been created in order to analyze the most environment-related tasks. Post-Soviet Union crisis became a call for the new environmental restrictions such as maximum allowable limits on emissions and discharge, investigations into the natural resources, pollution payments including several limitations and beyond, creating systematized of environmental funds and economic responsibility for environmental damage and violation. The problem of the natural protection created a need for the organization of Russian Ministry of Natural Resources and Environment.

Moreover, in the Russian market there is a presence of the big number of business conglomerates controlling from the last decade about 40% of Russian companies from the point of revenues and employees. The big change in the situation Russia faced when it came over tax evasion and government has begun a control over the hugest companies. Hence, Russian economy is characterized by large SOEs with relatively low R&D spending what is not a common factor on

the west, but they are vital for many emerging markets. Such companies give a job for the big number of people and it's easier to start the all kinds of innovations. These factors have an impact to all stages of Russia's economy offers chances for increased innovation activities as her SOEs are key multipliers of technologies. The Russian Government created several directions for development in science, technology and environmental innovation until the end of 2020 (Thurner & Roud, 2015).

In the Russian Federation sales of green products doubled in 2015, compared to 2011, reaching 150 billion rubles. As it was claimed by experts, by 2020, the Russian market for organic products will amount to 300-400 billion rubles, and the same amount will come from the export potential of green products (Portal Finmarket, 2017). According to a survey conducted by CVS Consulting in 2014, about 53% of Russians are willing to pay more for environmental goods, compared with 70% in Moscow (Kizim & Ilyukhin, 2014; Orel, 2017).

However, living in a transitional country, Russian customers do not show a strong level of customer' activism while the government does not require the same amount of corporate responsibility and environmentally friendly technologies as leading western countries. Hence, it is expected that not all best practices in the European and American markets will be successfully adopted by the Russian market. On the contrary, due to the rich Soviet heritage, Russian Federation achieved a sufficiently high level of social and human development, and its status is still better than that of other BRICS countries. For instance, in recent times countries with developing economies successfully start up with human needs and their social indicators became close to those indicators shown by green market leaders. However, from the environmental point of view the developing markets work worse as they often follow the "brown" economic growth model where economic and social issues evaluated higher than environmental needs (Skolkovo, 2019).

In the market research conducted by NeoAnalitics in 2019, it was found that local market of organic products is developing fast. The main factors effecting the development of eco market is Russia are peoples' lifestyle, popularity of healthy lifestyle and clear eating as well as lack of trust to genetically modified foods. In 2018, the value of the organic market in Russia increased by 8,2% and was equal to 6 milliards of rubles. As it was mentioned by NeoAnalitics, the full organic market volume can be estimated in 300 milliards of rubles. Moreover, only 2 % of the organic market is full and it has a huge potential for the growth. Marketers claim that Russia has a big potential for the organic market development as it has a huge amount of lands that are suitable for the organic farming and they have never been treated by pesticides (NeoAnalitics, 2019).

From the first of January 2020, the Federal Law on organic products has started on the territory of Russia. This legislation determines a big step in the development of eco-market in Russia because it regulates the terminology for the organic production. Moreover, the law restricts

the use of pesticides, antibiotics, and other chemical ingredients in the organic food manufacturing processes. In the accordance with a new law, the producers of eco foods have to make an official certification for their production (Komersant, 2019).

## 1.5 Distinctive features of Russian consumers.

The modern Russian consumer has been formed over the past 15 years. In 2000, the first Russian crisis ended, and the crisis began economy and welfare of the population, which lasted until the second economic crisis of 2008–2009. This crisis has hurt a lot on macroeconomics Russia, but to a lesser extent, has touched the Russian consumer. Besides, it ended relatively quickly and moved to the next rise of 2010–2013. Over these 15 years, the Russian consumer has changed dramatically. First, its purchasing power has almost tripled. People stopped "getting" and began to choose products, the service approached the price. All consumer markets were booming. Modern trade formats - hypermarkets and supermarkets have overtaken traditional trade. Housing, the number of cars, various appliances grew rapidly and devices from the public. Millions of Russians went on vacation abroad. Mobile communication is closer to total coverage, Internet penetration has reached 70%. In 2013, the birth rate exceeded the mortality rate, and life expectancy increased to 71 years (Alexander Demidov, 2015).

In 2012, the Levada Center conducted a survey, which determined that about three-quarters of the Russian population were aware about environmental issues in their country. That research was conducted among Russian residents from 45 regions (Bobylev & Perelet, 2013). The study showed that 49% of the Russians believed that sustainable behaviors can decrease a harmful impact on the environment, while more than 50% of the respondents claim that they already have ecologically friendly habits in order to diminish the environmental footprint (IPSOS Russia, 2020). In 2017, it was found by Nelsen market research that two-thirds of Russian resident show their willingness to change purchasing behavior in order to diminish negative impact on the nature. The study claimed that only 12% of the Russian resident are used to buy green products on daily basis what shows one of the lowest results in the world. For instance, in China around 50% of consumers claim that they had a green purchasing experience.

The main barrier for the eco purchase in Russia is the inaccessibility of eco-products for the most segments of the population. Almost half of the respondents argued that they cannot afford to buy ecologically friendly products because of their high costs, while only 14% of respondents

claimed that they can easily find and buy green goods in the store. Consumers showed they willingness to pay for locally produced organic milk products, water, frozen meat and sea products. More than half of the respondents claimed that for them it is significant to see that companies take choose a sustainable strategy of their development.

Generation Z among the participants of the study showed the highest interest to the environmental issues and stronger environmental concern. It shows the important tendency that for the big part of younger consumers is to "think different', understand the dependence between their own being and ecology. Marketers claim that thoughts of generation Z depict environmental trend that are actual for all the world and thus, the positioning as the environmental brand among companies could be attractive for the generation Z customers (IPSOS, 2020).

Social responsibility is a new field for the Russian business and not many enterprises use a sustainable initiative as a part of marketing communications even though for many businesses sustainable elements in the strategy gives a wide opportunity for differentiation (Nielsen, 2017). An analysis of the assortment in large retail chains showed that around 30% of sales are products that contain green labels on their packages. Amongst all the environmental labels, Russian consumers prefer labels that claim that product does not contain chemical additives. The popular labels "Bio', "Natural" and "Eco" are second by the popularity according to the number of sales, however, this segment shows the fastest grow rate, which is equal to 39% comparing with the previous year (Nelsen, 2017). The environmental labels "Gluten Free", "Non-GMO", "Cruelty Free" or "Vegan" are in third place by popularity among green Russian buyers according to Nelsen Market Research.

The trend towards a healthy lifestyle is very popular among Russian consumers as the index of consumer confidence level shows that the concern about the health issues is the most actual problem among green consumers in Russia. The consumption of goods without GMO as well as "cruelty free" or "eco" products is growing exponentially. Taking into account the dynamic of green sales, it can be concluded that trend for environmentally friendly lifestyle is steadily increasing (Nielsen, 2017).

In Russia, the main volume of sales of environmentally friendly products was conducted for people with above average income. New generation of wealthy buyers are citizens with incomes above secondary and higher education, who have certain property and lead an active lifestyle. This target group is interesting for companies not only as active buyers, but also as trendsetters and opinion leaders who show the sustainable behaviors and tend to consume green products on the daily basis. These customers try to test new products and services. Very often, they share their impressions in social networks as well as to public. Now, people with above average income tend to be more modest, show the reasonable behavior and sustainable

consumption. New generation of Russian wealthy consumers prefer the quality, naturalness, and functionality of products, moreover, this group of consumers expect to see the environmentally responsible behavior of companies. They actively support pro-environmental ideas and show their willingness to change not only consumption habits, but also lifestyle (IPSOS, 2020).

74% of the Russians pay attention to the product nutrition, while more than 60% of consumers believe that the shorter the list of ingredients, the more sustainable and healthier the product. Main part of respondents showed the confidence to the fact that benefits of FMCG products are inversely proportional to the number of additives (Nielsen, FMCG & Retail, 2016). Responsible consumption in Russia is gaining momentum, while more than 50% of consumers claim that environmental concern became more relevant for them. Despite the fact that global priorities are concentrated among the topic of climate change, Russian issues are related to the responsible consumption. The half or respondent claimed that that plastic packages irritant them, moreover, every fifth person confirmed that try to spend less energy resources in order to support the environment. Around 30% of Russian respondents showed their willingness to decrease the purchase of harmful for the environment packages (IPSOS, 2020).

To conclude, it is clear from the industrial literature that Russian eco market remain growing and mainly consists from organic foods and cosmetics. Despite this fact, that market is in its infancy, green consumers show several trends such as strong concern about health and environmental issues. Moreover, younger consumers as well as consumers with above average income tend to have higher level of environmental concern and be more open for the green consumption. In Russia, green customers are able to differentiate distinctive attributes of sustainable products, and they pay more attention to the nutritional information, eco labels and package design.

## 1.6 Factors determining the consumer perceptions of eco products.

During the theoretical analysis of excising literature, it was found that not only behavioral factors, motivation and purchasing benefits affect consumer decision to purchase sustainable product, but also, there are several characteristics of products or manufacture which could increase probability of purchase. Moreover, as it was mentioned by Rettie, 2012 green marketing strategies make a social responsibility of a company important and support sustainable relationship of the company with customers, environment and society in general. It means that peoples' attitudes

towards sustainable and eco-friendly behavior influence the company's decision to produce products and services with green characteristics.

First of all, the new trends of green marketing include the need of effective distribution of information to the consumers (Testa, Iraldo, Vaccari, Ferrari, 2015). That means that it is significant to share actual information about green products in times when green consumers make their purchasing decisions (Thogersen, Haugaard, Olesen, 2010). Previous works of Hornibrook, May and Fearne, 2015 describe the efficiency of *eco-certification* in sustainable products' promotions. "Eco-labels are results of based on environmental information policies and programs that were created in order to address information about green product impact to customers and with it to reduce their uncertainty about green purchasing decision (Testa, 2015). Some of researchers (Long, 2018), argue that companies starting eco-labeling programs increase the quality of environmental communication between brands and customers. Moreover, this type of the informational exchange creates a strong link with industry as well as it brings all the important knowledge to scientists and pro-environmental engineers. Thus, the informational exchange about green processes strongly supports an idea of sustainable future. Harms & Linton, 2015 claim that environmental certification can work as a brand for the companies because it adds value to the consumers' willingness to pay for sustainable products. Furthermore, the existence of label on a product as the confirmation of certification suggest that there is a well-established monitoring system which can give a guarantee to consumers about the quality of green products and its consistency (Kavaliauske, Vaskiv, Seimieno, 2013). Additionally, it was mentioned by Esparon, Gyuiris & Stoeckl, 2013, that some of green customers trust the claim that eco certification make a significant difference for the environment.

Secondly, that was mentioned in previous academic studies that *brand popularity* can affect consumers' perception towards eco products. For instance, Ahmand and Anders, 2012 argued that for many organic and sustainable products brand name as well its popularity could be the "key factors" affecting consumers purchasing decisions. Moreover, that was found that some groups of customers show the willingness to pay a price premium for products with popular and well-known brand names (Wu, Yin, Xu, Zhu, 2014). Brand popularity can create a feeling for customers that popular eco brands are trustworthy and superior to other brands (Dean, 1999). It was also found that buying popular brand customers expect a certain level of quality from this brand what assume a certain level of trust to it. In advertisement brand popularity as an extrinsic cue can cause a better consumers engagement as well as buyers expect several product values and see other less popular brands as more riskier purchasing decisions (Whang, Ko, Zhang, Matilla, 2015).

Another important factor affecting green consumer attention to the sustainable products is a *reputation* of the environmentally friendly brand. The stable reputation of the brand environment

as well as trustworthy and environmental management create a company's green image (Trott, 2013). Moreover, a corporate reputation is dependent on the ability of brand to position environmental values and concerns to their customers using advertisement. Konuk, Rhman & Salo, 2015 argued that there is a higher probability for green buyers to purchase a new eco product from the brand that has a better reputation and a higher brand equity. Other works claim that strong company' reputation as well positive image of corporation are based on superior quality of its products (Jarvinen & Suomi, 2011). According to Martinez, 2015, marketing strategies which were created by enterprises in order to determine customers' attitudes and beliefs about environmental products support the development of positive reputation of eco brand. Moreover, green reputation benefits brands with customers acceptability of eco goods and their positive post purchase experience. Green marketing approaches can increase company' reputation, profits and to strength the green image of the sustainable brand.

During the analysis of academic literature, it was found that ecologically friendly ***design*** of green products is another factor that makes an impression on consumer decision to purchase eco product. According to Zhu, 2013, the process of environmental design entails designing goods that minimize the consumption of energy resources and materials as well as use of harmful manufacture activities. Moreover, eco design can contain material and details which can be recovered, reused or recycled. Thus, the design of the product' package can be considered as significant attribute of product-consumer communication (Loose & Szolnoki, 2012). Different elements of design such as color or package material can affect customer' expectations about the taste or quality of environmentally friendly product (Boesen, 2019). Ketelsen, Janssen & Hamm, designed or reduced packages. Overall, it is clear that customers are used to rely on visual heuristics in order to evaluate the quality of the product and its design (Kim, Gravier, Yoon & Oh, 2019; Herbes, Beuthner & Ramme, 2020).

Moreover, it was found in previous researches that customers tend to make a conclusion about the product ***nutrition*** based on visual characteristics or claims from advertisement (Gomez, 2013). Many researchers such as Lahteenmaki, 2013 and Wezemal, Caputo, Nayga, Chryssochoidis, Verbeke, 2014 mentioned the importance of product' nutrition for consumer choice. Additionally, it was supported that the use of claims about the product nutrition support customers with information related to their preferences (Lahteemaki, 2013). Moreover, study of Zepeda and Deal, 2009, argued that ecologically clear products such as food or cosmetics have a higher nutritional value and contain fewer contaminants or harmful for the environment components, thus, consumer expect that eco products have a superior quality comparing with conventional products.

Finally, based on previous studies it was found that *"cruelty free"* label as well as other confirmation of the lack of animal testing have a positive effect om the consumer' perception towards sustainable products. The research on marketing trends claimed that animal welfare is one of the general trends of 2019 and with-it consumers show their willingness to use less animal products and materials, use non-harmful beauty and self-care products. For instance, more than 20% of Euromonitor's Beauty Survey responders claimed that "cruelty free" label as well as lack of animal testing positively influence their purchasing decisions (Spray Technology & Marketing, 2019). Moreover, when customers interpretive welfare labels in the right way they have positive attention to any kinds of animal welfare what increase their attitudes towards cruelty free brands (Sheehan & Lee, 2014).

## Conclusion

In the theoretical part of the study significant conclusions for the future research were drawn. In the first part of the thesis all the green marketing phenomenon from the definition of the environmentally friendly products to the green purchase motivation was studied. Sources of external and internal consumer motivation, green consumer benefits of sustainable consumption and value-attitude framework were discussed and analyzed in detail. Moreover, the theoretical part supported research with the answer to the one of the key research questions and described distinctive features of green Russian consumers. Main trends of the eco market were briefly discussed in order to get a better understanding of Russian consumers' preferences.

Based on the previous researches, it was found that product' attributes such as eco-certification, "cruelty free" labeling, environmentally friendly design and organic nutrition can significantly influence the green consumers' perception for the sustainable products. Moreover, Russian consumers are interested and concerned in the nutrition information, green labels, ecologically friendly packages. Finally, factors related to the green brand image and equity such as brand popularity and reputation can increase the customers' attitudes towards green brand and probability of the future purchase.

# Chapter 2 DEVELOPMENT OF THE RESEARCH DESIGN

## 2.1 Theoretical framework and research propositions

It was mentioned in the past academic works that green purchasing behavior as well as consumer' green attitudes can be dependent on a consumer' demographic characteristics (Yu et al., 2014). On the study of He, Duan, Wang and Zetian, 2019 such consumer demographic as age and gender were taken into consideration. According to authors age could be a moderator for the estimation of consumer' environmental behavior, moreover, some researchers claimed that people from younger age groups had better understanding of environmental issues and the level of their awareness was higher that from older ones. Also, older people did not show a strong environmental behavior (Diamantopoulos, 2003). Moreover, latest studies of Uddin and Khan, 2018 claim about similar conclusion that younger buyers have more interest to buy eco products. For example, on developing market of India the main green customer segment consists from young buyers (Central Statistics Office, 2017). *Thus, it is claimed that **consumer age** can be one of the predictors in this research paper.* It is expected, that understanding of consumer' preferences according to their age differences will give a better understanding of the Russian market tendency.

Some researchers suggest that gender of buyers plays an important role in the dynamic of consumer environmental behavior. For instance, He, Duan, Wang and Fu, 2019 argued that according to previous studies male customers have better knowledge of environmental problems than female customers, while last one shows the higher attendance to the green purchasing behaviors. On the other hand, environmental researchers long time claimed that women have stronger environmental concerns, and, in this case, gender was frequently examined as predictor of consumer green attitudes and values (Lee, 2009). In study of Royne, Levy and Martinez, 2011 results showed a significant for marketers' findings that younger consumers showed more effort to pay extra for sustainable products that older consumer. *In current study the gender of green buyers can be used as a predictor for future estimations.*

On the base of the theoretical analysis it was found that consumer' purchasing decision depends on his/her attitudes and values. Moreover, it was mentioned that environmental factors such as social influence and informative environmental attitudes effect consumer personal green attitudes. Thus, that was accepted by previous researchers that normative environmental aptitudes and informative environmental attitudes have effect on green consumer attitudes (Lee Johnstone & Stephanie Hooper, 2016). *Thus, **consumer green attitudes** should be used in our research as the third predictor for propositions.*

*Overall, the **predictor's** variables for the conceptual model are **age**, **gender** and **consumer green attitudes.***

**Green product certification** is a powerful tool for sustainable brands as it can help it support their reputation as well as to serve consumers with credible information about the quality of product and its environmental orientation. Furthermore, some companies position their eco-certification as a competitive advantage (Gulbrandsen, 2006). According to Basu, Chau and Grote, 2003 the growing actuality of eco-certification is supported by the market direction to achieve sustainable goals. Consumers show their readiness to pay higher prices for eco certified products, a specially on the organic food market. Moreover, **eco-certification and labeling** affect consumer decision making process as they make a procedure of green procurement easier because these factors are read by customers as direct standards. However, the existence of eco-certification on the market makes consumers carefully inspect products and pay attention to the smaller details (Grant et al., 2017). Also, it was found previously during the analysis of determinants which are special for sustainable consumption, that green consumer intentions are dependent on procurement context. For example, green consumers are searching for certification labels and information about suppliers (Chkanikova, 2016). Previous studies considered the dependency between consumer age and willingness to pay for the eco-certified products. Whitson, Ozkaya & Roxas, 2014 claimed that decision to purchase eco-certified green products was shown to vary by the age of buyers and younger consumers willing to buy more eco certified products than older customers. Thus, the following proposition will be tested:

***P1**: Consumer age variable will be a significant predictor for the importance of eco certification variable and younger consumer will see more importance in the existence of eco-certification than older consumers.*

The previous studies of Whitson, Ozkaya and Roxas, 2014 as well as Salladare, Brecard and Olliver, 2016 showed the wide consensus of the gender role in consumer perception towards eco-certified products. They claimed that female consumers are more prone to purchase ecologically certified green products than their conventional alternatives. Based on this knowledge the next proposition must be tested:

***P2**: Consumer gender variable will be a significant predictor for the importance of eco certification variable and female consumers will see more importance in eco certification than male consumers.*

It was supported by Ovchinnikov, 2011, that for consumers with positive environmental attitudes towards the nature show more willingness to pay for reusable and eco certified products than customer with low level of environmental attitudes. Customers with strong pro-environmental attitudes tend to value eco certification more than buyers with lower level of green environmental attitudes (Harms & Linton, 2014). According to the previous findings the following proposition in current research should be formulated:

*P3: Consumer green attitudes variable will be a significant predictor for the importance of eco certification variable and consumers with higher level of green attitudes will see an eco-certification more important than those with lower degree of green attitudes.*

Environmentally oriented consumption is based on the general idea that consumers make sustainable and rational decisions. It means that customer analyze their shopping and likelihood that their buying habits could harm the nature (Schaefer&Grane, 2005). As it was mentioned before consumers have different sources of external and internal motivation to purchase green. They rely on community norms, social approval, their personal attitudes and values as well as are following altruistic ideas of sustainability. However, as it was found in previous analysis that consumer-brand relationships play the great role in the forming of eco-demand. It was already mentioned that brand awareness formulates positive consumer' attention to the brand, rise up his loyalty and future probability of purchase. Effective green brand image and its ability to deliver environmentally affirmative ideas to the eco buyers are general contributions in creation of consumer-based brand equity (Chen, 2008). Based on a claim of Cialdini, 2003 the higher the level of **brand popularity** the higher is a positive impact of the product on consumer purchasing decision. Moreover, the popularity as a descriptive norm increase consumer' attitudes toward brand and grown up a probability of future buying intentions (Kim & Min, 2014, 2016). That was discussed in previous studies that age can be a significant predictor of green consumer behavior towards sustainable brands, because older customers tend to have less expressive purchasing criteria as younger people. Moreover, younger consumers often pay more attention to the symbolic aspects regarding environmentally friendly products (Hur, Woo & Kim, 2015). Therefore, the next proposition can be created:

*P4: Consumer age variable will be a significant predictor for the importance of brand popularity variable and for younger consumer the brand popularity will remain more important criteria than for older consumers.*

In accordance with study of Dean, 1999, consumers tend to reduce the uncertainty level choosing the most popular products and brands. Additionally, Kim and Min, 2014, repeat a similar idea that brand popularity as well as its price have an influence on consumer perception about the quality of product. It was found by Charness & Gneezy, 2012, that women tend to be more risk-averse in their purchasing decisions, while males prefer to use well-known products and brands with perceived quality. Thus, the research can predict that male consumers will pay more attention to the brand awareness as well as at brand popularity. Based on these findings, the following proposition was created:

*P5: Consumer gender variable will be a significant predictor for the importance of brand popularity variable and for male consumers a brand popularity will be more important than for female consumers.*

Some of previous studies have claimed that customers' green behavior can be affected by their involvement into the issues of sustainability and products with environmental attributes influence green consumers' purchasing intentions (Marguerat & Cestre, 200). Furthermore, customers with high involvement in sustainability and strong environmental attitudes expected to have more interest to green brand popularity (Whang, Ko, Mattila, 2015). Thus, the following proposition can be examined:

*P6: Consumer green attitudes variable will be a significant predictor for the importance of brand popularity variable and consumers with stronger green attitudes will perceive brand popularity more important than consumers with lower degree of environmental attitudes.*

Furthermore, speaking about the **reputation** of environmentally oriented brand, it is empirical evidence that consumer' trust can cause favorable influence on brand equity (Butt, 2017). Overall, that is clear that brand image and its reputation influence the consumer' perception towards eco production. In conformity with Chen, 2015 and Fotiadis, 2019, brand reputation as well as corporate image of green brand can be improved by advancement an environmental communication attitude. Moreover, the grow of brand reputation can have a great influence on consumer evaluation of the eco products produced by the company (Venger & Pormirleanu, 2018). In accordance with market research of IPSOS Russia, 2020, younger consumers which represent generation Z show stronger environmental concern, moreover, for them sustainability and green reputation of eco brands remains one of the key criteria for choosing products. Therefore, the following proposition was formulated:

*P7*: *Consumer age variable will be a significant predictor for the importance of brand reputation variable and younger consumers will see more importance in brand reputation than older consumers.*

Past studies did not focus on studying the impact of gender indicator for the importance of brand reputation. However, the current research expects that the attention to the brand reputation will differ among male and female consumers. First of all, it is expected that women purchase environmental products more frequently as the majority of purchases is basically made by females. It means that their decision-making process can differ as they buy many of FMCG products on the daily basis and can have better knowledge about practical characteristics of products. Thus, it can be predicted that females are more open for new buying experiences due to the frequency of their shopping, while men can face several difficulties with a choice. Secondly, it is expected that male consumers will pay more attention to the general characteristics such as brand image, popularity and reputation because they less aware about practical features of many. Consistent with the arguments above, for this research it is important to understand how the gender of buyer effects brand reputation. Thus, the following propositions was formulated:

*P8*: *Consumer gender variable will be a significant predictor for the importance of brand reputation variable.*

Previous studies conducted that customer who trust the company' reputation and tend to believe that manufacture take care about environment show the stronger willingness to pay for environmental products (Orset, 2017). It means that consumers with stronger environmental attitudes take into account the importance of brand reputation, therefore the following proposition should be examined:

*P9*: *Consumer green attitudes variable will be a significant predictor for the importance of brand reputation variable and consumers with stronger green attitudes will pay more attention to the reputation of environmental brand.*

Another important feature of eco product that could affect consumer perception is **ecologically oriented design**. During the previous studies it was found that consumers are aware about the influence of product' packaging on the environmental sustainability. Some consumers claimed that that for them it is essential to choose products with recycled, recyclable or reusable material

and the ability of materials to be nonharmful for the planet influence their purchasing decisions (Agrawal and Gupta, 2018). That was ascertained that zero-packaging, recyclable and biodegradable packages' design is provisional signal for the environmental purchase and nonharmful for the planet (Scott and VigarEllis, 2014). Moreover, it was exhibited that several buyers show their regular readiness to pay more for good that have specific certifications and labels such as organic, no pesticides or no genetically modified (GE) when all these attributes have their personal labels (Bernand, 2006). Also, from the company sustainability perspective environmental product design has several advantages such as decrees of environmental footprint, efficient use of energy and resources and achievement of green indicators (Sanye-Mengul. Perez-Lopez, Gonzalez-Carcia, Lozano, 2018). However, the study of Baruk & Iwanicka, 2016, claimed that the importance of environmental design for green consumers increase with their age, while Barber, 2010 argued that customers from the older "baby boomers' segment show higher willingness to pay for the sustainable package design than younger 'millennials'. Therefore, the following proposition will be tested:

*P10: Consumer age variable will be a significant predictor for the importance of design variable and older consumers will see more importance in environmental design than younger consumers.*

That was recorded in previous studies that female customer more likely than male customers think about the environmental footprint of packages and buy bigger volume of packages in order to decrease a waste (Jezewska-Zuchowicz & Jeznach, 2015). Moreover, it was confirmed that women show the higher willingness to pay for sustainable packages and bottles (Orset, 2017). In accordance with previous studies the following proposition was created:

*P11: Consumer gender variable will be a significant predictor for the importance of design variable and female consumers will see environmental design more important than male consumers.*

As It was confirmed in the past studies that customers with stronger environmental concern and environmentally friendly habits as well as those who experience positive emotions while participating in eco-friendly activities show more willingness to pay for the green designed products. Accordingly, the next proposition should be tested:

***P12:** Consumer green attitudes variable will be a significant predictor for the importance of design variable and consumers with stronger environmental attitudes will see eco design more important that consumers with lower level of green attitudes.*

Furthermore, in conformity with findings of Dabija, Bejan and Grant, 2018 several studies discovered a consumers' tendency to purchase eco products that provide comprehensive information not only about labeling and eco-certification, but also about the **nutrition**. The quality standards of eco products make manufactures to provide more detailed information about the product nutrition with a purpose to encourage the purchase of healthier food (Mark, 2017). Researches claims that this type of consumer behavior when buyer prefer eco-friendly and sustainable products influence to consumer loyalty towards sellers of products with organic nutrition. From this, it will be argued that healthy or natural nutrition can be a significant indicator for the consumer choice on Russian eco market. However, past researches claim that for products with eco or organic nutrition, younger and middle-aged customers show stronger willingness what means that nutrition is remain more important for younger and middle-aged customers than those who are older (Lea, 2005; Majumar & Swain, 2018). Therefore, the following proposition should be examined in this study:

P13: *Consumer age variable will be a significant predictor for the importance of nutrition variable and younger consumers will see an importance of healthy nutrition that older consumers.*

Study of Cruz-Congors, Villalpando, Rodriguez-Oliveros, Castillo-Garcia, Mindo-Rosas and Menses-Navarro, 2012, showed the significant importance of consumer gender effect on their purchasing decision towards environmental product with healthy nutrition. As example, authors claimed that female buyers are more prone and pay higher attention to the eco-product nutritional information. Thus, the following proposition was created:

P14: *Consumer gender variable will be a significant predictor for the importance of nutrition variable and female consumers see more importance in eco nutrition of environmental products than male consumers.*

As it was mentioned in past works that customers with stronger environmental attitudes as well as with higher level of environmental knowledge pay more attention to the eco nutrition of green products that those who do not have strong environmental concern (Wu, Yin, Xu & Zhu, 2014) the next proposition for this research was made:

P15: *Consumer green attitudes variable will be a significant predictor for the importance of nutrition variable and consumers with stronger green attitudes will see eco nutrition more important than consumers with lower level of green attitudes.*

Animal welfare was conducted as one of the product specific features that correspond and multiply the value of environmentally oriented product for specific segments of consumers who use animal-based apparel products. For example, in segment of the woolen clothing animal material' manufactures can provide attributes of the animal welfare and green standards of the manufacture processes (Hustverdt, Peterson and Chen, 2008). Harper and Makatoni, 2002 claimed that concerned about lack of harm to the animal is more complex than green or fair-trade concerns. Purchase of animal welfare products bring consumers social or public benefits connected with improvement of animal well-buying (Gouido, 2012). These kinds of consumer advantages can not be enjoyed personally by buyer, but they are distributed throw community groups as people are confident that human care about animals is ethical and will be considered as positive attitude (Harvey and Habbard, 2013). That mean that animal treatment can be evaluated by community as ethical value. As controversial to the social benefit, individual advantages are benefits that are experienced by exact person in his exact social circle as family or closest friends (Griskevicius, Cantu & Vugt, 2012). Previous researchers such as Van Dam and Fisher, 2013 claimed that people with egoistic orientation have less interest to **cruelty-free** products, while customers with strong social orientation purchase such products without any internal dilemma as support of animal is a part of their environmental identity. Interestingly, that only consumers with discrepant position face mental dilemma about such product because they male an effort to find animal friendly product with better price/quality balance (Gerini, Schjoll, 2016). Previous studies contain arguments that "cruelty free" labels as well as lack of animal testing are more significant for younger consumers as they tend to use more cosmetic products (Biesterbos, 2013; Ramsida & Manikandan, 2014). Based on the information the following proposition was created:

P16: *Consumer age variable will be a significant predictor for the importance of "cruelty free" variable and for younger consumers "cruelty free" label will remain more important than for older consumers.*

In accordance with studies of Gunden, Atis & Salali, 2019 women show more perception towards "cruelty free' labels, moreover, the level of their values towards environmental brand is higher. Therefore, the next proposition should be tested:

P17: *Consumer gender variable will be a significant predictor for the importance of "cruelty free" variable and for female consumers the importance of "cruelty free" is more important than for male consumers.*

It was claimed by Dagher, 2015, that there is a significant relation between consumer green attitudes and purchasing behavior of animal welfare products, moreover the relation between these variables was stronger for female consumers. The research of Sheehan & Lee, 2020, considered that the level of social responsibility as well as value to support animal rights influence the consumer' agreement with "cruelty free' brands. Thus, the following proposition should be tested:

P18: *Consumer green attitudes variable will be a significant predictor for the importance of "cruelty free" variable and consumers with stronger green attitudes will see more importance in 'cruelty free' labels than those who have lower degree of environmental attitudes.*

To conclude, sustainable features such as eco-certification, brand popularity, brand reputation, environmental design, nutrition and animal welfare are expected to be significant for the consumers when they make their purchasing decision. In accordance with examined literature the conceptual research model was developed.

*Conceptual research model*
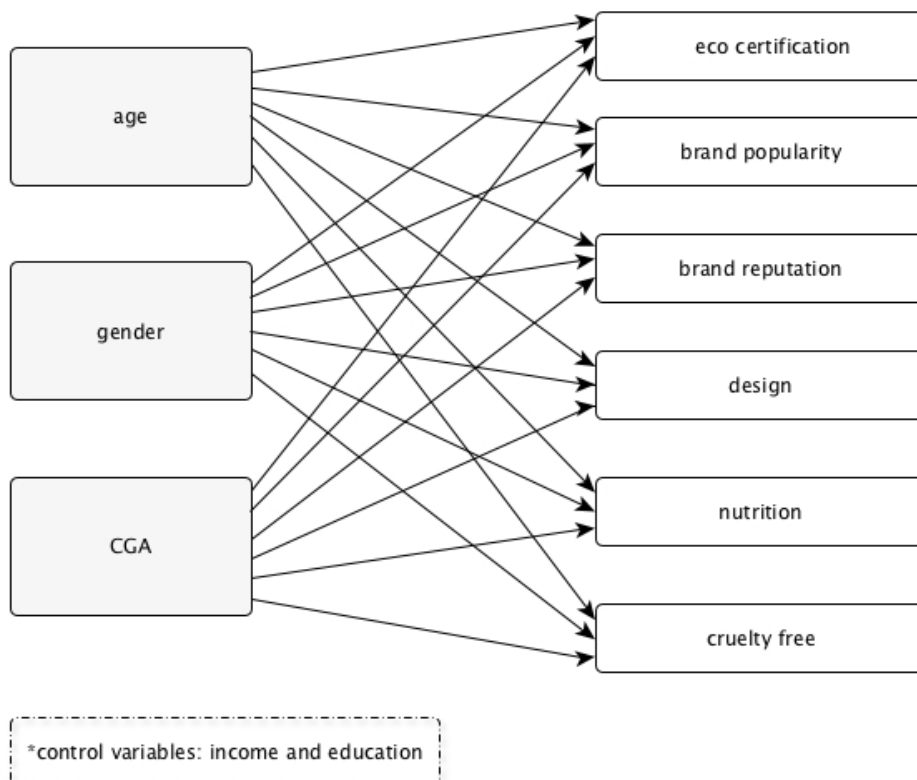
## 2.2 Control variables

Many of theoretic works claim that there is a strong dependency between purchasing behavior and indicators of income and education of consumers (Roper Organization, 1990). Some authors found-out that female customer with higher education level and income have stronger probability to be a participant of eco purchasing. However, D'Souza, Taghian, Lamb and Peretiatko, 2006 claimed that income and education level do not influence consumer relation to the eco brand. Past researchers were studying the dependency of income and education variables in context of developed countries and were looking at consumers' perception of green products from different angles, but only some researcher could analyze a multiple factor of this dependency (Lockie, 2004).

Speaking about the education as a control variable, that is important to mention that in previous researches it was conducted that buyers' attitudes towards sustainable product such as environmentally friendly organic food could be increased with a grow of their **education level** (Rimal, 2004). Moreover, it was figured that more educated people tend to have better knowledge and show stronger awareness of environmental issues which could influence their green buying intentions. Also, customers who archived a higher level of education could implement their green sustainable skills and knowledges in order to have a better green behavior performance when they buy green (He, Duan, Wang & Zetian, 2019). Thus, that would be necessary to examine in current study the effect of education variable for male and female consumers of different age groups and understand the importance of eco-certification, brand popularity, brand reputation, product design, nutrition and cruelty free product conditions for these consumers. As these studies were previously conducted in developed countries as well as in countries with emerging economies, it is expected that understanding of green consumer preferences in accordance with their education level would provide us better understanding of green consumerism phenomenon on the developing Russian eco market.

Additionally, it will be necessary to look at consumer' **income level** as at other control variable for different consumers. It was conducted in previous works that the income level of customers could be a factor differentiating their green purchasing behavior (Rimal, 2004). The increase of purchasing behavior affected by income level can be explained by the reason that green products have a price premium in comparison with non-sustainable products, thus, the consumer with higher income could have more opportunities to be engaged in environmental consumption.

In study on Asian market He, Duan, Wang & Zetian, 2019 claimed that customers who have bigger financial resources could have better affordability and more freedom to decide sustainable, run positive attitudes and take responsible actions towards environment. Thus, it is expected that income level as control variable will give us better understanding of consumer preferences towards eco certification, brand popularity, brand reputation, environmental product design, nutrition and cruelty free product' conformation. The study is interested to find an impact of income level of consumer on the importance of these factors for environmentally friendly consumers on the eco Russian market.

## 2.3 Methodology overview

This study proposes and explores a conceptual model that analyze how various characteristics of eco-products and eco brand are perceived by consumer. Doing this study, it is necessary to understand in the **exploratory research** what variables consumers who buy sustainable find important. It was decided to choose the exploratory research as a form of our analysis because in current study the goal is to find some unexpected outcomes of the phenomenon. In contradiction with confirmatory kind of study, exploratory research does not need to contain exact hypotheses as well as have less details about the research design (Schwab & Held, 2020). Tus, the research propositions were developed in a theoretical part of the study.

Future findings can be used by marketers in order to create better understanding with consumers. Moreover, these outcomes could be used for better understanding of the Russian consumer' needs.

- *Dependent variables* – eco-certification, brand popularity, brand reputation, eco design, environmental nutrition and cruelty free variable.
- *Independent variables*:
  *Predictors:* consumers green attitudes (CGA), customer' age and gender.
  *Control variables:* level of consumer' education and household income.

Empirical research methodology was used to come to research outcomes. In accordance with study of Chamorro, Rubio and Miranda, 2009, the quantitative research methodology was mainly chosen by authors of works considered on environmental issues. The method for data analysis is SPSS statistical analysis that include **multiple regression analysis**. In academic literature regression analysis remain a way of estimation the relationship between two or more sets of data and this type of analysis run a set of statistical estimations in order to find the type of these

relationships. Regression analysis was often used as a tool to determine the main component of a series or a trend. Moreover, this type of analysis supports researchers with an opportunity to forecast future events and to achieve advantages (Kaufman, 2012). Regression type of analysis shows in its final stage a relationship that may exist between two or more variables (Venkateshan, 2015). Thus, in order to estimate the relationship between independent variables, predictors and control variable for this research, the regression analysis was chosen. While primary data for the empirical estimations will be collected using online survey.

## 2.4 Survey design

The author of study on research design Kerlinger, 2015 described research design as "plan and structure of investigation so conceived as to be obtained answers to research questions. In order to collect primary data an online survey was created. Online survey was distributed in the internet throw different Russian social networks such as Telegram, Vkontakte, Odnoclassniki and Instagram, all the responders were collected randomly using a snowball method. The attention to the demagogic criteria were a key idea of survey distribution. That was necessary to get responses not only from millennials and gen Z, but also from older people.

The survey design has two scenarios due to the need to collect only customers' responds as it important for the quality of the results. At the first part of survey, it was important to test consumer' **normative** and i**nformative** attitudes. For these purpose questions related to the influence of social circle and consumers' thoughts towards social normative attitudes were examined. Consumers needed to rate on a scale the level of their agreement with a proposed statement. For the greatest quality and frequency of results seven-point scale was used in order to measure a response value. The scale represented a set of answers from very strongly disagree to very strongly agree.

| Q1. | My social circle (family/friends/colleagues) believe that caring for the environment is important and try to lead an environmentally friendly lifestyle. |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Q2. | I feel that actions that can directly or indirectly harm the environment are censured by society |

With an aim of estimation of informative external factors, the questions about TV and Internet-content were addressed to responders. These questions were also organized into seven-point scale format.

| Q3. | I often come across articles and TV-programs in which environmental problems are mentioned. |
|---|---|
| Q4. | I often meet information about an environmentally friendly lifestyle on social networks and on the internet. |

The next pool of questions was related to the estimation of **consumer' environmental values.** For thus, consumer' *pro-environmental orientation* as well as *self-image* and environmental *behavior intentions* were tested.

| Q5. | I am aware of current environmental issues and I understand the impact of consumption on the environment. |
|---|---|
| Q6. | I believe that that everyone can do something to save the planet. |
| Q7. | I consider myself a conscious consumer, because I believe that my buying habits have an impact on environment |
| Q8. | I already have as min one environmentally friendly habit. (e.g. recycling, use of reusable bags/cups, recourse saving) |
| Q9. | I try not to use disposable goods unnecessary. |
| Q10. | I buy things and food consciously (I try not to take too much and reduce waste). |

Question 5 was related to the understanding of the consumer' *environmental concern*, while the 6th question tested their *skepticism level*. The last three question (Q5-Q7) were adapted for the better understanding of consumer' *self-image*. Moreover, not only customer' self-image but also intensity of his/her intentions were estimated using the questions from 8 to 10.

On the third stage of questionnaire that was necessary to implement filter question with a multiple-choice option. Every customer was asked about his/her **experience of eco-purchasing**. This question was made following the need to filter green consumers responses from the list of all respondents, because responses of only this group will be significant for the current analysis. For

those who gave a negative answer on this question survey was complete, while green consumers target group moved to the next pull of question.

On the fourth stage of a questionnaire the grid question with a seven-point scale was created in order to measure the importance of each specific green product' characteristic. There they were asked *("Which of the following eco-product features are the most important to you and influence your choice?")*  to rate each characteristic from extremely unlikely to extremely likely. These results would help us to understand which characteristic of green product or company of its manufacture are significant for consumers. These variables included eco certification, brand popularity, brand reputation, environmentally friendly products design, sustainable nutrition and existence of "cruelty free" characteristic of the product.

And the final stage consists from the socio-demographical questions:

- **Q13**. What is your gender? (Male/Female)
- **Q14**. Could you tell us your age range?
- (**Q15**. What is the highest level of education you have completed?
- **Q16**. What is your family's approximate monthly income?

At the final stage of survey in order to collect detailed information about consumers they were asked about their age, gender, the highest level of completed education as well as about the level of approximate monthly income of their families. These data supported us with significant information about independent variables which needed to be organized for the empirical multiple regression test in SPSS.

## 2.5 Sample description

The research sample was collected using an online survey which was distributed throw the Russian citizens using several online sources and social networks. As it was mentioned before, the sample was distributed in main Russian social networks with a different age segmentation. For example, in order to collect responses from older consumer groups the Odnoklassniki and Vkontakte social networks were used, while the younger consumer segment was archived using Telegram channels as well as paid Instagram promotions in collaboration with environmentally and family-oriented blogs.

In the result of an online survey 460 responds were collected from the entire population, while 392 of them were collected from the target group – consumers with environmentally friendly

purchasing behavior experience. The study has been made only for eco consumers as they have a green purchasing experience that is needed for the analysis. The questionnaire was successfully distributed throw online social network between consumer in the age from 16 to 70 years old. The main goal of the survey distribution was to collect maximum possible number of responses from the older people as they remain less active in social media and internet as well. In the collected data there were no missing answers, thus, the quality of responders was perceived as sufficient.

**Descriptive statistics:**

- The total number of responders is equal to 460, while only 393 of the respondents had a green purchasing experience
- From those consumers who purchase green 73% are female consumers, while the remaining 19% are male consumers
- The consumer age group from 16 to 24 years old is equal to 41% of responders, while consumers in the age group from 25 to 40 years old contain 48% of the sample, the 11% are people from 41 years to 70 years old.
- 19% of green consumer responders have middle and professional education.
- About 80% of responders claimed that they have their bachelor/master/doctoral degree completed.
- 25% of respondents characterized their income as below average and claimed that they cannot purchase any home electronics and even purchasing of food and clothes remains difficult for them.
- 75% of responders claimed that their families have above average level, for some of all of the respondents purchasing of food, clothes and home electronics does not seem difficult.

Conclusion

The development of the research design chapter introduced a description of practical part and determine the research methodology as well as data collection method. This chapter was created in order to develop a conceptual research model which will determine the level of significance of the key product and brand features. Moreover, in the second part of the study the primary data was collected and described. Also, this part explains all the methods and approaches which will be used for propositions testing. The analysis of the findings as well as their academic and managerial implementation will be described in the last part of the research.

# Chapter 3 RESULTS OF ANALYSIS AND DISCUSSIONS

At the third chapter of this research paper the data collected from the previous survey was analyzed. First of all, that is important to mentioned that all the data was prepared for the future analysis, moreover, it was filtered from the false and inaccurate responses. Also, all the insufficient outliers were cut, and sample could be examined as homogeneous and sufficient. Moreover, there is a clear understanding that collected sample can run all the statistical analyses that are to be carried out.

## 3.1 Preliminary analysis

In the current research paper, the different types of variables were presented. The main part of all variables is observed variables and they include all the dependent variables such as eco certification, brand popularity, brand reputation, environmental product design, nutrition and cruelty free product characteristic. For all the described dependent variables a scale system will be used as method of measurement. Moreover, predictor variable age and gender as well as controlled variable education and income level are also observed, and all their data is already existing. However, it is necessary to understand that not all of variables that were expressed in the model remain observed, there is also one latent consumer green attitudes variable that was estimated from six observed variable that were presented in the primary data results. Before the estimation of latent variable, it was necessary to provide a factor analysis in order to support an idea that all the six inclusive variables are homogeneous and, on their base, the new variable can be created.

| variable | component 1 | extraction | | |
|---|---|---|---|---|
| Environmental concern | ,695 | 484 | | *Table 1* |
| Pro-environmental orientation | ,575 | 331 | | **CGA** |
| Self-image | ,758 | 575 | | (Consumer Green |
| Green behavioral intentions | ,709 | 502 | | Attitudes) |
| Green behavioral intentions | ,741 | 549 | | |
| Green behavioral intentions | ,736 | 542 | | |

Based on the results, factor analysis using principle component on the six items retained a one factor solution where eigenvalue > 1 with factor loading between *x* and *y*.

However, in order to estimate how the set of environmental concern, pro-environmental orientation, self-image and green behavior intentions variables go together into a single scale (consumer green attitudes varable) the reliability analysis was made.

| Reliability Statistics | |
|---|---|
| Cronbach's Alpha | N of Items |
| ,790 | 6 |

The reliability statistics results conducted directedly after factor analysis showed that there is a reason trust a CGA variable as Cronbach's Alpha is equal to 0,790 and it means that all the variable can be used in order to estimate consumer green attitudes variable.

## 3.2. Regression analysis.

A multiple regression analysis was conducted in order to understand which of the dependent variables (eco certification, brand popularity, brand reputation, product design, sustainable nutrition, cruelty free characteristic) environmentally oriented consumers find important. The CGA as well as age and gender variables are predictors, while the education and income level were presented as control variables.

In order to archive the proper results from the regression analysis all the data was cleaned by removing outliers using a case wise diagnostic rule. This led a removal of 6 outliers that were found during the regression analysis. The regression analysis has been made for the six dependent variables which describe specific environmental features and characteristics that were rated by sustainable consumers from the extremely unimportant to the extremely important using a seven-scale answers.

*Eco certification*

The regression model has a statistical significance with F = 2,75 and p equal to 0,019 and as this coefficient is < than 0,5, thus, this regression model was built fairly and trustworthy. The level of significance on the coefficients' table shows us that such independent variable as age and consumer green attitudes can be a predictor/control variable for the importance of the eco certification among consumers.

| Eco certification (y) | B | St. Error | Betta | t | Sig. |
|---|---|---|---|---|---|
| gender | -,008 | ,263 | -,001 | -,029 | ,977 |
| age | -,022 | ,008 | -,140 | -2,739 | **,006** |
| education | ,120 | ,255 | ,024 | ,470 | ,639 |
| income | ,056 | ,234 | ,012 | ,239 | ,811 |
| CGA | ,281 | ,099 | ,149 | 2,844 | **,005** |

Overall, among all the variables age and consumer green attitudes are significant, thus, it shows that importance of eco certification is predicted by age. As Beta coefficient is equal to -0,008 it can be considered that panel Beta can be examined as an example of negative linear relationship. Thus, it can be concluded that younger consumers find eco certification more important.

Additionally, as significant coefficient of consumer green attitudes is equal to 0, 005 what is < 0,05, we can conclude that importance of eco certification can be predicted by consumer green attitudes variable. As the Beta has a positive value (0,281) results claim that consumer with stronger CGA will find eco certification more important.

*Brand popularity*

The regression model is statistically important with F = 11,99 and p equal to 0,000, what is < 0,5, thus, the linear regression model can be conducted as significant one. Among all the variables predictor variable gender, age remain significant as well an education level and their significant coefficients are not higher than 0,05.

| Brand popularity (y) | B | St. Error | Betta | t | Sig. |
|---|---|---|---|---|---|
| gender | -,667 | ,220 | -,149 | -3,036 | **,003** |
| age | -,031 | ,007 | -,222 | -4,596 | **,000** |
| education | ,617 | ,215 | ,139 | 2,876 | **,004** |
| income | ,370 | ,196 | ,091 | 1,891 | ,059 |
| CGA | -,124 | ,083 | -,075 | -1,505 | ,133 |

The importance of brand popularity is predicted by gender and age variables that have a negative Beta coefficient what means that these variables show the negative linear relationship, thus, it can be concluded that brand popularity is more important for male consumers as well as for consumers from younger age groups. While, the education level variable has a positive value that is equal to 0,617 what means that importance of brand popularity is controlled by education level and people with higher education find brand popularity more important.

## Brand Reputation

The coefficient p shows that significance level of multiple regression is equal to 0,001 and F = 4,045, what can confirm that model is significant, and the results of regression are reliable. Among all the variables gender, age and control variable – income is significant for the analysis. Panel Beta shows that negative relationship for gender and age variables, what means that importance of brand reputation is predicted by age and gender, however male as well as younger customers will find brand reputation more important.

| Brand reputation (y) | B | St. Error | Betta | t | Sig. |
|---|---|---|---|---|---|
| gender | -,557 | ,258 | -,111 | -2,163 | **,031** |
| age | -,019 | ,008 | -,127 | -2,498 | **,013** |
| education | ,140 | ,249 | ,028 | ,562 | ,574 |
| income | ,567 | ,229 | ,125 | 2,477 | **,014** |
| CGA | ,143 | ,097 | ,077 | 1,482 | ,139 |

Importance of brand reputation is controlled by income level and as the Beta value of income variable is positive and equal to 0,567 it can be claimed that consumers with higher income would find brand reputation more important.

## Product design

| Design (y) | B | St. Error | Betta | t | Sig. |
|---|---|---|---|---|---|
| gender | -,209 | ,223 | -,044 | -,937 | ,349 |
| age | -,063 | ,007 | -,433 | -9,350 | **,000** |
| education | ,476 | ,217 | ,102 | 2,193 | **,029** |
| income | ,380 | ,198 | ,088 | 1,912 | ,057 |
| CGA | ,136 | ,084 | ,077 | 1,617 | ,107 |

The regression model can be considered as significant with F= 20,440 and p equal to 0,000 what is less than 0,5 and with it we can conduct that regression model is trustful for the future analysis. Among all the variables only age and income level variables are significant as their significance coefficients do not exceed the established minimum (0,05).

As it can be concluded from the analysis the importance of environmental products design is predicted by the age of consumers. However, the Beta coefficient is negative, therefore, it is expected that the linear relationship is negative and younger consumers tend to see more importance in sustainable product design. The importance of sustainable design is also controlled by consumer' income level variable. And as Beta value claim that relationship between variable is positive, it is confirmed that consumers with higher income level find sustainable product design more important.

## Sustainable Nutrition

For the sustainable nutrition variable, the regression analysis is significant with F=8,526 and p equal to 0,000, and as this value is less than o,5 it can be can considered that particular multiple regression analysis is trustworthy and sufficient.

| Nutrition (y) | B | St. Error | Betta | t | Sig. |
|---|---|---|---|---|---|
| gender | -,423 | ,245 | -,087 | -1,727 | ,085 |
| age | -,043 | ,007 | -,289 | -5,848 | **,000** |
| education | ,353 | ,235 | ,074 | 1,499 | ,135 |
| income | ,167 | ,216 | ,038 | ,771 | ,441 |
| CGA | ,159 | ,092 | ,088 | 1,738 | ,083 |

Among all the six variables only consumer age variable is significant as its sig. coefficient is equal to 0,000 what is less than established minimum (0,05). Beta value has a negative slope what means that importance of nutrition variable is predicted by consumer age and results show that younger consumers find the nutrition variable more important.

*Cruelty Free*

The regression model is significance with F=20,924 and p equal to 0, 000 and (as it less, that 0,5) it argues that the regression shows reliable results of analysis. In accordance with a significant coefficient gender, age and CGA are remain significant among all the other variables.

| Cruelty free (y) | B | St. Error | Betta | t | Sig. |
|---|---|---|---|---|---|
| gender | ,921 | ,261 | ,165 | 3,531 | **,000** |
| age | -,060 | ,008 | -,354 | -7,658 | **,000** |
| education | ,195 | ,252 | ,036 | ,775 | ,439 |
| income | ,394 | ,231 | ,078 | 1,704 | ,089 |
| CGA | ,608 | ,099 | ,290 | 6,141 | **,000** |

As significance coefficient of gender variable is less than 0,05 and equal to 0,000 it is proved that importance of the cruelty free certification is predicted by gender, and as Beta coefficient does not have a negative scope it is consider that female consumers find cruelty free labels more important.

As significance coefficient for the age is less than 0, 05 it can be considered that relationship significant and taking into account the negative slope of Beta coefficient has negative relation, thus, the important of cruelty free label is predicted by age – for younger consumers the importance of "cruelty free" label be stronger.

The importance of the cruelty free label is predicted by consumer green attitudes as this variable significance value is equal to 0, 000 what shows the high level of significance. However, Beta coefficient has a positive slope what means that consumers with stronger CGA find "cruelty free" certification more important.

### 3.3 Proposition testing.

The first three propositions were related to the eco certification variable of environmental product. On the basis of multiple regression analysis, it can be argued that among all the variables **age** and **consumer green attitudes** are significant. Therefore, the 2nd proposition of o research should be rejected as consumer' gender variable did not show any significant effect on consumer perceptions towards eco certification.

| | | |
|---|---|---|
| *P1: Consumer age variable will be a predictor for the importance of eco certification variable and younger consumer will see more importance in the existence of eco-certification than older consumers.* | accepted | |
| *P2: Consumer gender variable will be a predictor for the importance of eco certification variable and female consumers will see more importance in eco certification than male consumers.* | | rejected |
| *P3: Consumer green attitudes variable will be a predictor for the importance of eco certification variable and consumers with higher level of green attitudes will see an eco-certification more important than those with lower degree of green attitudes.* | accepted | |

However, the P1 as well as P2 were accepted and argued by the regression analysis. Results of the analysis showed that consumer age as well as the amount of consumer green attitudes are predictors for the importance of eco certification among consumers – younger consumers and consumers with stronger green attitudes find eco certification more important.

| | | |
|---|---|---|
| *P4: Consumer age variable will be a predictor for the importance of brand popularity variable and for younger consumer the brand popularity will remain more important criteria than for older consumers.* | accepted | |
| *P5: Consumer gender variable will be a predictor for the importance of brand popularity variable and for male consumers a brand popularity will be more important than for female consumers.* | accepted | |
| *P6: Consumer green attitudes variable will be a predictor for the importance of brand popularity variable and consumers with stronger green attitudes will perceive brand popularity more important than consumers with lower degree of environmental attitudes.* | | rejected |

The propositions 4-6 were related to the brand popularity variables and overall result of regression analysis showed that among all the predictor variables predictor variable gender, age remain significant, but the consumer green attitudes were not a predictor for the importance of brand popularity among consumers. Overall, research propositions P4 – P5 were supported with results analysis, while P6 should be rejected from the research model. Accepted propositions conducted the evidence that younger customers as well as men pay more attention to the popularity of the brand when they choose green products.

Research propositions 7 – 9 were related to the brand reputation variable. The results of multiple regression proved that from all the predictor variables gender and age variable were supported by the analysis. It means that age as well as consumer' gender are predictors that are significant for the importance of the brand reputation for consumers. The claim that younger consumers pay more attention to the brand reputation was successfully supported by statistic analysis. Furthermore, regression analysis showed that gender variable is a significant predictor for the importance of brand reputation and for Russian men brand reputation is more important than for women.

| | | |
|---|---|---|
| *P7: Consumer age variable will be a predictor for the importance of brand reputation variable and younger consumers will see more importance in brand reputation than older consumers.* | accepted | |
| *P8: Consumer gender variable will be a predictor for the importance of brand reputation variable.* | accepted | |
| *P9: Consumer green attitudes variable will be a predictor for the importance of brand reputation variable and consumers with stronger green attitudes will pay more attention to the reputation of environmental brand.* | | rejected |

However, the statistical analysis did not support a P9, thus, it has to be considered that that consumer green attitudes is not a significant predictor for the importance of brand reputation for Russian consumers. Thus, the following proposition must be rejected.

Research propositions P10 – P13 were related to the environmental design variable and multiple regressions were running in order to estimate the significance of age, gender and CGA predictor variable om the dependent design variable.

| | | |
|---|---|---|
| **P10:** *Consumer age variable will be a significant predictor for the importance of design variable and older consumers will see more importance in environmental design than younger consumers.* | accepted | |
| **P11:** *Consumer gender variable will be a significant predictor for the importance of design variable and female consumers will see environmental design more important than male consumers.* | | rejected |
| **P12:** *Consumer green attitudes variable will be a significant predictor for the importance of design variable and consumers with stronger environmental attitudes will see eco design more important that consumers with lower level of green attitudes.* | | rejected |

The regression results showed that from all the predictor variables only age variable has showed a significant effect on the importance of sustainable product design among consumers. Thus, only P10 is supported with a data analysis, while propositions 11 – 12 should be rejected as they did not find an empirical evidence of their existence. Accepted propositions confirmed the claim that younger Russian consumers find environmental product design more important than older consumers.

Research propositions P13 – P 15 were created in order to examine an effect of age, gender and CGA on the importance of nutrition among Russian consumers. Results of the multiple regression analysis conducted that among all the predictive variables only consumer age variable is significant. Therefore, the P15 can be accepted and taken into consideration during the

| | | |
|---|---|---|
| **P13:** *Consumer age variable will be a significant predictor for the importance of nutrition variable and younger consumers will see more importance of healthy nutrition that older consumers.* | accepted | |
| **P14**: *Consumer gender variable will be a significant predictor for the importance of nutrition variable and female consumers see more importance in eco nutrition of environmental products than male consumers.* | | rejected |

| | | |
|---|---|---|
| **P15**: *Consumer green attitudes variable will be a significant predictor for the importance of nutrition variable and consumers with stronger green attitudes will see eco nutrition more important than consumers with lower level of green attitudes.* | | rejected |

discussion of the results. The evidence that younger consumers pay more attention at the nutritional information has been supported by regression analysis. However, P14 and P15 did not find an empirical evidence during the data analysis and should be rejected from the future suggestions.

Propositions from 16 to 18 were related to the importance of "cruelty free" product characteristics. The regression analysis showed the evidence that gender, age and CGA are remain significant among all the other variables and predict the importance of those variables for the consumers' perception.

| | | |
|---|---|---|
| **P16**: *Consumer age variable will be a significant predictor for the importance of "cruelty free" variable and for younger consumers "cruelty free" label will remain more important than for older consumers.* | accepted | |
| **P17**: *Consumer gender variable will be a significant predictor for the importance of "cruelty free" variable and for female consumers the importance of "cruelty free" is more important than for male consumers.* | accepted | |
| **P18**: *Consumer green attitudes variable will be a significant predictor for the importance of "cruelty free" variable and consumers with stronger green attitudes will see more importance in 'cruelty free' label than those who have lower degree of environmental attitudes.* | accepted | |

Therefore, it is statistically proved that all the propositions P16 -P18 found an empirical support on the result of the primary data analysis and can be taken into consideration for the future discussion as well as academic studies. It means that consumer age variable is a significant predictor for the importance of cruelty free variable among consumers and for younger customers animal welfare labels seem more important than for older people. Moreover, gender as well as

CGA should be considered as predictors for the importance of the "cruelty free" label among Russian consumers and it means that an idea that women as well as people with strong environmental attitudes see more importance in eco certification.

## 3.4 Discussion on the results

The aim of the research was to evaluate as well as to examine those factors that nudge and affect openly consumer choice for environmentally friendly products in Russian Federation. Additionally, it was planned to understand which characteristics related to the manufacture brand or green product are significant for different types of customers during their green buying behavior. That was necessary to figure out which determinants are important in consumer' decision making process.

As determinant six characteristic of sustainable product/brand were found from the theoretic studies and examined. These factors include: eco certification, brand popularity, brand reputation, environmental product design, sustainable nutrition of the product and "cruelty free" label; all of them were studied and analyzed with a help of statistical measurements. As a result of the research analysis the following theoretical findings were conducted:

The importance of eco-certification for green Russian consumers is predicted by age of consumers and their green attitudes. It was found that younger consumers see more importance in eco labels than older people. The stronger environmental attitudes and values of consumers the more important they see green product certification. This fact can be explained by the evidence that younger people in Russia are more digitalized and can have specific knowledges about the advantages of eco certification and general environmental issues. However, the gender was not confirmed as a predictor for the importance of eco-certification. This is possible because Russian men and women who are interested in certified eco-products are equally vigilant and selective.

The significance of brand popularity among the Russian consumers is predicted by age and gender of buyers. Moreover, the level of education affect consumer' view on the importance of brand popularity. Brand popularity is more important for male consumer and younger people. This evidence could be explained by reluctance of Russian male consumers to encounter difficulties of choice, because they may take decision based on recognizability and popularity of arbitrariness company. It is interesting that consumers with higher education level pay more attention to the eco-brand popularity. But is was found that consumer green attitudes do not predict an importance brand popularity. This could be explained by the conscious consumption of eco-products and high share of skepticism among green customers in relation to large and recognizable brands.

It was proved that for Russian green consumer the relevance of brand reputation in their decision-making process can be predicted by consumer age and gender. Also, the income level can have an influence on consumer view at brand reputation. As it was found during research brand reputation is more important for male consumers, younger people and people with above average income level. Nevertheless, environmental attitudes of green Russian consumers do not predict an importance of brand reputation.

The research confirmed that people from the different age as well as people with a different income level have distinct perceptions towards environmental product design. Younger people and consumers with higher income level find sustainable design more important. This evidence could be confirmed by the price premium of environmental design of packages. The sustainable materials require higher cost and price for sustainable designed product is premium in comparison with chipper analogies.  But consumer' gender as well as environmental attitudes do not correspond to the importance of sustainable design among consumers. These results can be explained by the fact that men and women in Russia are equally concerned about the impact of non-recyclable disposable packaging on the environment. Moreover, it was confirmed by IPSOS Market analysis that the problem of sustainable consumption and waste recycling are the most actual environmental problems among Russian population (IPSOS, 2020).

The nutrition as product characteristic is more important for younger consumers, in other words, the age is a predictor for the significance of the environmentally friendly product nutrition among Russian consumers. However, the gender of consumers as well as their environmental attitudes were not considered as predictors for the importance of nutrition among green Russian consumers.

Female consumers and consumer from younger age group as well as people with stronger green attitudes see more importance in the lack of animal testing and harmful intentions of manufactures in relation to animals.  These groups of consumers would more likely pay attention at the "cruelty free" product label.

The results of the current research contribute to the previous studies that, first of all, examined the influence of different predictors on the green consumer behavior. Thus, this research corresponds to the study of Shim, Shin and Kwak, 2017 where it was determined that younger consumer have a significantly positive effect on the cognitive and affective stages of analyzed eco-friendly product. But as it was unable to estimate the impact of such control variables as income and education level in the previous study, the results of this analysis could suggest future researchers that income level as well as education level are having a significant impact on the consumer purchase intentions.

Secondly, the research corresponds to the study of Laroche, Bergeron & Barbaro-Forleo, 2001 and Lockie, 2004 which were considered about combination of determinants such as consumers' attitude, values, knowledges and demographic characteristics towards green purchasing behavior. The current study showed the significant impact of demographic characteristics as well as green attitudes and values on the consumer perception of environmental product attributes that influence his/her purchasing decision.

## 3.5 Managerial implementation

The research on the determinants of green consumer behavior has a strong potential for the managerial implementation. The knowledges about consumer preferences toward different green brand/product features and characteristics can be used by marketers in order to improve communication channels with their target consumers. Current table can be used as the identificatory of consumer preferences according to their characteristics.

*Table of results*

| | gender | | age | | education | | income | | CGA | |
|---|---|---|---|---|---|---|---|---|---|---|
| | male | female | young | old | middle | high | low | high | weak | strong |
| **eco certification** | | | *More importance* | *Less importance* | | | | | *Less importance* | *More importance* |
| **brand popularity** | *More importance* | *Less importance* | *More importance* | *Less importance* | *Less importance* | *More importance* | | | | |
| **brand reputation** | *More importance* | *Less importance* | *More importance* | *Less importance* | | | *Less importance* | *More importance* | | |
| **design** | | | *More importance* | *Less importance* | | | *Less importance* | *More importance* | | |
| **nutrition** | | | *More importance* | *Less importance* | | | | | | |
| **cruelty free** | *Less importance* | *More importance* | *More importance* | *Less importance* | | | | | *Less importance* | *More importance* |

First of all, the advertisement can be specified in accordance with consumer demographics. Thus, it is possible to improve offline as well as online advertisement campaigns. For example, doing

context and social online commercial of environmentally friendly products marketers could use these findings for the target settings. Moreover, consumer awareness about environmental issues, public events and green initiatives related to the sustainable brand can be increased significantly using correct social media settings predicted by key findings of this research. From the current results it can be helpful to analyze consumers' profiles and make a detailed suggestion for every additional group of sustainable buyers.

According to the research findings, for the younger part of Russian population all the features related to the green product or brand are significant. In order to improve communication channels with Gen Z and millennial consumers, marketers should use a combination of tools which include all the elements from the product nutrition to the official eco-labels and package design. Moreover, youngsters have a variety of expectations in relation to the brands, therefore, for successful dialog with these buyers, green brands should work on the brand equity and environmental corporate responsibility.

As it was mentioned by the marketing research, wealthy people make a visible contribution on the economy and have a high purchasing power. Additionally, this group of consumers is able to share ideas and opinions in social media (IPSOS, 2020). Thus, attraction of wealthy youngsters could dramatically increase a demand on eco products in Russia. Hence, marketers should work on its corporate sustainable image in order to improve the green reputation of the company. In fact, generation Z as well as millennial expect that manufactures will be maximum clear and transparent showing the advantages of their production. In this case, marketers could increase the engagement of customers to their internal processes, for instance, companies can make open days or master classes for the loyal audience. Also, that would be very valuable for high-income people if manufactures could ask their opinion in social networks. In order to enhance long-term connection with young customers manufactures should be active in social media and get in touch with consumers, describe production issues and advantages of green products.

Secondly, marketers can work on the design of packages and their capacity. For instance, they should describe the advantages of the product design and give all the information about its environmental footprint. Additionally, packages can be reusable and made from sustainable materials. Producers can give these customers open information about the places where they can be recycled or utilized.

Despite the fact that product design should be sustainable it also needs to be attractive for younger consumers. As it was mentioned in corporate literature the generation Z is the most digitalized customers, they spend much time in social media networks and for them it can be a competitive advantage if product will remain attractive for "posting" in internet blogs (Nielsen, 2019).

Young male consumers showed their willingness to purchase products of popular producers which have a strong sustainable reputation on the market. If companies want to increase the loyalty of this customer segment, they should enhance the spending on the corporate social responsibility in order to advance the reputation of the brand and its equity. "Go public" is an optimal approach for the development of green marketing strategy for the emerging eco market. Moreover, the tactic of publicity, openness and sustainable initiatives can increase popularity of the brand among population. Additionally, it can be suggested to increase amount of entertainment articles in social media, improve the quality of information, integrate educational and informational content.

Young women with strong level of green consumer attitudes are very sensitive to the environmental content and animal welfare information. The results of analysis conducted that they show more willingness to pay for products that contain animal welfare certifications. This trend can be explained by the common use of décor cosmetic and self-care products among Russian women. In order to increase their loyalty to the brand, marketers can provide their cosmetic products with "cruelty free" labels and certifications. It is suggested that advertisement content may include facts about the need of animal welfare practices and information about green brand activities in these areas.

The knowledge achieved by the current study can also be used in manufacturing processes such as product design or development. For instance, products related to the target audience of young people could have environmental certification and recyclable/reusable packages.

To conclude, that is necessary to determine that due to the lack of the studies on preferences of green consumers in Russian market, these findings could improve marketers' understanding of consumers' favoritism towards environmentally friendly products.

## 3.6 Research limitation

Current study was focused on the determinants of consumer choice for eco products in Russia and, as a result of the study, new findings were contributed to the knowledge of green marketing phenomenon. As it was already mentioned, the research has a potential of academic as well as managerial implementation. Nevertheless, this research paper as well as any other studies have several limitations.

First of all, the sample presented to analysis contained only 392 responders who were target consumers of environmental products and had green purchasing experience. Moreover, about 70%

of the responders were female consumers. It is clear that the number of green consumers with a low-income level as well as middle education could be bigger in order to analyze this group of consumers better.

Additionally, it was difficult to achieve a bigger number of older people as they do not tend to be highly digitalized and open for online communication. For the future researchers it could be suggested to distribute questionnaires not only using digital platform but also offline. In future researches authors could study not only existing consumers of green products but also those who do not have green purchasing experience in order to open the consumer segment for the market.

Finally, that is important to mention that limited number of analysis tactics were used and there are different features and characteristics of environmentally friendly products that could be examine in future studies.

# CONCLUSION

The study of factors affecting consumer choice for the environmentally friendly products in Russia has been conducted among Russian consumers. It was found that age and gender as well as consumer green attitudes and values are significant predictors for the importance of different features and characteristics related to the environmentally friendly products and sustainable companies.

Moreover, current research makes a significant contribution to the previous studies made by international authors such as Shim, Shin and Kwak, 2017 and Locie, 2004 where researchers conducted the importance of demographic predictors in green consumer behavior. The finding obtained by this research corresponded to previous research papers, but also contribute a new significant knowledge related to the trends of Russian market.

The current study fully answered all the research questions posed to it at the beginning. Despite the fact that this research paper met several limitations, the knowledge obtained during the statistical analysis can have a perspective of successful managerial implementations. The findings considered in the current study could be used in order to improve communication channels between sustainable brands and green consumers.

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*Conceptual Research Model*
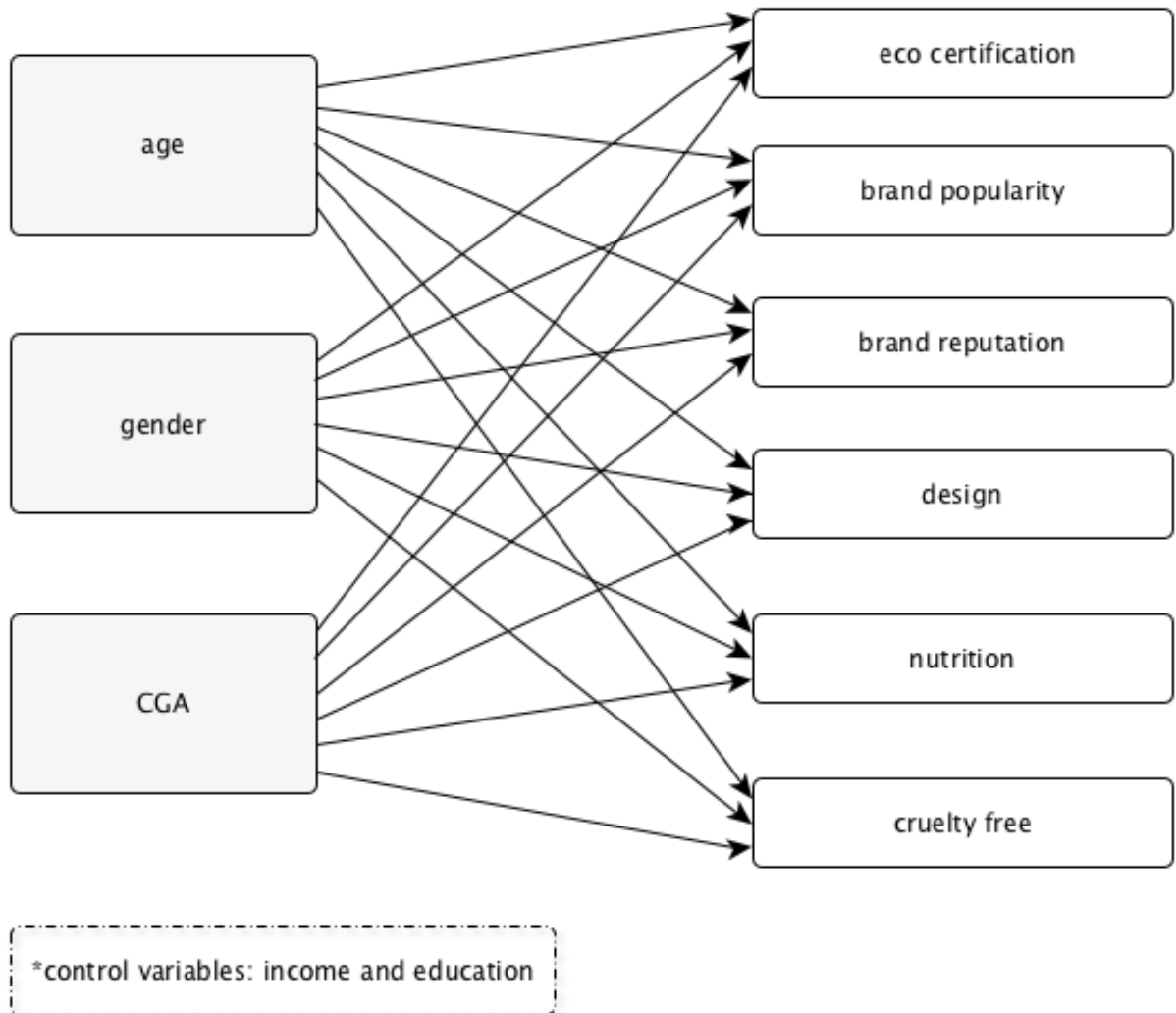
*Online Questionnaire*

Q1. My social circle (family/friends/colleagues) believe that caring for the environment is important and try to lead an environmentally friendly lifestyle.
(1 strongly disagree – 7 strongly agree)

Q2. I feel that actions that can directly or indirectly harm the environment are censured by society.
(1 strongly disagree – 7 strongly agree)

Q3. I often come across articles and TV-programs in which environmental problems are mentioned.
(1 strongly disagree – 7 strongly agree)

Q4. I often meet information about an environmentally friendly lifestyle on social networks and on the internet.
(1 strongly disagree – 7 strongly agree)

Q5. I am aware of current environmental issues and I understand the impact of consumption on the environment.
(1 strongly disagree – 7 strongly agree)

Q6. I believe that that everyone can do something to save the planet
(1 strongly disagree – 7 strongly agree)

Q7. I consider myself a conscious consumer because I believe that my buying habits have an impact on environment
(1 strongly disagree – 7 strongly agree)

Q8. I already have as minimum one environmentally friendly habit. (e.g. recycling, use of reusable bags/cups, recourse saving)
(1 strongly disagree – 7 strongly agree)

Q9. I try avoiding unnecessary use of disposable products.
(1 strongly disagree – 7 strongly agree)

Q10. I buy things and food consciously - I try not to take too much and to reduce waste.

(1 strongly disagree – 7 strongly agree)

Q11. Have you ever bought eco-friendly products? (filter question)

(yes/no)

Q12. Which of the following eco-product features are the most important to you and influence your choice? (greed 7-scale question)

|  | extremely unlikely | very unlikely | unlikely | neither unlikely nor likely | likely | very likely | extremely likely |
|---|---|---|---|---|---|---|---|
| Eco certification |  |  |  |  |  |  |  |
| Brand popularity |  |  |  |  |  |  |  |
| Brand reputation |  |  |  |  |  |  |  |
| Eco design |  |  |  |  |  |  |  |
| Natural nutrition |  |  |  |  |  |  |  |
| Cruelty free |  |  |  |  |  |  |  |

Q13. What is your gender?

(male/female)

Q14. Could you tell us your age?

(numerical answer)

Q15. What is the highest level of education you have completed?

(secondary/professional/associate degree/bachelor's degree/master's degree/doctoral degree)

Q16. Which statement best describes your family's financial situation?

(Not enough money even for food/ There is enough money only for food and clothing/ There is always enough money for food, clothing, household appliances and furniture, but for a car or apartment we need to save/ There is enough money for everything)

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 392 | 100,0 |
| | Excluded[a] | 0 | ,0 |
| | Total | 392 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| ,790 | 6 |

**Communalities**

| | Initial | Extraction |
|---|---|---|
| I am aware of current environmental issues and I understand the impact of consumption on the environment. | 1,000 | ,484 |
| I believe that that everyone can do something to save the planet | 1,000 | ,331 |
| I consider myself a conscious consumer because I believe that my buying habits have an impact on environment | 1,000 | ,575 |
| I already have as minimum one environmentally friendly habit. (e.g. recycling, use of reusable bags/cups, recourse saving) | 1,000 | ,502 |
| I try avoiding unnecessary use of disposable products. | 1,000 | ,549 |
| I buy things and food consciously - I try not to take too much and to reduce waste. | 1,000 | ,542 |

Extraction Method: Principal Component Analysis.

**Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2,983 | 49,720 | 49,720 | 2,983 | 49,720 | 49,720 |
| 2 | ,885 | 14,745 | 64,465 | | | |
| 3 | ,656 | 10,933 | 75,398 | | | |
| 4 | ,587 | 9,788 | 85,187 | | | |
| 5 | ,526 | 8,769 | 93,956 | | | |
| 6 | ,363 | 6,044 | 100,000 | | | |

Extraction Method: Principal Component Analysis.

**Component Matrix[a]**

| | Component 1 |
|---|---|
| I am aware of current environmental issues and I understand the impact of consumption on the environment. | ,695 |
| I believe that that everyone can do something to save the planet | ,575 |
| I consider myself a conscious consumer because I believe that my buying habits have an impact on environment | ,758 |
| I already have as minimum one environmentally friendly habit. (e.g. recycling, use of reusable bags/cups, recourse saving) | ,709 |
| I try avoiding unnecessary use of disposable products. | ,741 |
| I buy things and food consciously - I try not to take too much and to reduce waste. | ,736 |

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

# Regression Analysis

## Eco certification

### Model Summary[b]

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,185[a] | ,034 | ,022 | 1,96269 |

### ANOVA[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 52,938 | 5 | 10,588 | 2,748 | ,019[b] |
| | Residual | 1486,937 | 386 | 3,852 | | |
| | Total | 1539,875 | 391 | | | |

### Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2,885 | ,629 | | 4,583 | ,000 |
| | gender | -,008 | ,263 | -,001 | -,029 | ,977 |
| | age | -,022 | ,008 | -,140 | -2,739 | ,006 |
| | education | ,120 | ,255 | ,024 | ,470 | ,639 |
| | income | ,056 | ,234 | ,012 | ,239 | ,811 |
| | consumer green attitudes | ,281 | ,099 | ,149 | 2,844 | ,005 |

*Brand popularity*

**Model Summary**<sup>b</sup>

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,367ᵃ | ,135 | ,124 | 1,63814 |

**ANOVA**<sup>a</sup>

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 160,885 | 5 | 32,177 | 11,991 | ,000ᵇ |
| | Residual | 1030,459 | 384 | 2,683 | | |
| | Total | 1191,344 | 389 | | | |

**Coefficients**<sup>a</sup>

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 4,380 | ,526 | | 8,326 | ,000 |
| | gender | -,667 | ,220 | -,149 | -3,036 | ,003 |
| | age | -,031 | ,007 | -,222 | -4,596 | ,000 |
| | education | ,617 | ,215 | ,139 | 2,876 | ,004 |
| | income | ,370 | ,196 | ,091 | 1,891 | ,059 |
| | consumer green attitudes | -,124 | ,083 | -,075 | -1,505 | ,133 |

*Brand reputation*

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,223[a] | ,050 | ,037 | 1,92099 |

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 74,632 | 5 | 14,926 | 4,045 | ,001[b] |
| | Residual | 1424,419 | 386 | 3,690 | | |
| | Total | 1499,051 | 391 | | | |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3,807 | ,616 | | 6,179 | ,000 |
| | gender | -,557 | ,258 | -,111 | -2,163 | ,031 |
| | age | -,019 | ,008 | -,127 | -2,498 | ,013 |
| | education | ,140 | ,249 | ,028 | ,562 | ,574 |
| | income | ,567 | ,229 | ,125 | 2,477 | ,014 |
| | consumer green attitudes | ,143 | ,097 | ,077 | 1,482 | ,139 |

*Design*

**Model Summary**[b]

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,458[a] | ,210 | ,200 | 1,66353 |

**ANOVA**[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 282,826 | 5 | 56,565 | 20,440 | ,000[b] |
| | Residual | 1062,651 | 384 | 2,767 | | |
| | Total | 1345,477 | 389 | | | |

**Coefficients**[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4,231 | ,536 | | 7,892 | ,000 |
| | gender | -,209 | ,223 | -,044 | -,937 | ,349 |
| | age | -,063 | ,007 | -,433 | -9,350 | ,000 |
| | education | ,476 | ,217 | ,102 | 2,193 | ,029 |
| | income | ,380 | ,198 | ,088 | 1,912 | ,057 |
| | consumer green attitudes | ,136 | ,084 | ,077 | 1,617 | ,107 |

*Nutrition*

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,316[a] | ,100 | ,088 | 1,81456 |

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 140,357 | 5 | 28,071 | 8,526 | ,000[b] |
| | Residual | 1264,373 | 384 | 3,293 | | |
| | Total | 1404,731 | 389 | | | |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 5,665 | ,582 | | 9,735 | ,000 |
| | gender | -,423 | ,245 | -,087 | -1,727 | ,085 |
| | age | -,043 | ,007 | -,289 | -5,848 | ,000 |
| | education | ,353 | ,235 | ,074 | 1,499 | ,135 |
| | income | ,167 | ,216 | ,038 | ,771 | ,441 |
| | consumer green attitudes | ,159 | ,092 | ,088 | 1,738 | ,083 |

*Cruelty free label*

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,462[a] | ,214 | ,203 | 1,94006 |

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 393,777 | 5 | 78,755 | 20,924 | ,000[b] |
| | Residual | 1449,082 | 385 | 3,764 | | |
| | Total | 1842,859 | 390 | | | |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1,395 | ,628 | | 2,220 | ,027 |
| | gender | ,921 | ,261 | ,165 | 3,531 | ,000 |
| | age | -,060 | ,008 | -,354 | -7,658 | ,000 |
| | education | ,195 | ,252 | ,036 | ,775 | ,439 |
| | income | ,394 | ,231 | ,078 | 1,704 | ,089 |
| | consumer green attitudes | ,608 | ,099 | ,290 | 6,141 | ,000 |