PERSONAL FACTORS OF ATTITUDES OF RUSSIAN CONSUMERS TOWARDS A NEW PRODUCT (ON THE EXAMPLE OF AN ELECTRIC SCOOTER)

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Summary. The article presents the results of the study of the personal factors of attitudes of Russian consumers towards a new product for the Russian market. Electric vehicles (in terms of an electric scooter) are taken as a new product for the Russian market. The study involved 150 people of various ages living in Moscow and the Moscow region. The aim was to identify the personal characteristics of Russian consumers associated with a positive attitude towards electric vehicles. Hypotheses were: 1) the similarity of the image of the product (the personality of the product) and a consumer’s self-image (the identity of the consumer) is associated with a positive attitude towards the product; 2) people with higher risk appetite have more positive attitudes towards electric vehicles. Methods: survey. The questionnaire consisted of several blocks: the technique of «Measuring brand personality» by J. Aaker, the technique «Measuring consumer identity» (modified by N. Antonova), the method of assessing risk readiness by Schubert. Results: 1) the hypotheses were partially confirmed; 2) the hypothesis about the correlation of a positive attitude with a propensity to take risks was not confirmed. A model of the attitude of Russian consumers towards electric vehicles was also built, the final model included the factor of the correlation between the image of oneself and the image of the product. Risk taking is not a positive attitude factor towards electric vehicles. The results obtained can be used to develop a strategy for promoting new products – electric vehicles – to the Russian market.9

Keywords: consumer identity, consumer behavior strategies, product attitude, risk appetite, electric scooter.

9 Acknowledgement: I express my sincere gratitude to my supervisor Dr. N. Antonova for her valuable suggestions.
In Russia as in other countries the number of cars is steadily growing especially in large cities. Of course, this process has its advantages such as increasing the mobility of people expanding the range of their opportunities and ultimately improving the quality of life. Nevertheless, the uncontrolled use of private cars has a number of negative consequences: in addition to environmental problems, social problems also arise due to the growing inefficiency of urban transport systems (Leontieva, Maiburov, 2019).

Under these conditions electric scooters can be seen as more than just a reasonable alternative to a private car. Electric scooter is a product, which looks like the motorcycle and actually is powered by the battery. The emergence of this type of transport marks the emergence of society to a new level where other social standards and standards of consumption are being formed. However, for the Russian market electric scooters are an innovative product and this of course affects its perception by consumers. In addition to the objective reasons for the low demand for electric scooters in Russia such as underdeveloped infrastructure, cold climate, etc., there are also psychological barriers. An interesting question is due to what factors the electric scooter will be able to «step over the gap» between innovators and the active majority. Which consumers can make up the mass audience of scooter consumers? In this study it plans to analyze the influence of a number of psychological and social factors on consumer loyalty towards electric scooters.

Loyalty to a product, brand or service is considered not only as a positive attitude towards them but also as a complex notion formed under the influence of both rational and unconscious psychological factors (Antonova, Patosha, 2017). External factors of loyalty include situational factors and subjective norms such as a person's beliefs about what behavior significantly others consider acceptable. Internal – consumer personality traits in the study, of which many researchers rely on the five-factor personality model
«Big Five», which includes such personality traits as neuroticism, openness to experience, extraversion, benevolence, and conscientiousness (Matzler et al., 2006). Recent research proves that the existence of a correlation between the identity of the consumer and the individuality of the brand he prefers (Antonova, Morozova, 2015), that is consumer preferences are determined not only by personal characteristics but also by a person’s self-image. The study of the features of the formation of this correlation and its dynamics will make it possible to target the potential audience.

In the course of consumption as well as in the implementation of other types of social activities a person does not always make decisions rationally or carefully weighing all the pros and cons. A consumer often relies on simple strategies and familiar ways of responding to certain types of situations. The consumer strategy is currently defined as a stable system of actions carried out by a consumer in connection with the choice, purchase and final use of a product to meet their needs in the most acceptable way (Folomeev, 2016). Thus analyzing consumer strategies one can identify the features of decision-making, which are characteristic of consumers and understand the logic of their choice.

The willingness to consume an innovative product means that loyalty and stable systems of actions for this product are not formed, which suggests that the consumer thinks outside the box and acts decisively. In addition electric scooters themselves are quite traumatic (Sharifulin, 2019). This fact combined with the undeveloped infrastructure of the Russian roads suggests that potential consumers of electric scooters are prone to risk.

The purpose of the present study is to identify correlations between the personal characteristics of consumers, which determine a positive attitude towards such a new product for the Russian market as an electric scooter.
Attitude towards a product as a subject of psychological research

Attitude in psychology is considered as a stable organization of beliefs about a social object or situation, which determines the individual's behavioral response. For example, D. Krech with the coauthors define attitudes as long-term systems of positive and negative assessments, emotional experiences and tendencies to act «for» or «against» in relation to social objects (Krech et al., 1969). Attitude is differentiated from set, which is a state of readiness for a certain activity since this is a setting in relation to social objects.

M. Smith proposed to consider attitude as a complex three-component structure (Fabrigar et al., 2005) highlighting the cognitive, affective and behavioral components. The cognitive component includes knowledge and opinions about objects. These opinions are formed by comparing the signs (attributes) of objects with human goals as a result, of which the qualities of usefulness-harmfulness, desirability-undesirability, etc. are attributed to objects. The affective component includes emotions about the object and attitude towards it. Many researchers consider the affective component to be the core of the attitude and associate the motivating function of the social attitude with it (Folomeeva, 2012). The cognitive and affective components determine the behavioral component – readiness for action towards the object. It should be noted that readiness for action is not identical to real behavior. Many studies emphasize that despite the important role of attitude in the regulation of human behavior it is also determined by external physical and social factors. For example, according to the theory of justified action by A. Aizen and M. Fishbein (Fishbein, Aizen, 1970) attitude is the sum of ideas about the consequences of behavior actualization. A positive attitude to behavior and its compliance with subjective norms determine the strength of the intention to act, which in turn affects behavior.
Consumer preferences are considered by some researchers as a kind of attitude towards a product or service (Eagly, Chaiken, 1993). This approach makes it possible to overcome the reductionism of behavioral models of consumer behavior that are guided by such formal criteria as the frequency and regularity of purchases, recommendation facts, and other behavioral signs. A pronounced attitude towards a product associated with the perception of positive information about it and the denial of negative information is called consumer loyalty. Loyalty as an attitude also contains three components. The psychological content of the cognitive component is knowledge and perceptions associated with the product/brand and reflecting its benefits. The affective component includes emotional experiences that are pleasant to the individual associated with the product/brand. The behavioral component of loyalty implies a tendency to regularly consume a product/brand. Despite the fact that loyalty like other types of consumer attitudes is not unambiguously associated with the regularity of consumption of a product/brand it is precisely this loyalty that contributes to the formation of long-term, positive consumer relations with a product/brand (Antonova, Patosha, 2017; Bagozzi et al., 2002).

Theoretical studies of the psychological mechanisms of loyalty formation are devoted to those external and internal factors that influence this process. Consumer behavior strategies, consumer motivation and personality traits can be considered as internal factors that determine the perception of products and brands (Antonova, Morozova, 2015). The external factors that determine perception are on the one hand social norms and situational factors and on the other the subject image, i.e. a symbolic image of an inanimate object created in the process of subject-object interaction. In consumer psychology multifactor loyalty models are being developed that reveal the psychological mechanisms of the formation of this attitude and explain its impact on
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The influence of personal characteristics of consumers on the purchase decision is recognized by most researchers. At the core of this connection is personification — endowing inanimate objects with personal characteristics. By E. Perelygina, personification is the main mechanism for the formation of a subject image. According to her definition, an object image is a symbolic image of an inanimate object created in the process of subject-object interaction, which provokes the perception of this thing as a subject (Perelygina, 2002). The personification of objects leads to the fact that the possession of them begins to be perceived by a person as an element of the self-concept.

N. Antonova and V. Stepanenko (Antonova, Stepanenko, 2020) also point out that a consumer's Self-concept has a significant impact on his or her brand loyalty: the consumer seeks to purchase those products, which will help him or her maintain a positive Self-concept.

The study proceeds from the assumption that the object of personification can be both a brand and a product. American researchers R. Batra, P. Lenk, and M. Wedel in their work «Separating Brand from Category Personality» (Batra et al., 2013) have proved that entire product categories (or subcategories) and not just brands within them are perceived as having personal characteristics. They emphasize that it is necessary to distinguish between the personality traits that make up the brand identity and the personality traits, which are characteristic of all brands within a certain product category. S. Levy writes: «the primary source of meaning is the product itself (category)» (Levy, 1986) pointing out that within the category of drinks liqueurs mean...
discrimination, wine symbolizes snobbery, beer means sociability and democracy, soups and juices stand for virtues. Coffee is considered stronger and more masculine; while tea is perceived as weak and feminine. The key conclusions of this thesis are as follows:

1) the identity of the product influences on the effectiveness of brand promotion, since the product is often primarily in relation to the brand. In practice, this leads to companies attempting to change the image of the product category for example beer companies tried to increase the consumption of beer by women making it seem less «masculine» and marketers of dairy companies try to present milk as a product for adults not just for children;

2) the expansion of existing brands into new categories requires a systematic study of many candidate categories within the framework of «personality» and «image «to see which of them best» fit «and» match « the personality of the brand being expanded (Keller, 2003). In any case, it is extremely important to understand the context of the personality of the category.

This is especially important if considering high-involvement products, such as electric vehicles.

Involvement is defined as the perceived significance of an object based on individual needs, values and interests. In the consumer's perception the object of involvement (product, service, and advertising message) is an important element of meeting the needs and achieving the goals (Bigné-Alcañiz et al., 2010). The factors leading to the development and formation of consumer involvement are interest, perceived risk, perceived pleasure from consumption and perceived symbolic value—often expressed through self-expression and self-identification (Zaichowsky, 1985). One of the most important goals of involvement is a symbolic goal. That is, the goal is aimed at social interaction and the formation of consumer's self-concept and management of
their own image. Symbolic goals are associated with both the product category (the significance for an individual of the consumption of a particular product category) and with specific brands (the significance of brand consumption). For a modern consumer a symbolic goal in relation to a product of a high level of involvement may be no less important than the actual utilitarian goal associated with the operation of this product.

As stated by S. Ilinykh the identity constructed in the consumer society is based on the need for belonging and recognition. At the same time belonging to a certain consumer stratum and recognition by representatives of this stratum has a decisive significance for a person (Ilinykh, 2007). T. Sidorova emphasizing the importance of studying consumer identity defines it as a product of the transformation of social identity, which has a number of similar features such as awareness of belonging to a social group, a personally significant experience of this belonging, endowing oneself with specific objectives and subjective (psychological) characteristics of this group (Sidorova, 2016). The author also notes that consumer identity is not equal to social identity it has specific characteristics determined by the level of self-actualization of the individual, which require psychological study.

On the one hand, the personal characteristics of a consumer or the features of his or her identity play an important role in the formation of consumer loyalty to the product or brand (Antonova, Morozova, 2015). On the other hand, the characteristics of the product influence the consumer's self-image.

In line with the characterological approach, that is an approach that takes into account the significance of the cognitive and emotional components of the consumer's attitude towards the product or brand, quite a lot of research has been conducted. Thus, an attempt has been made to build a model of brand personification in the study by M. Tsoi, V. Shchekoldin and I. Dolgikh (Tsoi et al., 2017). Using the example of fashion
brands consumers with similar purchasing behavior were identified and the degree of compliance of brand positioning with personalized characteristics of these consumers was evaluated. The goal of that work was to more accurately segment consumers by filling their profiles.

A. Shcherbak (Shcherbak, 2015) carried out an empirical study of demonstrative consumption based on the assumption of the mutual influence of the consumer's self-concept and brand identity and came to the conclusion that consumers choose brands, which are identical to their self-concept.

The hypothesis of the correlation between the consumer's identity and the personality of the preferred brand was confirmed on the example of consumers' perception of clothing brands in N. Antonova's research (Antonova, Morozova, 2015).

Any product inevitably goes through the stages of entry to a new market. The success of this process depends on the correct choice of the target audience, the effectiveness of advertising, the price, and quality of the product (Sterkhova, 2006). The entry of a novelty product on the market increases the degree of uncertainty caused by the incompleteness and inconsistency of information about products and brands on the one hand and the peculiarities of perception of this information, which is characteristic of each individual and different age groups on the other hand (Vasilenko, Tkachenko, 2016). In this case, it is important to consider the psychological readiness of consumers for innovation and age-related features of responding to the degree of uncertainty that inevitably accompanies the introduction of innovation.

According to the theory of diffusion of innovations by E. Rogers the group of consumers who are the first to actively use the product – innovators are characterized by a tendency to take on risks (Rogers, 1995). By analyzing the correlation between respondents' loyalty to an electric scooter and their risk appetite it is possible to
understand firstly at what stage of introduction to the Russian market this type of transport is located and secondly whether it is perceived by consumers as dangerous.

Another aspect of this problem is the influence of age on the features of consumer risks. Thus, according to the results of the study of I. Vasilenko and O. Tkachenko in the consumer behavior of young people (18-35 years old) the type of risk called a «cocoon of trust» prevails. This means that consumers of this age group trust manufacturers and retail chains and are loyal to the services they consume. This group uses close social networking and the media as sources of information about products focusing on the approval of the reference group and imitation of the socially approved model. Since the potential consumers of electric scooters are young people and the sales are primarily aimed at them it seems practical to find out whether there are any peculiarities in the perception of information about products that are characteristic of adherents of electric scooters.

METHOD

The present study is the second stage of a project related to a study of psychological factors of preference of Russian consumers towards electric vehicles.

Main Hypotheses

Based on the theoretical analysis, the following research hypotheses are settled down:

1) the similarity between a consumer’s self-image and the perceived personality of the product is associated with the positive attitude of Russian consumers towards a product;

2) risk-averse is related to the positive attitude of Russian consumers towards a new product such as an electric scooter.
Sample

The current study focuses on 150 people living in Moscow and the Moscow region. The following characteristics were considered: gender (74 men and 76 women), age (16-60 years, with 95.3% of respondents being under 50 years old), education (higher school, college, incomplete higher education, and higher education), and income level. The survey was conducted over the Internet and most included young people as they are more likely to purchase an electric scooter.

Design

In the course of the study, a complete questionnaire was developed to aim at studying the personal factors of preference for electric scooters by Russian consumers. It includes:

1) a socio-demographic block of questions analyzing consumer groups according to their gender, age, and social status;

2) questionnaire to identify the attitude towards electric scooters. The questionnaire was developed on the basis of a three-component structure of attitude: cognitive (what respondents know about the product), affective (respondents' attitude to the product), behavioral (whether they are going to use, buy).

3) a set of questions for analyzing the features of brand identity and consumer identity. This block employs: 1. the method of «Measuring the brand personality» by J. Aaker (Aaker, 1997) translated into Russian language by N. Antonova (Antonova, Morozova, 2015). The method involves evaluating the product according to the following parameters: Successful, Reliable, Spirited, Practical, Imaginative, etc. using the Likert dimension (from 1 to 5) where 5 is the maximum rating of the product according to these parameters and 1 is the minimum rating. The method is based on the mechanism of personification, since the product is evaluated according to the categories,
by which people usually evaluate others; 2. the respondents rated themselves on the same dimensions. When processing these parameters, they were combined into dimensions in accordance with the model of J. Aaker: Excitement (daring, spirited, imaginative, up-to-date), Sophistication (charming, upper-class), Sincerity (honest, down-to-earth, wholesome, cheerful), Ruggedness (outdoorsy, tough), Competence (reliable, intelligent, successful); 4) a set of questions for the analysis of risk behavior of consumers: a method for diagnosing the degree of risk readiness of Schubert; a questionnaire for identifying indicators of risky consumer behavior (Vasilenko, Tkachenko, 2016).

RESULTS

Attitude of Russian consumers towards electric scooters

In general the sample is characterized by low preference towards electric scooters: only 13.6% of respondents reported that they would like to buy a scooter for everyday transportation in the near future. Such attitude towards electric scooters is typical for Russian consumers. At the same time the problem of automobile traffic jams is of an extreme case in Moscow the largest metropolis in Russia. Residents make enough income to purchase an expensive vehicle, that is the conditions for the introduction of an innovative product are quite comfortable. However, the majority of respondents (90.7%) use public transport and only 3.3% plan to switch to an electric scooter. One can assume that in the regions the demand for electric scooters is even lower. It is of higher importance to identify the features of the image of the electric scooter, represented in the minds of Russian consumers, as well as the psychological factors of consumer loyalty to this type of transportation.
To create an image of a Russian consumer who prefers an electric scooter using the Spearman criterion the correlation of socio-demographic parameters with adherence to this type of transport was analyzed. A significant positive correlation (0,65) at \( p \leq 0.01 \) was found only with the age of the respondents. The younger a person is, the more likely they are to choose an electric scooter over other vehicles. Only 12% of those over 30 years old said they would like to own an electric scooter now or in the future. This result is logical and predictable since it is young people who are more open to innovations, are leaders in their production and consumption.

The image of the product (the personality of the product) and the identity of the consumer

The questionnaire for Russian consumers has shown that the image of an electric scooter is characterized by excitement and ruggedness. According to the method by J. Aaker the majority of respondents (58,7 and 52%, respectively) gave high marks to an electric scooter. To the least extent it is characterized by sophistication and competence, high scores were set by 26 and 28,6% of respondents respectively. This data suggests that an electric scooter is perceived by Russian consumers as a modern emerging vehicle that gives a sense of freedom and independence. Low ratings exist on the sophistication dimension, which may be due to the fact that an electric scooter is not yet a fashion accessory for Russians and low ratings on the competence dimension are probably due to the risk of injury, which is perceived as unreliable means of transport.

When evaluating their own images according to J. Aaker, the majority of respondents noted their sincerity (74%), competence (76%), and ruggedness (77,3%). Most respondents perceive themselves as practical, friendly, successful, and freedom-loving people.
As highlighted in the initial data analysis, the respondents do not perceive an electric scooter as a close product that reflects their identity. This assumption was confirmed by mathematical and statistical analysis; no statistically significant correlations were found between the identity of the respondents and the individuality of electric scooters. This is consistent with the result that, in general, Russian consumers know little and rarely want to use electric scooters.

To test the hypothesis 1 that the similarity between self-image and the perceived individuality of the product is related to consumer's preference for this product, the delta was calculated for each of J. Aaker’s dimensions (sincerity, excitement, sophistication, competence, ruggedness). Then these values were taken module and using the Spearman test the correlation between the dimension of preference and the dimension of practical use of an electric scooter was checked. The preference towards purchasing an electric scooter in the future is slightly negatively associated only with the difference in images on the Ruggedness dimension (-0,38) at p≤0,01. Ruggedness is the only dimension that is significant for both the identity of respondents and the individuality of an electric scooter. Accordingly, the discrepancy on this dimension causes a lower preference towards electric scooters.

At the same time on the dimension of practical use of electric scooters (see tabl. 1), very weak negative correlations were obtained with the dimensions of excitement (-0,17), ruggedness (-0,16), competence (-0,12) at p≤0,05. On the dimension of sincerity and sophistication the negative correlation is not significant. It is assumed that weak correlations are related to the low level of preference towards electric scooters, which is typical for the sample. Their presence suggests that the consistency of the images of the consumer and the product is due to their closer involvement.
Table 1.
Correlations between «the practical use of electric scooters» and the degree of differences between the individuality of the product and the identity of the consumer.

<table>
<thead>
<tr>
<th>Dimension of method J. Aaker</th>
<th>Practical use of electric scooters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sincerity</td>
<td>-0,63</td>
</tr>
<tr>
<td>Excitement</td>
<td>-0,17*</td>
</tr>
<tr>
<td>Competence</td>
<td>-0,18*</td>
</tr>
<tr>
<td>Sophistication</td>
<td>-0,75</td>
</tr>
<tr>
<td>Ruggedness</td>
<td>-0,16*</td>
</tr>
</tbody>
</table>

Note: (*) – p ≥ 0,05, not significant.

Thus, the hypothesis 1 was partially confirmed. For the positive attitude of the respondents in relation to the electric scooter, the similarity of the image of the product and the identity of the consumer product is associated with the ruggedness factor.

Attitude towards the electric scooter and risk appetite

At the next stage of the study the correlation between respondents' loyalty to an electric scooter and their risk appetite has been analyzed. Risk appetite was measured by the Schubert questionnaire. The results were interpreted according to the following dimension (see tabl. 2).

Table 2.
The correlations between the respondents' loyalty to the electric scooter and their risk appetite.

<table>
<thead>
<tr>
<th>Degree of Risk Appetite</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; -30</td>
<td>low risk tolerance</td>
</tr>
<tr>
<td>30 to -10</td>
<td>rather low risk tolerance</td>
</tr>
<tr>
<td>-10 to +10</td>
<td>medium risk tolerance</td>
</tr>
<tr>
<td>+10 to +30</td>
<td>rather a high propensity to risk</td>
</tr>
<tr>
<td>&gt; +30</td>
<td>high risk tolerance</td>
</tr>
</tbody>
</table>
In addition, the results were subjected to a correlation analysis employing the Spearman test. The hypothesis regarding the correlation between risk appetite and preference towards electric scooters has not been confirmed. A very weak positive correlation was found between the risk appetite and the practical use of the electric scooter (0.25) at $p \leq 0.05$ (see tabl. 3).

**Table 3.**
Correlation between respondents «risk appetite» and dimensions of «loyalty to the electric scooter and its practical use».

<table>
<thead>
<tr>
<th>Statement</th>
<th>Risk Appetite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loyalty to the electric scooter</td>
<td>0.59</td>
</tr>
<tr>
<td>Practical use of the electric scooter</td>
<td>0.25*</td>
</tr>
</tbody>
</table>

*Note: (*) – $p \geq 0.05$, not significant.*

One can assume that consumers who have declared their loyalty to an electric scooter in accordance with the theory of diffusion of innovations by E. Rogers are early adopters. The level of acceptable risk in this group of consumers is significantly lower than that of innovators (Rogers, 1995).

**Table 4.**
Correlations of «loyalty to an electric scooter» with «the criteria of risk behavior».

<table>
<thead>
<tr>
<th>The criteria of Risk behavior</th>
<th>Loyalty to an electric scooter</th>
</tr>
</thead>
<tbody>
<tr>
<td>I often use personal transport for commuting.</td>
<td>0.08</td>
</tr>
<tr>
<td>When buying a vehicle, I always carefully weigh the pros and cons.</td>
<td>-0.95</td>
</tr>
<tr>
<td>I am generally happy with my vehicles.</td>
<td>0.44</td>
</tr>
<tr>
<td>My choice of a vehicle is based on personal experience.</td>
<td>0.12</td>
</tr>
<tr>
<td>For me, it is important that my choice of a vehicle is approved by my family.</td>
<td>0.23*</td>
</tr>
<tr>
<td>My friends are the source of information about various types of transport.</td>
<td>-0.12</td>
</tr>
<tr>
<td>When choosing a vehicle, I listen to the advertising.</td>
<td>-0.74</td>
</tr>
</tbody>
</table>

*Note: (*) – $p \geq 0.05$, not significant.*
In order to identify the factors influencing the decision-making of consumer’s loyalty to an electric scooter, a correlation analysis with the criteria of risky consumer behavior identified by O. Vasilenko and I. Tkachenko (Vasilenko, Tkachenko, 2016) was carried out. A weak positive correlation was obtained (0.23) at \( p \leq 0.05 \) of preference for an electric scooter with the criterion of «family approval» (see tabl. 4).

It’s important for individuals who are inclined to use an electric scooter obtain approval from their family. This criterion of risky consumer behavior is typical for young people as a category of people seeking the approval of the primary reference group. Its connection with loyalty to an electric scooter means that the image of this vehicle should be built in such a way that it does not cause negative emotions in the older generation.

**Model of positive attitude towards the electric scooter**

At the final stage of the study it attempts to build a loyalty model for an electric scooter. Based on the results of empirical study it is assumed that the multivariate model of loyalty to the electric scooter’s functions as follows (fig. 1).

According to the assumption, the components of loyalty to an electric scooter in this model include psychological factors that influence the consumer's purchasing decision. Such factors are: risk appetite, hedonism as well as the image of consumer herself/himself and the image of an electric scooter that exist in the mind of the consumer. In turn the images of oneself and an electric scooter are made up of assessments of images according to five dimensions of the J. Aaker methodology. When choosing variables that are supposed to be components of loyalty to an electric scooter, the variable «practical use of an electric scooter» is excluded from consideration,
because Its distribution is not normal (c.r.=62.53), which is associated with a very low level of implementation of this product on the Russian market.

**Fig. 1.** Conceptual Model of Loyalty to an Electric Scooter

The analysis of the hypothetical model and its correction were carried out in the SPSS Amos Graphics software, which allows using the method of structural modeling (Structural Equation Modeling). The conformity of the model to the original data has been tested and modified by adding new links between elements, and removing weak
links. The rectangles represent the explicit variables, which are being measured. These include deltas between the images of a consumer and an electric scooter according to the dimensions of the J. Aaker method purchase intent as well as such psychological characteristics of consumers as hedonism and risk appetite. Consistency of imagery and loyalty to an electric scooter are latent variables that are assumed to be present, which is why they are indicated by ovals. Hidden variables affect explicit variables.

Consequence hypotheses are shown in the following tabl. 5:

<table>
<thead>
<tr>
<th></th>
<th>Self-assessment of consumer himself/herself on the dimension of</th>
<th>Sincerity</th>
<th>Excitement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Competence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sophistication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Ruggedness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Assessment of an electric scooter on the dimension of</td>
<td>Sincerity</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Competence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Sophistication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Ruggedness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>The image of oneself and the image of an electric scooter are significantly connected.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>The image of an electric scooter is a factor of loyalty to this product.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>The consumer’s self-image is a component of an electric scooter’s image.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Risk appetite is a factor of loyalty to an electric scooter.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Consent Criteria

Confirmation of hypotheses about the existence of correlations in the proposed model is carried out using the goodness-of-fit criteria. The obtained values of the goodness-of-fit criteria allow to confirm hypotheses 1-14.

The values of the goodness-of-fit criteria for the model are shown in tabl. 6. All criteria indicate good agreement of the model with empirical data.
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Personal factors of attitudes of Russian consumers towards a new product (on the example of an electric scooter)

Table 6.
Consent criteria.

<table>
<thead>
<tr>
<th>Consent criteria</th>
<th>Rank of value</th>
<th>Resulting value</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>GFI</td>
<td>0 – 1,0</td>
<td>0,957</td>
<td>&gt;0.95</td>
</tr>
<tr>
<td>CFI</td>
<td>0 – 1,0</td>
<td>0,999</td>
<td>&gt;0.90</td>
</tr>
<tr>
<td>NFI</td>
<td>0 – 1,0</td>
<td>0,944</td>
<td>&gt;0.90</td>
</tr>
<tr>
<td>CMIN/df</td>
<td>0 – 1,0</td>
<td>1,014</td>
<td>3&gt;x&gt;0</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0 – 1,0</td>
<td>0,010</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>

Hypothesis status and interpretation are shown in the following tabl. 7:

Table 7.
Hypothesis status and interpretation.

<table>
<thead>
<tr>
<th>№</th>
<th>Hypothesis</th>
<th>Regression coefficient</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Self-Assessment of consumer himself/herself on the dimension of Sincerity is a component of the self-image.</td>
<td>0,73</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Self-Assessment of consumer himself/herself on the dimension of Excitement is a component of the self-image.</td>
<td>0,93</td>
<td>Consistent with the general assumed model and in particular with the model of self-image</td>
</tr>
<tr>
<td>3</td>
<td>Self-assessment on the scale Competence is a component of the self-image.</td>
<td>0,79</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Self-Assessment of consumer himself/herself on the dimension of Sophistication is a component of the self-image.</td>
<td>0,69</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Self-Assessment of consumer himself/herself on the dimension of Ruggedness is a component of self-image.</td>
<td>0,63</td>
<td></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Assessment of an electric scooter on the dimension of Sincerity is a component of the image of an electric scooter.</td>
<td>1.04</td>
</tr>
<tr>
<td>7</td>
<td>Assessment of an electric scooter on the dimension of Sincerity is a component of the image of an electric scooter.</td>
<td>1.04</td>
</tr>
<tr>
<td>8</td>
<td>Assessment of an electric scooter on the dimension of Competence is a component of the image of an electric scooter.</td>
<td>0.99</td>
</tr>
<tr>
<td>9</td>
<td>Assessment of an electric scooter on the dimension of Sophistication is a component of the electric scooter's image.</td>
<td>1.043</td>
</tr>
<tr>
<td>10</td>
<td>Assessment of an electric scooter on the dimension of Ruggedness is a component of the e-scooter image.</td>
<td>0.98</td>
</tr>
<tr>
<td>11</td>
<td>The consumer’s self-image is a component of an electric scooter’s image.</td>
<td>0.58</td>
</tr>
<tr>
<td>12</td>
<td>The image of an electric scooter is a factor of loyalty to this product.</td>
<td>0.46</td>
</tr>
<tr>
<td>13</td>
<td>Risk appetite is a factor of loyalty to an electric scooter.</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Consistent with the general assumed model and in particular with the model of the image of an electric scooter

Consistent with the general assumed model and in particular with the model of the image of an electric scooter

Consistent with the general hypothesized model and in particular with the loyalty model to an electric scooter

This means that risk appetite is not a component of an electric scooter’s loyalty. The result is being expected. An electric scooter is perceived by Russian consumers as reliable and durable (this is evidenced by the high marks on the Ruggedness dimension of the J. Aaker methodology). Accordingly, the propensity to take risks, that is, the willingness to expose oneself to danger, is not a quality that determines the preference towards this type of transport.
Modification of the model

As noted above the components of «risk appetite» and «hedonism» consumer style were not tested, and were removed from the model. This significantly increased the goodness-of-fit criteria in particular the GFI criterion, which previously took a value of 0,94 less than the required critical value, became 0,96. As a result the following model is finalized (fig. 2).

![Diagram of loyalty to an electric scooter](image)

**Fig. 2.** A posteriori model of loyalty to an electric scooter

CONCLUSION

1) The attitude of Russian consumers towards electric scooters is unexpressed. Russian consumers are poorly aware of this type of transport.
2) A positive correlation was found between a positive attitude towards an electric scooter and the age of the respondents. Thus, potential users of electric scooters can be young people.

3) The image of an electric scooter in the minds of Russian consumers is characterized by such features as Excitement and Ruggedness (according to the method of J. Aaker). Thus, an electric scooter is perceived by Russian consumers as a transport for courageous people, associated with vivid emotions.

4) The identity of the respondents in the Russian sample is not significantly related to the individuality of electric scooters they perceive, which is due to the low level of commitment to this type of transport, which is typical for the sample.

5) Partially confirmed the hypothesis that the lower the level of discrepancy between the self-image and the perceived individuality of the product is the higher is the consumer's loyalty to this product was partially confirmed. Such a correlation between self-image and the personality of an electric scooter has been found only on the dimension of ruggedness. Considering the high ratings given by the respondents on this dimension to both themselves and the electric scooter, one can conclude that in marketing strategies it is necessary to focus on this characteristic of an electric scooter.

6) The hypothesis stating that those who tend to use an electric scooter are also prone to risk has not been confirmed. Meanwhile, the risk appetite is positively associated with the practical use of an electric scooter. Perhaps if there were more people actually using an electric scooter, this correlation would be more significant.

To sum up, electric scooters are gradually entering the Russian market, this product is becoming interesting to a group of consumers, which appears as early adopters in the concept of diffusion of innovations by E. Roger. However the affective component of loyalty to this type of transport even among this group of consumers is
weakly expressed as in particular evidenced by the lack of correlation between the image of oneself and the perceived individuality of an electric scooter. Only the consistency of images on the ruggedness dimension is connected with the loyalty to an electric scooter. Potential buyers of an electric scooter are not risk-averse however it is possible that the actual use of an electric scooter has such a correlation.

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ЛЮЧНОСТНЫЕ ФАКТОРЫ АТТИТЮДОВ РОССИЙСКИХ ПОТРЕБИТЕЛЕЙ ПО ОТНОШЕНИЮ К НОВЫМ ТОВАРАМ (НА ПРИМЕРЕ ЭЛЕКТРОСКУТЕРА)

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Аннотация. В статье приводятся результаты исследования личностных факторов аттитюдов российских потребителей по отношению к новым для российского рынка товарам. В качестве нового для российского рынка товара взяты электрические транспортные средства (на примере электроскутеров). В исследовании приняли участие 150 человек различного возраста, проживающие в г. Москва и Московской области. Целью исследования являлось выявление личностных особенностей российских потребителей, связанных с позитивным аттитюдом по отношению к электрическим транспортным средствам (электроскутерам). Гипотезы: 1) сходство образа товара (индивидуальности товара) и образа себя (идентичности потребителя) связано с более позитивным аттитюдом по отношению к товару; 2) люди с более высокой склонностью к риску имеют более позитивные аттитюды в отношении электрических транспортных средств. Методы исследования: опрос. Опросник для исследования личностных особенностей потребителей состоял из нескольких блоков, в основу которых были положены: методика «Измерение индивидуальности бренда» Дж.Аакер, методика «Измерение идентичности потребителя» (авторская модификация Н.В. Антоновой), методика оценки готовности к риску Шуберта. Аттитюды потребителей в отношении электроскутеров изучались с использованием авторского опросника. Структура опросника была разработана в соответствии со структурой аттитюда (когнитивный, аффективный, поведенческий компоненты). Результаты. Гипотезы частично подтвердились; 1) подтверждена гипотеза о сходстве образа себя и образа товара как фактора позитивного аттитюда по отношению к товару; 2) гипотеза о связи позитивного аттитюда со склонностью к риску не подтвердилась. Была также построена модель отношения российских потребителей к электрическим транспортным средствам, в итоговую модель вошел фактор взаимосвязи образа себя и образа товара. Склонность к риску не является фактором позитивного аттитюда по отношению к электрическим транспортным средствам. Полученные результаты могут использоваться при разработке стратегии продвижения новых товаров – электрических транспортных средств – на российский рынок.

Ключевые слова: идентичность потребителя, стратегии потребительского поведения, аттитюд к товару, склонность к риску, электроскутер.