Market research of high-tech products to analyze the possibility of diversification of production (for example, household laser rangefinders)

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Abstract: The article is devoted to the theory and practice of market research of the B2C high-tech products. The authors carried out analytical internal research on the Russian market of household laser rangefinders using alternative aggregated economic and mathematical methods. The rangefinders can be used in many areas including machine-building and construction fields. The article confirms the hypothesis that the number of queries on the Internet about laser rangefinders of firms is proportional to their market share, based on which, according to Yandex statistics, a map of competitors was built. Both a separate analysis of the leading products of the companies and a joint analysis were performed.

1. Introduction
Russian enterprises operating in the field of space activities produce unique, complex, high-tech and expensive products consumed either by large private customers or the state itself, represented by various government departments. In connection with the solution of strategic tasks to increase the share of civil and non-military products up to 30% of the total output of the military-industrial complex (MIC) of the Russian Federation by 2025, and up to 50% by 2030, there exists a difficult question of finding market niches for those enterprises. The niches should be of that kind where the defense industry complex could successfully compete with the private sector [1–3].

2. Materials and Methods
Marketing research (MR) allows conducting a scientific analysis of all the factors affecting the successful commercial sale of goods, and is a tool that allows you to make managerial decisions about the promotion or development of a product by systematically searching, collecting, analyzing and presenting data and information related to the specific market situation that the enterprise had to face.

First of all the company must determine who will buy its products that is to segment the market.

Market segmentation is the division of the market into distinct groups of indicators. It allows highlighting the market in which the company will have the greatest competitive advantages and profits. If there exist large companies on the market determined, it is worth further narrowing the segments to a market niche that is less interesting to large companies, and only having conquered it, invade their segments.
After identifying the market segments, the question should be resolved how to differentiate and position on the market. With the help of differentiation, you can separate the product from the competitors' products of the same type by highlighting its characteristic features.

Defining customers is the first step in shaping a marketing strategy, which is a set of consistent directions that allow the company to carry out profitable customer relationships. After this, it is necessary to develop a marketing program that will allow customers to get the expected value of the goods. The marketing program, in turn, consists of a marketing measures complex that includes a set of tools for the practical implementation of the strategy.

The marketing complex is a set of controlled tactical marketing tools: product, price, place, promotion, people, process and physical environment - which the company uses to get the desired reaction on the target market. All this is included in the concept of marketing - mix (7P). [5, 6]

Model 7P describes the presentation on the market by the seller, if you consider the market from the side of the buyer, then it is converted to model 4C: customer needs, cost, convenience and communication. The consideration of the 7P model should be followed after a thorough study of the 4C model. [5, 6]

The use of all of the above tools should allow you to analyze and develop a business portfolio, i.e. a set of business directions and products that will define the company’s activities.

Conducting a versatile MR is a complex task that requires a large number of resources, including temporary ones. In the framework of this study, it was decided to focus on search purposes, i.e. collecting information on current varieties of laser rangefinders, market capacity, analyzing competitors and identifying the strengths of their products. The study covered only the segment of the Russian market of household laser rangefinders.

The B2C market is represented by household laser rangefinders, costing from 700 to 5000 rubles. This type of rangefinder is designed to replace roulettes and rulers, and these measuring instruments are in almost every home. Given the decreasing price and much greater usability, the potential market capacity [14] is all households in the country.

According to Rosstat, in 2010 the number of households was 54.6 million. Given the increase in the population from 142.9 million in 2010 to 146.8 million in 2019, based on a simple proportion, you can get an approximate number of households for 2019 equal to 56 million. Laser rangefinder, like any household tool, has an average service life of about 4 years, if moral obsolescence is not taken into account. Hence, the potential market capacity in the number of devices sold is one fourth of the total number of households, i.e. 14 million units / year, or with an average rangefinder price of 3 thousand rubles. So, the potential market capacity will be 42 billion rubles/year.

The actual market capacity is difficult to calculate, since there is no open data on sales of laser rangefinders. To calculate the current market capacity, the following methodology was proposed and used. The AliExpress website displays the total number of purchases of a product and its price. At the request of "laser rangefinder", all firms with a sales quantity of more than 10 items were scanned. Statistics are collected on the total number of sales within the range depending on the average number of sales in the range in increment of 100.

The total number of sales of laser rangefinders based on the summation of all sales was 112483. Since the average life of a store on AliExpress is about 1.5 years, you can calculate the number of sales per year equal to 74989 / year. The average cost of the rangefinder on AliExpress is 1500 rubles, which gives the actual capacity of the AliExpress market for the whole world 112,483 million rubles / year.

The number of users registered on the trading platform is about 150 million people [15]. From here we get the percentage of people who bought a laser rangefinder from the total number of users as a ratio of sales to the number of users, which is 0.05%. If we consider that AliExpress as a trading platform reflects the current demand for laser rangefinders, we can translate these numbers into the demand of Russian users, multiplying the percentage of interested people by the number of working-age population.
The working population is used as the basis, not households, since all household members buy goods on AliExpress and only those who can pay with electronic money and who have free money can register on this electronic platform. When using this method, an assumption is made about the uniform interest in this type of product in all countries, in addition, the value may be overestimated, since not all employable people are employed and therefore do not receive income, but to separate those who do not receive income, but has the ability to purchase goods is not possible.

Taking into account the labor force in the Russian Federation, according to Rosstat data, 74.9 million people, actual demand for laser rangefinders is 37.5 thousand units / year, which, with the average price of the rangefinder in Russia, is about 3 thousand rubles. will amount to 112.5 million rubles / year.

These figures are very approximate and calculated with a large amount of assumptions. However, they show that the current demand for laser rangefinders is 370 times less than potential, which indicates the possibility of its substantial growth and the prospects of this area.

3. Results
As mentioned earlier, it is not possible to find data on sales by manufacturers. In this regard, on the Yandex market trading platform, a search was made for the keyword “laser rangefinder”, filters were introduced a restriction on the upper limit of the cost of the laser rangefinder to 5 thousand rubles for the separation of household range finders of the B2C market from professional rangefinders of the B2B market.

Further, on the Yandex “word search” service, the queries “Laser rangefinder [company name]” were made, which made it possible to determine the number of requests per month for various companies, potential competitors when trying to occupy the B2C market. Table 1 below shows, in descending order, the results of the average number of search queries per month when averaging over a year for 11 firms and the percentage of queries in the total number. Firms for which the number of requests was less than 50 were not taken into account. The data in the table are shown in descending order.

| Rank | Firm          | Number of Requests per Month | % of Total Number |
|------|---------------|-----------------------------|-------------------|
| 1    | Bosch         | 4320                        | 50.7              |
| 2    | Condrol       | 1122                        | 13.2              |
| 3    | ADA instruments | 895                        | 10.5              |
| 4    | SNDway        | 847                         | 9.9               |
| 5    | RGK           | 337                         | 3.9               |
| 6    | Elitech       | 266                         | 3.1               |
| 7    | Makita        | 211                         | 2.5               |
| 8    | Resanta       | 141                         | 1.7               |
| 9    | TESLA         | 134                         | 1.6               |
| 10   | INSTRUMAX     | 131                         | 1.5               |
| 11   | Praktika      | 122                         | 1.4               |
|      | Total         | 8526                        | 100               |

Source: made by authors according to https://wordstat.yandex.ru/

Based on the assumption that the more interest in the brand, expressed in the number of requests, the greater the volume of its sales, we can conditionally consider the column “percentage of the total number” from table 1, the market share of each of the players. Because Yandex gives out the number of requests per month, then in a year the number of requests will be 8526 * 12 = 102312. This value is 2.7 times larger than that calculated according to AliExpress, however, given that not every request is made a purchase, this result more likely confirms previous calculations, rather than disproving them.
In the following text, market share means the percentage of search queries out of the total number, since these values should be proportional.

The results obtained show that the market leader is BOSCH (50.7%), which is primarily due to the brand's popularity and expected reliability for ordinary consumers. Condtrol followed with 13.2% of the market, and ADA instruments and SNDway shared the third place with approximately equal market shares of 10%. Of the Russian companies, RGK with a share of 3.9% and Practica with a share of 1.4% should be pointed out. If we divide the companies according to their market share, we can distinguish Bosch with a market share of more than 40%, then the three followers of Condtrol, ADA instruments, SNDway with a market share of 10 to 20% and the rest of the companies that have occupied a market niche with a market share of less than 10% [17]. The calculation of the Hirschman-Herfindahl Index (HHI) gives a result of 2855 for 3 players, which indicates a high concentration of the market.

### 3.1. Growth rate of market share and a map of competitors

By the selection of words Yandex also allows you to determine the number of requests in each month for two years. This allows you to consider the dynamics of changes in demand and make a map of competitors.

To determine the growth rate, the average number of requests per month was calculated for the periods from 07.2017 to 06.2018 and from 07.2018 to 06.2019, after which the growth rate of market share for each company was calculated. The exception is Tesla, because until 1.05.2018 there were no search queries for laser rangefinders for this company, therefore, to calculate the growth rate, the remaining range was divided into two equal intervals. The obtained data on the change in market share and the growth rate of sales and market share are shown in table 2, the data are sorted by the rate of increase in output.

| Firm          | Requests 2018 | Requests 2019 | Sales growth rate | Market share growth rate | Market share change, % |
|---------------|---------------|---------------|-------------------|--------------------------|------------------------|
| Elitech       | 138           | 266           | 92.7              | 73.8                     | 1.3                    |
| Resanta       | 76            | 141           | 85.5              | 67.3                     | 0.7                    |
| RGK           | 224           | 337           | 50.4              | 35.7                     | 1.0                    |
| TESLA         | 11            | 134           | 30.7*             | 89.2*                    | 1.3*                   |
| Condtrol      | 927           | 1122          | 21.0              | 9.2                      | 1.1                    |
| Bosch         | 3889          | 4320          | 11.1              | 0.2                      | 0.1                    |
| Praktika      | 112           | 122           | 8.9               | -1.7                     | 0                      |
| SNDway        | 867           | 847           | -2.3              | -11.9                    | -1.3                   |
| ADA instruments | 1040         | 895           | -13.9             | -22.4                    | -3.0                   |
| Makita        | 247           | 211           | -14.6             | -23.0                    | -0.7                   |
| INSTRUMAX     | 158           | 131           | -17.1             | -25.2                    | -0.5                   |
| Total         | 7689          | 8526          | 10.9              | -                        | 0                      |

* - the value does not match, because it is calculated at other intervals, as there are no company searches in the first half of 2019.

As can be seen from Table 2, Elitech shows the highest output growth rates, while an increase in sales does not mean an increase in market share. So, the company Practica has an increase in sales of 8.9%, while its market share has not changed at all, this is due to the fact that the total sales in this segment increased. If the number of players does not change, then the change in market share occurs only due to the redistribution of market shares of other players. The growth rate of sales allows us to assess the possibility of the functioning of the company, so if the pace is positive, then the volume of sales is growing, and this indicates a possible increase in profit. However, if at the same time the growth rate of the market share is negative, then the company will develop only to the level of market saturation, and then sales will fall, being redistributed to other players.
Table 2 also shows the positive dynamics of a 10% increase in demand. According to https://vvs-info.ru, the volume of imports of electronic rangefinders using the HS code 9015101000 increased in 2019 by 42% in dollar terms, but this statistic includes all electronic rangefinders, including industrial ones. However, these numbers show a positive trend for market growth.

For further analysis, a competitor map was constructed and shown in Figure 1. The abscissa scale is logarithmic, since the large gap between the leading Bosch company does not allow the remaining players to be displayed on a linear scale.

![Competitor map](https://wordstat.yandex.ru/)

Figure 1. Competitor map. Source: made by authors according to https://wordstat.yandex.ru/.

The competitors map allows you to group all the players. For further analysis, it is advisable to consider the product lines of “dairy cows”, i.e. companies that occupy the largest market at low growth rates, and “difficult children”, i.e. companies that have a small market share, but high positive dynamics.

Companies like Bosch, Condtrol, ADA, and SNDway have a high market volume. Bosch has a small growth rate, but a very large market share, an analysis of its product line will help to understand how it managed to get so far from competitors. ADA is interesting for its negative dynamics, its analysis will help identify possible errors. The company Condtrol has the largest market share among the followers, but at the same time a sufficiently high dynamics, exceeding the dynamics of the leader. An analysis of this firm may reveal a strategy that allows you to gain market share. SNDway is the last of the three followers, and is taken into account as a reference static point with zero dynamics.

High growth companies include Elitech, Resanta, and RGK. Elitech is characterized by a market share of 3.1% with a dynamics of 92%. This is possible either when entering the market, or when entering a product attractive to the consumer, both of which are interesting for potential entry into the market. Resanta has a growth rate of 85% with a market share of 1.7%. RGK closes the top three in terms of sales volume, it is a Russian company with a market share of 3.9% and a dynamics of 50%, it will cause the greatest difficulties, because despite a small share of the total market, it occupies 74% in the niche of Russian rangefinders. It is the most important competitor when entering the market.
4. Discussion

4.1. Analysis of companies holding a market share of more than 10%

As mentioned earlier, such companies include Bosch, ADA, Condtrol, and SNDway. SNDway has a market share of less than 10%, but since the difference is 0.1%, it was decided to consider it in this category.

To simplify, the analysis included samples with the largest number of queries according to Yandex data, i.e. the most popular models for each manufacturer. The models themselves and their characteristics are shown in Table 3 (the best characteristics are highlighted in bold italics). Due to the lack of the ability to conduct large-scale field research, it was decided to evaluate the product for each item by calculating an index proportional to the utility for the consumer [17], which is defined as the ratio between the value of the item and the parameter of the comparison base, which allows you to get away from absolute values and make comparisons heterogeneous characteristics.

As can be seen from table 3, the first place in all calculations is taken by the rangefinder of Bosch, the last is the rangefinder of ADA Inst. Condtrol and SNDway rangefinders share the second and third places. The final rating for the leader (Bosch) and the outsider (ADA) in this category repeat the position of firms along the abscissa on the competitors’ map, the result of the remaining two firms is different.

Table 3. Characteristics of the most popular laser rangefinders.

| Brand         | Queries | Price, rur. | Range, m | Precision, mm | Number of staning points | Measurement memory | Sound indication | Shockproof | Mathematical Operations | Max. and Min. | Tripod thread | Minimal distance in sm. | Layout mode | Weight, r. | Battery in set | Protection class | Laser | State Register |
|---------------|---------|-------------|----------|---------------|--------------------------|---------------------|------------------|------------|------------------------|---------------|--------------|------------------------|------------|------------|-----------------|------------------|-------|----------------|
| Bosch GLM 50 prof. | 161 | 146 | 232 | From 450 | 14597 | 50 | 1.5 | 3 | 3 | 30 | 5 | 5 | 5 | 5 | 6 | 140 | 120 | 3 | 83 | - | + | 0.5 | - | 0.5 | 635 | - | - |
| Condtrol Smart 60 | 157 | 50 | 60 | 40 | 60 | 50 | 2 | 1.5 | 2 | 3 | 3 | 30 | 5 | 5 | + | + | + | + | + | 140 | 150 | 0.5 | 0.5 | 635 | 635 | 635 | - | - |
| ADA Inst. CosmoMINI | 146 | 144 | 232 | From 40 | 1597 | 30 | 3 | 3 | 3 | 30 | + | + | + | + | + | + | - | - | 140 | 120 | 3 | 83 | - | + | 0.5 | 0.5 | 635 | 635 | 635 | - | - |
| SNDway SW-T40 | 161 | 146 | 232 | From 450 | 14597 | 40 | 2 | 1.5 | 2 | 3 | 3 | 30 | + | + | + | + | + | + | 140 | 120 | 3 | 83 | - | + | 0.5 | 0.5 | 635 | 635 | 635 | - | - |

Source: made by authors according to https://wordstat.yandex.ru/

4.2. Such basic assumptions were taken into consideration

1. The ratio of the parameter to the arithmetic mean value with a direct relationship of utility and parameter and the inverse ratio with an inverse relationship.

\[ K_{i,j} = \begin{cases} \frac{P_{i,j}}{P_j}, & \text{in direct case} \\ \frac{P_j}{P_{i,j}}, & \text{in inverse case} \end{cases}, \quad (1) \]

where \( K_{i,j} \) is the utility indicator of the i-th product characteristic of the j-th product, \( P_{i,j} \) is the value i-th product characteristic of the j-th product, \( P_j \) is the arithmetic mean value of the i-th characteristic for all goods.

Such an attitude allows one to separate parameters close to general market trends from unique ones. To facilitate the calculation process in programs such as Excel, for a direct or inverse problem, you
can select a column with the value “+1” if the relationship is direct or “–1” if the relationship is inverse. Then the formula for calculations is the same and will look like this: 

\[ = \left( \frac{B_{62}}{F_{62}} \right)^{H_{62}} \]  

(2)

where \( F_{62} \) is the cell with the mathematical expectation value for the parameter in row 62, \( B_{62} \) is the cell with the parameter value in row 62 for the product in column B, and \( H_{62} \) is the cell with the value that determines the nature of the relationship of the parameter in row 62 with consumer benefit: +1 - direct relationship, –1 - inverse relationship.

All values are given as an example, i.e. row and column numbers will be unique for each table.

2. The method can be modified by the escape of uncertainty and zero values exclusion. In that case formula will look as follows:

\[
K_{2,i,j} = \begin{cases} 
  \frac{P_{i,j} + \sigma_i}{P_{i,j} + \sigma_i}, & \text{in direct case} \\
  \frac{P_{i,j} + \sigma_i}{P_{j} + \sigma_i}, & \text{in inverse case} 
\end{cases}
\]  

(3)

where \( \sigma_i \) – standard deviation (SD) of \( i \)-th characteristic for all goods. SD is added to the numerator and denominator so that if the parameter value is equal to the mathematical expectation, the coefficient is equal to unity. At the same time, the uncertainty problem remains in the case when the mathematical expectation is zero and the standard deviation is zero. SD and expectation are simultaneously equal to zero, when the values of all parameters are the same and equal to zero, in the limit, this ratio is equal to unity.

In programs such as Excel, it is necessary to resolve this kind of uncertainty using a separate condition in the formula of the form:

\[
= IF (F_{62} + G_{62} = 0; 1; \left( \frac{B_{62} + G_{62}}{F_{62} + G_{62}} \right)^{H_{62}}) 
\]  

(4)

where \( G_{62} \) is the cell with the SD value along the line of parameter 62.

However, in a good way, such parameters that are the same for all products should be deduced from consideration, since differential comparison does not affect the final result.

3. The next method of normalization is analogical to the normalization in taxonomic method [10]. In that case the normalization is done by variation according to the following formula.

\[
K_{3,i,j} = \begin{cases} 
  1 + \frac{P_{i,j} - \langle P \rangle_i}{3\sigma_i}, & \text{in direct case} \\
  1 - \frac{P_{i,j} - \langle P \rangle_i}{3\sigma_i}, & \text{in inverse case} 
\end{cases}
\]  

(5)

Dividing by 3 allows you to compress the entire range of possible values to a range from minus 1 to 1, and adding one to shift the values of the parameters corresponding to the mathematical expectation from zero to a value equal to one, since it is impossible to postpone negative values in a pie chart. As a result, the obtained coefficient should take values from 0 to 2, however, this is applicable only with a normal distribution. If with an increase in the parameter value more than unity there are no problems, then the parameter gone to a negative value must be corrected to zero.

Similarly to the second method, when the standard deviation is zero, the coefficient value is not determined in connection with the division by zero, this problem is corrected in a similar way. Since when the SD value is zero, all values are equal to the mathematical expectation, the numerator and denominator in formula 5 are equal to zero at the same time, which in the limit gives the value of unity. The formula in Excel is simpler:

\[
= IF (G_{62} = 0; 1; \left( \frac{B_{62} - F_{62}}{G_{62} \times 3} \right) \times H_{62} + 1) 
\]  

(6)
This normalization makes it easier to compare products with each other, because mathematical expectation is removed and even minor changes will be noticeable on the chart. The result of calculating these coefficients allows you to build polygons of the characteristics of the goods in order to conduct an analysis in graphical form. An example of such a polygon according to method 1 is presented in Figure 2.

![Polygon of product characteristics, method 1. Source: made by authors according to https://wordstat.yandex.ru/](image-url)

**Figure 2.** Polygon of product characteristics, method 1. Source: made by authors according to https://wordstat.yandex.ru/.

### 4.3. Analysis of companies of growth rate bigger than 50%

The companies with growth rate bigger than 50% include Elitech (92.7%), Resanta (85.5%), RGK (50/4%). The largest size of the market has RGK (3.9%), and the smallest has Resanta (1.7%). Company RGK is domestic, so is regarded as the main competitor.

Similarly to the previous case, rangefinders with a high number of search queries were taken, as the most popular for each of the firms. The characteristics of the selected rangefinders are presented in table 4. The table shows the difference in search queries for a specific rangefinder and search queries for all rangefinders of firms. This is due to the large number of similar products for each company, differing in range and accuracy.
Table 4. The total ranking of rangefinders with a different approach to assessing utility.

| Product       | Queries | Price, rub. | Range, m | Precision, mm | Number of starting points | Measurement memory | Sound indication | Shockproof | Mathematical Operations | Max. and Min. | Min. thread in mm | Minimal distance in sm. | Weight, g. | Measurement time, s. | Battery in set | Protection class | Laser | State Register |
|---------------|---------|-------------|----------|----------------|---------------------------|-------------------|-----------------|------------|------------------------|---------------|-------------------|------------------------|-------------|---------------------|----------------|-----------------|-------|-----------------|
| Elitech LD 40H | 49      | 61 from 4319 | 1597     | 100 | 40               | 1.5                  | +               | -          | +                      | -             | 5                 | -                      | 82          | 0.5                 | +              | IP54            | +     | -               |
| Resanta DL-40  | 47      | 43 from 2340 | 597      | 99  | 20               | 100                  | +               | -          | +                      | -             | 3                 | 5                      | 115         | 0.5                 | +              | 650            | -     | 635             |
| RGK D100      | 49      | 63 from 4319 | 597      | 99  | 20               | 100                  | +               | +          | -                      | +             | 3                 | 5                      | 180         | 0.5                 | +              | IP54            | +     | -               |

Source: made by authors according to https://market.yandex.ru/.

As can be seen from table 4, the domestic rangefinder RGK D100 in almost all characteristics, except for accuracy, weight and price exceeds the rangefinders considered. Moreover, the accuracy of 1.5 mm from 2 mm is practically no different and has a psychological advantage rather than a practical one, and the difference in weight of 100 g. is completely insignificant.

Similarly to the previous section, the final rating was determined, the data are shown in table 5. The results for all calculation methods are completely identical.

Table 5. The total ranking of rangefinders with a different approach to assessing utility.

| Method 2 | Method 3 | Taxonometric method |
|----------|----------|---------------------|
| Brand    | Rank     | Arithmetic mean | Geometric mean | Rank | Arithmetic mean | Geometric mean | Rank | Coefficient |
| Elitech LD 40H | 2 | 0.82 | 0.82 | 2 | 0.9 | 0.91 | 2 | 0.76 |
| Resanta DL-40 | 3 | 0.63 | 0.62 | 3 | 0.7 | 0.71 | 3 | 0.49 |
| RGK D100 | 1 | 1 | 0.72 | 1 | 0.72 | 0.91 | 1 | 0.76 |

Source: made by authors according to https://market.yandex.ru/

Table 5 shows that the first place in terms of performance is occupied by the domestic rangefinder of RGK, the second is the rangefinder of Elitech, the third is the rangefinder of Resanta, although this result was obvious from a graphical comparison. This rating repeats the position of firms along the abscissa on the map of competitors, i.e. product characteristics correlate with company market share. Based on the data obtained, it is advisable to make a general comparison of the range finders of Bosch, Condrol, RGK and Elitech.

4.4. Comparison of leaders by market share and growth rate
A comparison of the leaders in terms of market share, found in section 3.1 (Bosch, Condrol), and the growth rates obtained in section 3.2 (RGK, Elitech), reveal how much the brand affects the demand for goods. Obviously, the higher the market share, the lower the growth rate and vice versa. So, this
section compares companies that have firmly established themselves in the laser rangefinder market with companies that have recently entered the market and are trying to regain their share of it. To compare the rangefinders in graphical form, only methods 2 and 3 were used. The final rating is presented in table 6.

Table 6. The final ranking of rangefinders with a different approach to assessing utility

| Brand          | Method 2 | Method 3 | Taxonomic method |
|---------------|----------|----------|------------------|
|               | Rank     | Arithmetic mean | Geometric mean | Rank     | Arithmetic mean | Geometric mean | Rank | Coefficient |
| Bosch GLM 50  | 3        | 0.8      | 0.79            | 3        | 0.84            | 0.85            | 3    | 0.58        |
| prof.          |          |          |                 |          |                 |                 |      |             |
| Condtrol Smart 60 | 4       | 0.73     | 0.71            | 4        | 0.84            | 0.85            | 4    | 0.49        |
| RGK D100      | 1        | 1        | 1               | 1        | 1               | 1               | 1    | 1           |
| Elitech LD 40H | 2        | 0.95     | 0.81            | 2        | 0.88            | 0.89            | 2    | 0.62        |

Source: made by authors according to https://market.yandex.ru/

The rating for all methods is completely converged. The characteristics of rangefinders with high growth rates are better than those of brands with a large market share, since they need to regain their space and prove their reliability to the consumer. The best characteristics are possessed by the rangefinder of the domestic company RGK, however, the range finders of the Bosch company are the most popular in sales. So, brand strength can be much stronger than technical specifications. When buying a rangefinder, a consumer can focus only on reviews and the brand image, and ceteris paribus, the choice will always be in favor of Bosch, as it is associated with greater reliability.

5. Conclusions

The market for household laser rangefinders is undergoing rapid development. The number of firms entering the market in this area is growing, there are domestic range finders listed in the State Register. The potential capacity of the Russian market will be 42 billion rubles year.

Based on the hypothesis of the proportionality of the number of queries on the Internet about laser rangefinders of companies by their market share according to Yandex statistics, a map of competitors was constructed in descending order: Bosch (50.7%), Condtrol (13.2%), ADA (10.5%) and SNDway (9.9%) and leaders in terms of sales growth in descending order: Elitech (92.7), Resanta (85.5), RGK (50.4) and both a separate analysis was conducted on the leading products of the companies, as well as a joint analysis. The rating results for all three aggregated methods coincided with each other and with the taxonomic method.

The data obtained on the products of market leaders correlate with market share; for growth leaders, results also correlate with market share, and not with growth rates. In a joint analysis of market share and growth leaders, it was noticed that leading products have a slightly different index according to method 3 (normalization to variation). At the same time, growth leaders have better overall indicators than market leaders.
If we talk about the possibility of entering the market of household rangefinders for a Russian company, such as, for example, JSC NPK SPP, on the basis of its own production capacities, then this prospect is very doubtful, since production is focused on one-time unique products, and not on serial, conveyor manufacturing. The development of our own rangefinder and the order of its manufacture on the side, for example, in China, or the redemption of one of the companies with subsequent rebranding, looks more promising. By releasing a trial batch, it would be possible to test it as souvenir products for partners and samples for exhibitions. Based on the results of interest in these products, it would be possible to develop a marketing strategy under the motto “Space Accuracy” and use the existing unique systems as the basis for promoting their products. Given the great prospects of the market of household rangefinders and its continuous growth, the company could well have won its niche, which would have allowed it to stay afloat even taking into account the declining government demand.

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