

UDC 658.8

JEL Classification: L53

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## METHODICAL APPROACH TO ACCOUNTING INTANGIBLE ASSETS AND BRAND VALUES IN MARKETING PRICING POLICY

*The article presents a methodological approach to the valuation of intangible assets and brand value in marketing pricing policy. This approach takes into account the specifics of the formation of intangible assets and sources of brand value in the B2B markets. It was proposed a modified ROI (Return on Investment) to assess the effectiveness of the brand promotion system as an intangible asset. It was proved the interrelation of an estimation of efficiency of marketing activity with pricing on the basis of the complex account of quantitative and qualitative characteristics of the goods. With the help of the BEST-marketing program, the most important quality characteristics of engineering products in the B2B market have been identified.*

Keywords: marketing pricing, brand valuation, intangible assets, B2B market, machine-building industry.

DOI: 10.15276/mdt.4.3.2020.7

**Statement of the problem in general form and it's connection with important scientific or practical tasks.** In the conditions of aggravation of competition, monopolization of the market and dominance of transformation of the economic basis, it becomes relevant to determine the effectiveness of marketing activities of the enterprise. Over the last decade, a significant development in the use of new marketing tools has taken place in the scientific-theoretical basis and practical approaches to marketing activities. This process has been greatly facilitated by the development of information technologies, the expansion of ways of forming intangible assets and their growing role in the assets of industrial enterprises in the world market and the development of digital technologies. All these trends have led to the use of the latest marketing tools in promoting industrial products in the B2B markets. Thus, along with the use of the concept of traditional marketing, industrial enterprises are beginning to shape the promotion system in the digital economy. These trends are widespread in the global world and are primarily used by multinational corporations. The above trends contributed to the actualization of the issue of valuation of brands in the B2B markets. This issue is of particular importance in the context of the diffusion of innovative technologies of Industry 4.0, as it raises the issue of valuation of intangible assets generated by the brand.

**Analysis of the latest research and publications, which initiated the solution of this problem and on which the author relies.** The problems of methodology of creating and evaluating brand creation and management of brand value deals with several of foreign and

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Ukrainians' scientists, including: Aaker D. [1], Keller K.L. [2], Lepley F. [3], Joseph D. [3], Oklander M.A., [4,5,6], Oklander T.O. [6], Chukurna O.P. [4,8], Studynska G.Ya. [7], Yashkina O. [5,10], Walsh K. [9] and other authors. However, the issue of creating a scientific approach to the inclusion of intangible assets in the price of machine-building enterprises is not sufficiently justified.

**Highlighting the previously unresolved parts of the general problem to which the article is devoted.** Although there are many approaches to brand evaluation, which are covered in many scientific papers, most of them are devoted to the problems of brand evaluation in consumer markets, B2C markets. Today, there is no single approach to the methodology for assessing brands in B2B markets. This aspect is exacerbated by differences in the sources of intangible assets in Ukrainian and European business practices and strategies. It should be noted that foreign companies in the financial reporting system take into account the value of intangible assets and the brand. It should be noted that there are difficulties in determining the valuation of brands of Ukrainian enterprises in the B2B market. Their value is based on internal company estimates and is determined when the business is sold or resold. This complicates the calculation of indicators of marketing efficiency, due to the uncertainty of the sources of intangible assets.

**Formulation of the purpose of the article (statement of the problem).** The purpose of the article is to form a methodical approach to the consideration of intangible assets and brand value in the marketing pricing policy of the enterprise in the B2B markets.

**Statement of the main material of the research with full justification of the scientific results obtained.** The choice of method for assessing the value of the brand depends on whose interests the assessment is made, this value is added to the balance sheet of the enterprise and whether the value of the brand is a factor influencing strategic decisions. Given these features, in practice use many different techniques and individual methods to calculate the value of brands, the choice of which is due to the specifics of the company and the development of its portfolio of brands. In this regard, there is a need to develop and form a methodology for assessing the effectiveness of marketing activities of the enterprise in its individual areas, channels of brand promotion, taking into account the specifics of the market. In addition, approaches to assess the effectiveness of marketing activities of the enterprise should be carried out on a regular basis in order to monitor the dynamics of its changes. Moreover, machine-building enterprises are oriented to the B2B market, so the tools for assessing the effectiveness of marketing for them should be practically justified for use in these markets.

However, according to the results of the analysis, marketers do not have a single approach to the interpretation of this issue. A generally accepted approach is to assess the effectiveness of marketing policy of enterprises in the following main areas, such as: optimal use of market potential, including for a new product; increasing the reliability of forecast estimates; finding the market segment of the product; improving the accuracy of market balance analysis, etc. This approach to assessing the effectiveness of marketing activities is mainly aimed at calculating and analyzing indicators that are taken into account when introducing and promoting a new product. However, evaluating the effectiveness of existing marketing promotion channels under this approach is a challenge. In addition, due to the actualization of the valuation of brands and methods of valuing the income they generate as intangible assets, there is a need to introduce an indicator to assess their effectiveness. In connection with the emergence and spread of new information channels for the promotion of goods and services within the concept of digital marketing and relationship marketing, there is a need for economic evaluation of the effectiveness of marketing activities, which should be carried out for each channel to promote a brand. Branding technology was introduced to identify the most promising and least expensive channels.

There are a lot of scientists consider approaches to assessing the effectiveness of marketing activities based on an integrated calculation of the competitiveness indicator, which includes qualitative and quantitative evaluation criteria. Indeed, when evaluating the effectiveness of marketing, it is not always possible to express any result only by a quantitative indicator. In our opinion, the economic efficiency of marketing activities of the enterprise should be defined as a certain effect obtained from marketing activities, relative to the total cost of carrying out these activities. Within this approach, in order to ensure the effectiveness of each marketing activity, the economic effect should be calculated separately for each area of marketing activities. It is proposed to consider marketing costs for brand promotion, including as an investment in the promotion system, ie to equate them with investment costs in marketing assets of the enterprise, it is reasonable to use a modified ROI (Return On Investment) to assess the effectiveness of marketing activities.

Under investment costs on assets marketing refers to all expenses of the enterprise, which are aimed at the marketing and promotion of its products and services on the market. Under marketing assets we will understand a set of additional values that are created through the use of marketing tools to promote goods, services and ideas on the market. Marketing assets primarily include intangible assets that are derived from the added value that creates a brand. The relationship between marketing investments, marketing assets and pricing is presented in Figure 1.

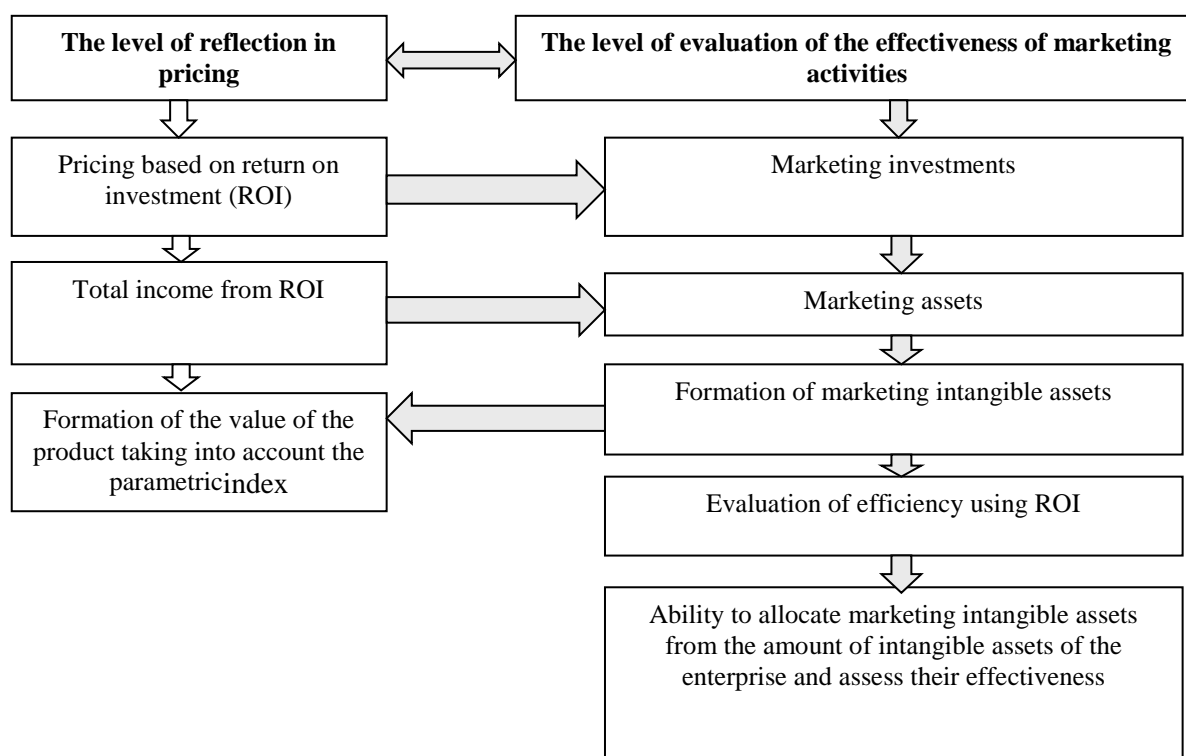


Figure 1 – The relationship between the evaluation of the effectiveness of marketing activities with pricing on the basis of comprehensive consideration of quantitative and qualitative characteristics of the product (source: own development)

In the context of globalization and the development of information and digital channels of promotion, the principles of branding in the B2B markets should differ significantly from the approaches to branding in the B2C markets. It is in the system of principles and approaches

to the formation of branding hidden sources of marketing assets. In this context, it should be noted that foreign companies in the financial reporting system take into account the value of intangible assets and separate the costs of research and development, which can be conditionally attributed to the cost of marketing investments.

The ROI can be used to assess the effectiveness of each individual type of marketing activity. Each marketing promotion channel requires constant monitoring of the return on investment in marketing activities. This is necessary to improve efficiency and the proper allocation of budgets.

ROI is the rate of return on investment or return on investment. It shows in percentage terms the profitability (if the value is more than 100%) or the loss (if the value is less than 100%) of a specific amount of investment in a particular project. There are several formulas for estimating the ROI. The simplest is the following:

$$I_{ROI} = \left| \frac{D - S}{\sum I} \times 100\% \right|, \quad (1)$$

where:  $I_{ROI}$  – return on investment index;  $D$  – sales revenue, грн.;  $\sum I$  – amount of investment, UAH;  $S$  – cost, UAH.

Subtracting the cost from the profit, we get the final profit, ie real profit. The ratio of final profit to the amount of investment shows how many times it is greater than the amount of investment. If the number obtained is less than 100, the investment does not pay off. If you add a period to the previous calculation, you will get another calculation formula used by financiers:

$$I_{ROI} g = \frac{(I_i + D_i) - \sum I_r}{\sum I_r}, \quad (2)$$

where:  $I_{ROI} g$  – return on investment index for the period;  $I_i$  – the amount of investment until the end of the period;  $D_i$  – income for the selected period;  $\sum I_r$  – the amount of real investment.

This formula calculates the return for the period of ownership of the asset. Applying the calculations in practice, you can find out how much the deposit has grown by the end of the period under analysis.

The above formulas have sufficient flexibility, so the calculations can and should be detailed. In other words, ROI can be calculated: for a separate advertising channel; for a set of promotion channels; for a single product; for a separate category of goods. To assess the effectiveness of marketing activities in the areas of marketing activities, we offer a modified formula for calculating ROI:

$$I_{ROI} m = \left| \frac{D_m - V_m^\sigma}{V_m^\sigma} \times 100\% \right|, \quad (3)$$

where:  $I_{ROI} m$  – index of return on investment from marketing costs for brand promotion;  $D_m$  – income from marketing activities, UAH.;  $V_m^\sigma$  – the amount of investment to promote the brand, UAH.

This figure was calculated as a percentage for the group of machine-building enterprises. In order to assess and analyze the effectiveness of marketing activities, 4 Ukrainian car-building enterprises, 1 Ukrainian machine-building enterprise of agricultural machinery, 2 Russian machine-building enterprises of diversified profile were selected, including car-building and 2 German multinational corporations, which also operate car-building. The assessment was performed according to the financial statements of enterprises (Table 1).

Table 1 – Estimation of the impact of marketing costs using the ROI  
(source: own development)

Year	PJSC "Azovzagalmash" (Ukraine)		PJSC "Dnirovagonmash" (Ukraine)		PJSC "Kryukiv Carriage Building Plant" (Ukraine)		Transmashholding Group of Companies (Eurasian Economic Union, BRICS)	
	ROI,%	% of marketing costs in income	ROI,%	% of marketing costs in income	ROI,%	% of marketing costs in income	ROI,%	% of marketing costs in income
1	2	3	4	5	6	7	10	11
2005	4617	2,1	4615	2,1	7548,3	1,3	–	–
2006	6642	1,48	6264	1,5	5568,2	1,7	–	–
2007	5408	1,81	3681	2,6	9927,1	0,99	–	–
2008	5818	1,68	5674	1,7	15268,3	0,65	9976,1	0,99
2009	5064	1,93	2457	3,9	3435,4	2,8	35878,	0,27
2010	2127	4,48	7215	1,3	7104,7	1,38	–	–
2011	2665	3,61	7309	1,3	6852,8	1,4	11146,4	0,88
2012	1897	5	7567	1,3	7669,4	1,3	9259,8	1,06
2013	748,22	0,13	6523	1,5	4653,4	2,1	11819,9	0,83
2014	1054,	8,65	1594	5,9	266,8	27,3	11479,0	0,86
2015	635,0	13,6	784,4	11,3	3385,5	2,8	20695,5	0,48
2016	509,9	16,39	5536	1,7	8201,8	1,2	14451,6	0,68
2017	1172	7,86	252,3	28,4	6599,2	1,5	–	–
1	12	13	14	15	16	17		
	Alstom Corporation (Germany, EU)		Siemens Corporation (Germany, EU)		PJSC "Umanfermmash" (Ukraine)			
	ROI,%	% of marketing costs in income	ROI,%	% of marketing costs in income	ROI,%		% of marketing costs in income	
1	12	13	14	15	18		19	
2005	–	–	–	–	3335,4		2,9	
2006	–	–	–	–	2618,07		3,6	
2007	–	–	498,5	16,7	1708,1		5,5	
2008	–	–	469,1	17,5	2452,2		3,9	
2009	–	–	603,5	14,2	2748,7		3,5	
2010	2219	4,3	582,6	14,6	3393,7		2,8	
2011	2114	4,5	613,9	14	4656,1		2,1	
2012	2029	4,7	601,4	14,2	3800,1		2,5	

2013	1998	4,7	545,7	15,5	37,5	72,6
2014	2996	3,2	970,0	9,3	191,6	34,2
2015	3502	2,8	562,9	15,1	3526,8	2,7
2016	3806	2,5	582,5	14,6	3193,1	3,06
2017	–	–	–	–	3143,4	3,08

According to the calculations, Ukrainian car companies have a low percentage of sales costs in the amount of gross income. Accordingly, the value of ROI in them is much higher. For Russian machine-building companies is characterized by the fact that the costs of marketing activities belong to the group of commercial costs, the relative share of which in the company's income is also insignificant at high values of ROI. This trend is fully correlated with Ukrainian car building. For all companies that have a high level of ROI is characterized by the fact that they have a high level of sales revenue compared to the cost of sales and promotion. Based on the calculations, it can be stated that in the machine-building enterprise markets the costs of product promotion are relatively low compared to the income received by enterprises from marketing activities. This indicates that companies receive a high level of income, which does not always depend on marketing activities. Accordingly, it should be assumed that in the engineering markets, the growth of sales depends on other factors, independent of marketing. This is clearly shown in Fig. 2.

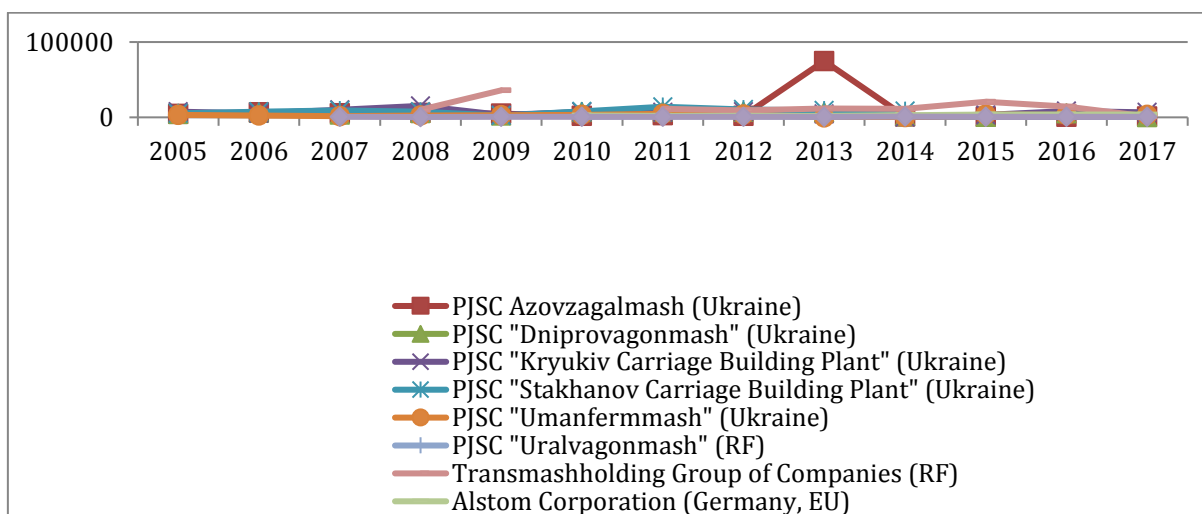


Figure 2 – Dynamics of ROI for machine-building enterprise that were studied (source: own development)

As can be seen from the calculations presented in Table 1 and Figure 2 almost all machine-building enterprises have a high ROI, which indicates a high level of income relative to marketing efforts. However, the highest level of costs for sales and promotion of all enterprises is observed in 2013-2015. The calculations show that the highest level of costs for sales and promotion of Ukrainian engineering products in the industry is observed in PJSC "Kryukov Wagon Plant" and PJSC "Azovzagalmash". Accordingly, these companies have the lowest level of return on marketing costs, which was estimated using ROI. The general trend for all calculations is the dependence of the increase in ROI while reducing the cost of sales and promotion.

As for the European machine-building enterprises represented by the two multinational corporations Alstom (Germany, EU) and Siemens (Germany, EU), the level of commercial

costs of these enterprises is much higher, but the ROI is lower than that of other enterprises. However, according to the financial statements of these enterprises, they do not separate commercial costs from administrative costs and in both of these types of costs are hidden costs for marketing promotion activities. In addition, international companies have in their financial statements a separate group of costs – for research and development, which also take into account the cost of marketing research, but in our calculation, they did not participate. The purpose of this analysis was to compare the level of commercial costs of enterprises in one industry in different countries, which are members of different integration unions. At the same time, in the context of globalization, it is not always possible to separate enterprises and consider their activities within a single integration association, as transnational corporations may be present in countries that are members of different integration unions. For example, Alstom (Germany, EU) is the world's largest producer of the strongest trains in the world and has a frequent stake in the Transmashholding group of companies (Russia, Eurasian Economic Union, BRICS).

In addition, research has shown that foreign engineering companies have significant intangible assets that are formed through goodwill and deductions made by the brand. An analysis of the financial statements of Russian engineering companies showed that they also take into account the costs of the brand and the revenues it accumulates. In turn, corporations such as Alstom (Germany, EU) and Siemens (Germany, EU) have significant intangible assets due to goodwill with significant contributions to research and development (Table 2).

Table 2 – Intangible assets in the form of goodwill of foreign machine-building enterprises (source: own development)

Year	PJSC "Uralvagonmash" (Eurasian Economic Union, BRICS) Intangible assets (million rubles)	Transmashholding Group of Companies (Eurasian Economic Union, BRICS) Intangible assets (million rubles)	Alstom Corporation (Germany, EU) Intangible assets (Goodwill) (million euros)	Siemens Corporation (Germany, EU) Intangible assets (Goodwill) (million euros)
1	2	3	4	5
2010	2450	1118410	5396	15763
2011	1970	1447903	5483	15706
2012	2636	2130662	5536	17069
2013	2932	4029173	5281	17883
2014	3294	4868090	4690	1248
2015	5337	22	1366	23166
2016	5335	4	1513	24159
2017	5345	21	1515	24560

Ukrainian machine-building enterprises do not have any sources of intangible assets in the form of goodwill and their amount is not reflected in the financial statements of enterprises. Intangible assets of Ukrainian machine-building enterprises are represented mainly by depreciation deductions. Thus, for the formation of intangible assets, machine-building enterprises must create marketing assets through marketing investments. The formation of marketing assets can be carried out through marketing investments in the creation of brands of machine-building enterprises by determining the strategy of positioning brands in B2B markets. The capitalization of the brand and the company's profit depend on a successful positioning

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strategy. Brand positioning strategies are usually associated with the perception of the level of brand quality by consumers, which forms consumer loyalty to the brand. In turn, the capital of the brand is formed not only depending on consumer perception of the level of product quality, but also other components, which include: the system of brand loyalty, brand associations, brand awareness and others. Thus, the capitalization of a brand depends on its competitiveness in the market. Moreover, the key role in this process belongs to the signs of perception of brand quality. Of considerable scientific interest are differences in brand positioning strategies in industrial B2B markets and consumer B2C markets.

In the context of globalization, the role of international competition has increased, primarily between large companies, which has influenced the strengthening of such a factor of competitiveness as the perception of product quality. This factor is especially inherent in branded goods. Quality perception becomes the basis of the strategy of many companies in international markets.

The question arises as to whether these factors are valid in a B2B market. In the markets of machine-building products, where the payback period is much longer than in the consumer markets, the capitalization of brands will be slower. In addition, industrial markets are characterized by a high degree of innovation, which aims to improve product quality. Constant work on quality is a factor of competitiveness in the market of industrial products. Industrial brands are those brands that have significant competitive advantages in quality and this fact confirms the development of global brands in the B2B market, such as: «Thyssen-Henschel» (Thyssen-Henschel), «Siemens» (Siemens), «Krauss-Maffey» (Krauss-Maffei), «AEG» (AEG), «Krupp». It is the perceived quality that becomes the strategy of positioning brands in industrial markets. Moreover, the industrial markets use mainly corporate (umbrella) brand, which covers the entire product line of the company. This approach ensures instant awareness and creates strong associations with the level of quality. In addition, it is easy to promote innovative products on the market under an existing brand.

The comparative analysis of brand factors in the B2C and B2B markets revealed that the coincidence of the results of the influence of these factors exists only on two grounds: the company's desire to change branding strategy and the desire to obtain short-term results. The opposite effect was observed for other signs of the influence of factors.

Based on the comparison of brand creation factors in the B2B and B2C markets, we can conclude that the main principle of creating a successful brand is the development of its identity. For B2B markets, in contrast to B2C markets, the perception of product quality is a more important characteristic of a brand than its price advantages. In industrial markets, it is quality and functional benefits that create brand value. Thus, the absolute difference in creating brand value in the B2C markets is the price advantages, and in the B2B markets - the qualitative advantages of the product.

In this context, it is interesting to have a similar dependence on the Ukrainian engineering markets (B2B). The first task is to identify qualitative indicators that affect the value of the brand, the second task - to establish the dependence of the impact of quality indicators of machine-building products of Ukraine on marketing assets. However, since Ukrainian companies do not keep records of intangible assets and do not separate the costs of research and development, we will compare the results with the financial result.

To solve this problem, in order to justify the impact of quality indicators on the formation of the value of corporate brands in the engineering market, a competitive analysis of the market was carried out using the program BEST-Marketing. The program provides an opportunity to analyze the qualitative characteristics of the product and identify its benefits, on the basis of which it is possible to position them. The following characteristics of machine-building products were selected for competitive market analysis: product name, reliability,



strength, durability, maintainability, safety, environmental friendliness, uniqueness, energy consumption, compliance with norms and standards, warranty period, service, supply of spare parts. Ranking of qualitative indicators on a scale is presented in Fig. 3.

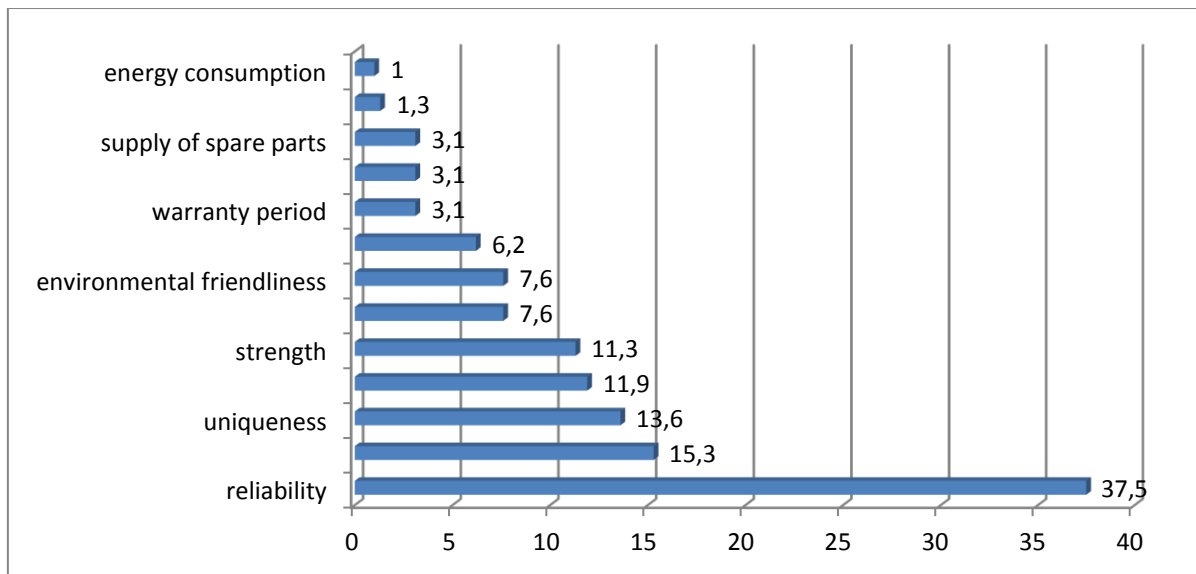


Figure 3 – Ranking of quality indicators of mechanical engineering products (source: own development)

Ranking the quality characteristics of engineering products using the BEST-Marketing program revealed that reliability, durability, uniqueness, safety and durability - these are the five most important quality indicators that are recommended to be included in the strategy of positioning in the engineering markets.

**Conclusions from this research and prospects for further developments in this area.** It was proposed to consider the marketing costs of brand promotion, including as an investment in the promotion system, ie to equate them with the investment costs in the marketing assets of the enterprise. This made it possible to offer to modified ROI (Return On Investment) to assess the effectiveness of marketing activities of the company in the areas of intangible assets, including the brand. It was calculated the modified ROI indicator on the example of European multinational corporations and Ukrainian machine-building enterprises. ROI calculations and competitive analysis of the machine-building industry using the BEST-marketing program confirm that the value of the brand in the B2B market depends on the quality and value of the product, rather than on marketing efforts to promote machine-building products to industrial markets.

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**Методичний підхід щодо обліку нематеріальних активів та вартості бренду в маркетинговій ціновій політиці.**

В статті представлено методологічний підхід до оцінки нематеріальних активів та вартості бренду в маркетинговій ціновій політиці. Цей підхід враховує специфіку формування нематеріальних активів та джерел вартості бренду на ринках B2B. Для оцінки ефективності системи просування бренду як нематеріального активу було запропоновано методику оцінки модифікованого коефіцієнту рентабельність інвестицій (рентабельність інвестицій). Доведено взаємозв'язок оцінки ефективності маркетингової діяльності з ціноутворенням на основі комплексного обліку кількісних та якісних характеристик товару. Виявлені найважливіші якісні характеристики машинобудівних товарів на ринку B2B за допомогою програми BEST-Маркетинг. Доведено, що на ринку B2B визначальними є якісні показники й формування цінності бренду здійснюється, в першу чергу, під їх впливом.

Ключові слова: маркетингове ціноутворення, оцінка бренду, нематеріальні активи, ринок B2B, машинобудування.

*Received to the editor* June 9, 202