

STRATEGY FOR ENSURING THE COMPETITIVENESS OF HIGH-TECH INDUSTRIAL ENTERPRISES

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Abstract. *The stable and efficient functioning of the Russian economy in the face of increasing contradictions, the struggle for resources, markets and technological leadership requires the building of the development potential of the high-tech sector. This requires a "smart" economy that produces unique knowledge, new things, and technologies that are useful to people. There are opinions that industrial enterprises currently do not have sources of competitive advantages that ensure the company's competitiveness for a long time. Other experts believe that such sources are available. They include qualified personnel, working as a cohesive team, innovation, patents and much more. The independent competitive advantage of the company is the stability of the competitive positions of the companies. In modern conditions, a particular importance is acquired by such a chain of concepts as sustainability - competitiveness - management of the enterprise's competitiveness. The level of competitiveness of industrial enterprises depends on many factors and acts as a driver of the economic development of the economic system. Low competitiveness entails: The purpose of the work is to determine the directions for increasing the competitiveness of industrial enterprises. Tasks: 1. identify the most significant factors and sources of ensuring the competitiveness of industrial enterprises; 2. to form a system of requirements and conditions necessary to ensure the competitiveness of industrial enterprises; 3. assess the level of competitiveness of high-tech industrial enterprises; 4. Development of a mechanism for managing the competitiveness of industrial enterprises. The empirical base of the research includes the reporting of industrial companies that are publicly available, reports of consulting companies, industry reviews, as well as data obtained during a questionnaire interview. The analysis used indicators such as the level of competitiveness, indicators that characterize the state and dynamics of the development of high-tech industrial enterprises. As a result of the study, the following results were obtained: 1. a combination of sources of increasing the level of competitiveness of high-tech industrial enterprises is revealed, among which key ones are: operational efficiency and strategic positioning; 2. a methodology for assessing competitiveness has been proposed and its approbation has been carried out; 3. The model of management of competitiveness of industrial enterprises is developed, on the basis of which recommendations are offered on increasing the degree of their competitiveness.*

Keywords: *industrial enterprise; competitiveness; competitive advantages; stability.*

Introduction

The development of the world economy is predetermined by various prerequisites, including the interests of states. "... China is focused on stimulating the domestic market, Germany is looking for an opportunity to protect itself from the economic decisions of its neighbors, Russia is developing import substitution programs, and the US is channeling efforts to strengthen the financial system" (Leonard, 2015). But with all the diversity considered, the key driver of promising economic development is manufacturing enterprises in the technological boundaries of the 4th industrial revolution and with a marketing focus on the domestic market. The manufacturing sector at present is "... the heart of the economic development process" (Amsden, 2003), the source of technological power of the state (Kondratyev, 2013), he "... is and will remain an important component ... of the economy" (Grunke, 2015). The reduction of this segment is a clear "sign of the economic decline of the country"(Kondratyev, 2013).

Thus, the development of manufacturing enterprises is a strategic task. Achieving such strategic objectives and in the long run, is seen through the creation of special mechanisms for the synergistic interaction of all elements existing potential. Such an important mechanism can, in our opinion, mechanism competitiveness of the organization's stability, focused on creating such intra-production conditions that will ensure the formation of sustainable competitive advantages in the long term.

The aim of the research is to find ways to increase the competitiveness of high-tech industrial enterprises.

Research methods

The study was carried out in three stages:

1. identify the most significant factors and sources of ensuring the competitiveness of industrial enterprises;
2. to assess the level of competitiveness of industrial enterprises;
3. development of competitiveness management requirements industrial enterprises.

The empirical base of the study includes the reporting of Russian industrial companies, which is in open access in the system of information disclosure by Interfax, reports of consulting companies, industry reviews, as well as data received during a questionnaire interview. In the course of the analysis, indicators such as the level of competitiveness, indicators characterizing the state and development dynamics of industrial enterprises were used. The observation period is 8 years and covers 2008-2015.

Just as the source of significant factors and conditions ensuring x competitiveness industrial enterprises involved materials of scientific and practical and analytical publications, scientific reports.

Results of the study

It makes sense to investigate the problem of the competitiveness of manufacturing enterprises only if they are in a state of competitiveness or if there are all opportunities to achieve this state in the near future. This happens as long as the characteristics of production, economic and financial activities of enterprises and the market remain unchanged in the established target standards. The problem of competitiveness was

raised in their studies by Post, Preston and Sachs (2002), Rumelt (1997), Hotelling (1990), Krivorotov (2014), Arrow, Block and Hurwicz (1959), Kozhevina (2012).

Competitiveness implies the dynamic stability of the basic economic characteristics of the enterprise and can be reflected by the formulation of certain targets, which are expressed by the ordering of some indicators of its economic condition. At the same time, we should not forget that sustainability is a property of enterprises that retains certain (specified, necessary) qualities during the observed period, allows resisting external influences. Based on this, it can be assumed that the planning of the conditions under which industrial enterprises do not move from one state to another (worse) can be controlled.

Within the framework of this study, the competitiveness of industrial enterprises is understood as the stability of maintaining competitiveness (achievement of strategic competitiveness) with a minimum of fluctuations in this criterion with respect to the trend. Strategic (Baloch & Inam, 2013) refers to the ability to maintain leadership in the long-term (10-25 years) perspective, based on the active development of innovative and investment factors in the context of objectively understood institutional transformations of the industry and the economy as a whole. The competitiveness of the organization has a number of properties:

- sufficiency for ensuring competitiveness and strategic development;
- adaptability to environmental changes and scientific and technical development;
- stability, determined by the technical cycle and the specified period of time;
- self-regulation and self-development in accordance with the dynamics of the internal environment;
- flexibility to ensure the competitiveness and development of the enterprise.

At the most abstract level, the competitiveness of industrial enterprises can be defined as a set of advantages, the use of which gives enterprises the opportunity to take a profitable position among competitors. Then the category of "competitiveness of the enterprise" and the category of "competitive advantages" - there are subordinate concepts, that is, "competitiveness" of the industrial enterprise is the result of the presence and use of competitive advantages. Therefore, competitive advantages - a system that has any exclusive value, giving superiority over competitors in the economic, technical and organizational spheres of activity (Mazilkina, 2007).

There are two types of advantages: comparative and competitive advantages. Comparative advantages ensure the competitiveness of an industrial enterprise through sources such as labor, natural resources (land) and capital. In modern conditions, only the availability of labor, capital, and raw materials do not ensure the competitive advantage of the enterprise, and precisely because they have become widely available, and thus the opportunity to gain advantages due to these differences is excluded. Proof of this is the acute awareness of the world's limited factors of production, in their classical sense, compared with the current and increasing level of needs. Therefore, due to the given objective circumstances, the task is to achieve the greatest satisfaction of needs with the least and rational use of resources and rational behavior of the economic entity. In an economy where all sectors can use advanced technology and highly skilled personnel to achieve a high level of development, the gap between production and service disappears.

However, where there is equality of conditions of functioning, the differences are leveled out. There is only one way out for producers – to create advantages (differences) themselves. Artificially created by the enterprise advantages in competition and should be attributed to competitive advantages.

Thus, competitive advantages are the determinants that determine and shape the competitiveness of an industrial enterprise, but at the same time, we can talk about the causal difference between these concepts. Competitiveness is the result of fixing the presence of competitive advantages. However, the presence of certain competitive advantages does not mean automatic preference, only in the complex they can have a decisive influence in choosing the best.

There is a certain hierarchy of concepts (table 1), which fits into the existing traditions of theoretical analysis and corresponds to the theoretical ascent from the abstract to the concrete: from the essential comparative advantages – through certain competitive advantages – to the criteria of competitiveness.

It should be borne in mind that the competitiveness of the enterprise and its competitive advantages are formed as a response to the factors of the external environment, including the characteristics of the market, industry, type of competition and its intensity, strategic opportunities and behavior of competitors, goals, and interests of customers, etc. So, the factors of the market environment that have an impact on the level of comparative competitive advantages, include market capacity, corporate structure, market conditions, segmentation, types of barriers to entry, etc. That is, the competitive position of the firm is a function of the state of the market environment, competition and competitors, industry factors that make up the macroeconomic, institutional and legislative, technological environment (Ogoleva & Radikov, 2003).

Table 1. The correlation between the concepts of "comparative advantages", "competitive advantages"

Comparative advantages	Competitive advantages	Competitiveness
An abstract category is used to characterize the preferential position of one market entity in comparison with another, which gives it the opportunity to win in a competitive struggle.	The result of the existence of comparative advantages, the concept corresponding to real market practice, related to real market opportunities (relative to costs or differentiation), and therefore, assuming a concrete practical form	The form of realization of competitive advantages, results of search and use by the market subject of new opportunities
The essential concept	It is a real representation of the essence, characterizes the conditions of market behavior	Expresses the result of market behavior
To identify comparative advantages, comparative characteristics of the effectiveness of the use of factors of production	It is expressed in specific indicators that can be accounted for and quantified (availability of a cheaper resource, economies of scale, availability of a special quality product), which indicates a certain source of leading position.	Empirical category, which has certain quantitative indicators. Competitiveness indicators quantify and qualitatively express competitive advantages.

In a simplified form, the definition of competitive advantage can be formulated as follows: manufacturers who sell their goods or services profitably have superiority over their rivals if customers prefer their products. However, some benefits are more valuable than others. In particular, in order to have competitive advantage has become strategically important, it is necessary to fulfill three conditions (Kevin, 2000).

1. Customers awareness of significant differences between goods or services offered by a particular company and those of its competitors. They must be unique in one or more key criteria for the evaluation of goods or services, according to which the real consumer choice is made and the decision to purchase is made.

2. This differentiation of products should be based on a sufficiently significant difference in the potential of producers, that is, the gap between the greater capabilities of a particular high-tech industrial enterprise and the less significant capabilities of its competitors. However, not every differentiation leads to the formation of a competitive advantage.

Differentiation should be based on key criteria of consumer choice. The set of such criteria practically does not include the "internal characteristics" of the manufacturer (for example, its location or the type of raw materials used). The only exceptions are those cases when these features cause the appearance of differences in the end product in terms of its delivery, influencing consumer decisions. In each specific market segment, the number of key criteria is limited, so effective differentiation of goods should be aimed at least one of the criteria included in this narrow circle.

The main criteria for the purchase are the price of the goods, the degree of its availability and such features as, for example, the quality of the goods, its appearance, functionality, availability of after-sales service, etc. in any case, the main properties of the offered products are taken into account, and very rarely - its additional features or functions. The cost of a product or service is not always a key criterion for the customer's choice of high-tech enterprise products. There are many examples of low prices that have not only not increased demand, but rather provoked a decline in demand or had no impact on consumer choice. An example is the experience of Texas Instruments. At the prices, the resources of competitiveness of industrial enterprises are almost exhausted. They are already comparable to the level of Western manufacturers and especially for high-tech equipment-processing centers, robotics. On the one hand, expensive components, on the other - constantly growing rates. And today's loans to domestic industrial enterprises are practically unavailable."

The gaps between the capabilities of competing companies can usually be classified into one of the following four categories (Kevin, 2002):

- a) Differences in corporate business systems due to the ability of a firm to perform individual functions more effectively than its competitors.
- b) Positional gaps arising from earlier decisions, as well as previous actions and circumstances. It takes into account the corporate reputation, consumer confidence, accumulated order book, irreversible investment decisions (for example, more profitable than competitors, the location of the enterprise).
- c) Differences caused by certain actions of the state in the field of legislation and economic regulation. This may be the obtaining of any patents and import quotas or the emergence of consumer safety laws.

d) Gaps caused by internal features of the organizational structure or the quality of management decisions. In turn, they are a consequence of whether the firm is able to innovate and adapt to market changes faster and more effectively than competitors.

3. Differences in the purchasing characteristics of products and in the potential of companies should exist for a long time. Thus, the competitiveness of industrial enterprises is the unity of intra-competitive advantages created by the business environment, but assimilated, integrated data by a competing enterprise. The external factors of competitive business environment mastered by industrial enterprises become their internal competitive advantages. Thus, from the point of view of creating competitive advantages, the production apparatus, all subsystems of a single production system should operate in the mode of optimizing the factors and parameters of the external and internal environment based on the unity of the elements of the integral system. Linking the scientific, technological, organizational level of production with the requirements of customers creates opportunities for the utmost use of the factors of production.

However, while industrial enterprises rely only on the policy of "importing" competitive advantages with a focus on "best practices" typical for efficient, competitive domestic and, mainly, foreign production companies, in practice, such enterprises often face serious problems of survival of these advantages. The fact that an imperfect internal environment, distortions in the management of often extinguish possible pulses of transformations that involve "imported" competitive advantage. Therefore, we cannot agree with the view that it is more effective not borrowing policy and the policy of growing competitive advantages – with the gradual introduction and integration into the existing system. These built-in competitive advantages provide the enterprise with competitive strength. Then competitive advantages are factors of competitiveness.

Competitive advantages have different forms of manifestation, which can be classified. The most complete division into groups is presented in Table 2.

Naturally, it is not possible to envisage all possible variants of the division. However, it can be stated that the classification is much easier if we take into account the extent to which the properties and characteristics of the competitive advantage allowing us to achieve the goal set by the industrial enterprise.

Therefore, in the study of competitive advantages, a systematic approach is important to ensure the identification and consideration of the most important factors affecting the evaluated (compared) objects. From the point of view of the system approach, it is important to create (modeling) sources of sustainable competitive advantage that provide the enterprise with the opportunity to achieve strategic competitiveness, the basis of which is the ability of the enterprise to implement a knowledge management system or training of the organization. Nile Fligstein in his work emphasizes the relevance of this area of ensuring competitiveness: "to withstand the onslaught of next-generation technologies, it is necessary to constantly improve the product, and the only way to do it is to train the organization" (Fligstein, 2004). Moreover, the ability to learn faster than its competitors is already considered as one of the few reliable sources of superiority over them. Goods that realize the simulated advantages that determine the requirements of consumers have "absolute" competitive advantages, that is, they have: first, a unique use value, and secondly, they necessarily overcome the framework of

competition for a certain time and occupy a monopoly position in the market, fully supported by the state and fixed by patenting fundamentally new characteristics of the goods.

Table 2. Classification of competitive advantages of an enterprise producing high technology products

Classification feature	Classification groups of competitive advantages	Classification feature	Classification groups of competitive advantages
Sphere of manifestation	In R&D in production in the implementation in product maintenance	Types of manifestation	Technical, economic, managerial
Level of manifestation	Forming the competitiveness of products, forming the competitiveness of the enterprise, forming the competitiveness of the region, forming the competitiveness of the country.	Benefit type	Material (based on material resources); Intangible (based on intangible resources): a) on intangible assets; b) on intellectual resources; c) on the relationship; d) on organizational resources.
Readiness for implementation	Real, potential	Source of occurrence	External, internal
Nature of the source	Based on economic factors, based on regulatory legal acts, structural nature, caused by administrative measures, determined by the level of development of the market infrastructure, technical and technological, based on awareness, based on geographic factors, based on demographic factors, of a non-legal nature	By the degree of measurability	Not measurable, these advantages are divided into simulated (formalizable, described with the help of models) and non-simulated (non-formalizable, have only a qualitative description). Measurable by expert means. Measurable by direct account.
By completeness	Accounted for New opportunities	On the way to achieve competitive advantages	Advantages of low order advantages of a high order
Whenever possible, use	Available inaccessible	The ability to simulate	Unique simulated
The degree of stability of the	Sustainable unsustainable	By constancy of impact	Permanent Periodic

Classification feature	Classification groups of competitive advantages	Classification feature	Classification groups of competitive advantages
manifestation of benefits.			Non-periodical Sporadic
If possible, create	Unreleased (basic) Created (developed)	Nature	Intense Extensive
By the degree of influence on competitiveness	The advantages of weak influence. The advantages of a strong influence. Multiplicative advantages	Market Coverage	On a separate market segment, on several market segments, in the market as a whole

Sustainable competitive advantage has several properties (characteristics): unique, difficult to copy, stable, applicable to different situations, better than competitors. For example, a resource that can provide the company with a sustainable advantage is the good reputation of the company, which is created over the years thanks to the constant exceptional quality of products and excellent service. A good reputation gives the company an advantage over its competitors. Excellent reputation in its specific expression is largely unique and, as a rule, there are only a few companies in the industry, that is, there is rarely and inextricably linked with the company that won it (a specific resource of the enterprise). A good reputation cannot be imitated by competitors, because the creation of something comparable requires a lot of years. In addition, accurate imitation is not possible, since the reputation of the enterprise can be formed based on a certain set of sources, such as product quality, innovative technology, excellent service, competent and professional staff, etc. the contribution of each source to the reputation cannot be accurately determined due to the ambiguity of cause-effect relations, objective difficulties of simulation, etc. If the company effectively and efficiently plan, maintain and use your online "reputation" within the framework of targeted management (management of resources), here are all the conditions to gain a sustainable resource of competitive advantage (Wolfgang, 2004).

In modern conditions, a large number of factors affect the competitiveness resistance industry. In this case, a change in the significance of various factors is observed (Table 3).

Table 3. Change in the importance of selected factors to ensure competitiveness, % (Unternehmerische Innovationspolitik in Deutschland: Ein Situationsbericht. Materials consulting firms «SCI Unternehmensberatung Görlitz», n.d.)

Factors	The 1970s	The 1990s
1.Reduction of production costs	19.7	13.9
2. Expansion of market share	46.9	12.7
3. Creating new products	25.3	57.4

The survey respondents identified the factors influencing the company's sustainability (Figure 1). They prefer factors related to the image of the company and its brand (Berns et al., 2009).

WHAT ARE THE BENEFITS OF ACTION?

Survey respondents cite the impact on a company's image and brand as the paramount benefit of addressing sustainability. But thought leaders differed — emphasizing instead a broad continuum of rewards grounded in value creation.

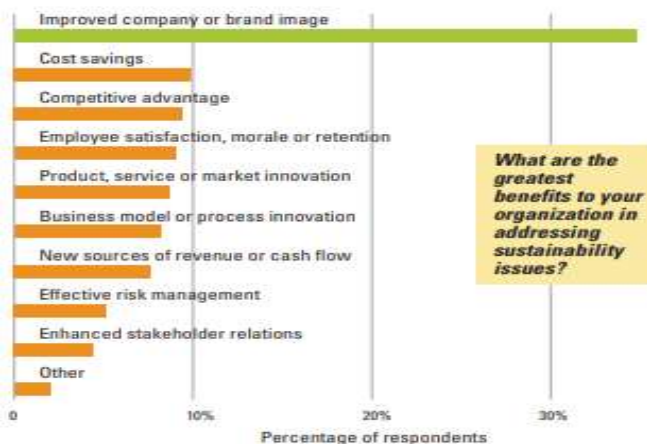


Figure 1. The results of the answers to the question "What are the benefits of action?"» (Berns et al., 2009).

Thus, the presence of such an amount of information it requires systematization. In Table 4 we will result in results of the analysis of the influence of factors on the competitiveness of the industrial enterprises and functional areas of competitiveness of the enterprise.

It should be taken into account that a competitive advantage of any type gives enterprises a higher productivity than competitors.

The art of enterprises in achieving competitiveness consists in their emphasis on a particular competitive advantage or a combination of them. In modern conditions of management, as the practice notes, it is necessary to pay attention to as many factors as possible to ensure the competitiveness of the enterprise, and to find their favorable ratio. Alfred Marshall wrote (Marshall, 1961) that "the trend towards diversity is the main cause of progress". Obviously, the wider the organization's set of factors of competitiveness and the more diverse their configuration, the more favorable prerequisites it has for successful activity in the market.

Management of competitiveness requires the following actions: analysis of competitive advantages and weaknesses of the organization; definition of an integral assessment of competitiveness; development of general and local strategies for the preservation and development of competitiveness.

If the competitiveness is considered as a statistical characteristic of competitiveness indicators, then their fluctuations in the dynamics should be minimal, and correspond to a certain trend of their change.

Table 4. Assessment of the degree of influence of competitive advantage on the competitiveness of an enterprise

Competitive advantage	Innovative activity	Logistics	Internet technologies	Image	Branding technology	Mobile workforce
To competitiveness	+++	++	++	++	++	+
Functional areas of competitiveness	all	Economic, competitiveness of products	Marketing, financial	Marketing product competitiveness	Product Competitiveness	Staffing
Competitive resistance	+++	++	+++	+++	+++	+
Competitive advantage	And integration into foreign markets	Strategic planning	The productivity of fixed assets	Reducing the cost of manufacturing products	Compliance with international standards	Intellectual resources of the enterprise
To competitiveness	++	++	+++	++	+++	+++
Functional areas of competitiveness	Personnel, competitiveness of the management system, scientific and technological, production and technology	Competitiveness of the management system	Industrial-technological economic	Economic, financial	Competitiveness of products, ecological, industrial and technological	Scientific-technological, production-technological, personnel
Competitive resistance	+++	+++	++	+	+++	+++

+++ - strong influence; ++ - the effect is moderate; + - slight influence

These conditions underlie the assessment of competitiveness and are transformed into the formulation of two tasks:

1. Measuring the sustainability of enterprise competitiveness levels in dynamics. The solution of this problem is possible on the basis of calculations of individual stability

indices (i_y), which represent the ratio of the average of the levels above the trend (the average level of Competitiveness for favorable periods of time - $\overline{F_{\delta n}}$) and the average of the levels below the trend (the average level of competitiveness for adverse time periods $\overline{F_{не\delta n}}$), which is expressed in the form of the formula:

$$i_y = \frac{\overline{F_{\delta n}}}{\overline{F_{не\delta n}}}$$

The closer the value of individual indices to unity, the less is the variability and, accordingly, the higher the stability.

Calculation by example

2. An assessment of the sustainability of the competitiveness of the VTCP can be obtained on the basis of the calculation of the Spearman coefficient (Aganbegyan, 2014):

$$K_{ycm} = 1 - \frac{6 \cdot \sum_1^n d^2}{n^3 - n}$$

where n is the number of observation periods;

d - p aznost grade level of competitiveness for years and ranks period rooms.

Interpretation of the Spearman coefficient is as follows: if each subsequent level of competitiveness is higher than the previous one, then the ranks of these levels and the

numbers of the periods coincide, that is, $K_{ycm} = + 1$.

For comparative generalizing characteristics industrial competitiveness composed matrix shown in Figure 2.

Stability of the trend of competitiveness change	Unstable tendency ($K_{ycm} < 0.2$)	12	11	10
	Weak tendency stability ($0.2 \leq K_{ycm} < 0.4$)	7	8	9
	Average trend stability ($0.4 \leq K_{ycm} < 0.6$)	6	5	4
	High trend stability ($K_{ycm} \geq 0.6$)	1	2	3
		High ($i_y < 1,1$)	The average ($1,1 \leq i_y \leq 1,2$)	Low ($i_y > 1,2$)
Individual stability of competitiveness levels				

Figure 2. Components of competitiveness

Enterprises falling into the quadrants 1, 2, 6 - have a high competitiveness; in 5, 7 - the average competitiveness; all other quadrants are characterized by low competitiveness.

According to this algorithm, the competitiveness of several enterprises has been assessed. These enterprises operate in the machine building industry in Russia. The evaluation results are represented in Table 5, 6. The table shows the levels of competitiveness in favorable times.

Table 5. Indices of enterprise competitiveness stability

Businesses	Levels of enterprise competitiveness								Individuals Sustainability Indexes levels competitiveness enterprises
	2008	2009	2010	2011	2012	2013	2014	2015	
The company with the highest level of individual competitiveness	0.553	0.523	0.448	0.475	0.36	0.495	0.424	0.535	1.01
Ent term with the lowest of individual competitiveness	0.556	0.437	0.369	0.573	0.573	0.521	0.59	0.6	1.275

Table 6. Evaluation of the stability of the trend of changes in enterprise competitiveness

Businesses	Ranks are equal to her competitiveness of enterprises								Coefficient of Spearman
	2008	2009	2010	2011	2012	2013	2014	2015	
The company with the highest level of individual competitiveness	8	6	3	4	1	5	2	7	-0.29
Ent term with the lowest of individual competitiveness	4	2	1	5	6	3	7	8	0.71

Management of the organization's competitiveness is carried out on the basis of compliance with certain requirements:

1. Mandatory analysis of the mechanism of action of economic laws.
2. Knowledge of the mechanism of action of the laws of the organization of structures and processes.
3. Compliance with the requirements of a set of scientific approaches to management.
4. Focus on specific markets and needs.
5. System automation of management.
6. Progressive methods of analysis, forecasting, rationing, optimization.
7. Focus on quantitative methods of evaluation and control.
8. The design of the models for the evaluation of competitiveness should take into account the weight of the incoming factors.
9. The indicators included in the assessment model of both aggregate capacity and competitiveness of the organization should be primarily dimensionless and relative.
10. Organic interrelation of the management system of competitiveness and strategic management, marketing, and human resources management.

Conclusion

The importance of studying the competitiveness of the enterprise is due to the fact that it is the firm's competitive positions that characterize the efficiency of its economic activities. The research carried out by us has made it possible to determine the factors that influence competitiveness. Such factors include expansion of the market share, product innovations. In addition, a significant role is played by the availability of competitive advantages and the business model used in the implementation of process innovations. A stable competitive advantage of the company is seen as a key factor of competitiveness.

The method for assessing competitiveness is presented, consisting of two stages: an assessment of the individual competitiveness of the enterprise and an assessment of trends in the change in competitiveness. For their calculation, standard and widely used statistical functions, such as the coordination coefficient, the rank correlation coefficient, were used. The approbation of the methodology was carried out at the enterprises of machine building in Russia. The study presents selective calculation results. The requirements of competitiveness management are defined. Presentation of the Methodic allows comparative analysis of different levels competitiveness stable enterprises. Secondly, monitor the change in competitiveness for a particular enterprise. This allows you to monitor the dynamics of competitiveness, point to apply management tools to ensure the stability of competitive positions.

Further research of the authors will be connected with the deepening of the study of the problems of ensuring competitiveness and competitiveness of industrial enterprises.

References

- Aganbegyan, A.G. (2014). Socio-economic development of Russia: analysis and forecast. *Problems of Forecasting*, 4, 3-16.
- Amsden, A.H. (2003). *The Rise of «The Rest»: Challenges to the West from Late-Industrializing Economies*. Oxford University Press.

- Baloch, Q., & Inam M. (2013). Strategic Competitiveness: Creating Firm's Future. *Journal of Managerial Sciences*, 3(1). 82 - 109.
- Berns, M., et al. (2009). Sustainability and Competitive Advantage. *MIT Sloan Management Review*, 51(1).
- Fligstein, N. (2004). State, markets and economic growth. *Economic Sociology*, 8(2), 41–59.
- Gogoleva, T.N. (2009). Competitiveness of the country: the essence and problems of regulation. *Bulletin of the VSU*, 2, 4-9.
- Grunke, J. (2015). Economic development: The role of manufacturing in our growing economy. Missoula Economic Partnership. Missoula.
- Hotelling, H. (1990). Stability in competition. In *The Collected Economics Articles of Harold Hotelling* (pp. 50-63), New York, NY: Springer.
- Kevin, K. (2000). Coyne Sustainable competitive advantage. *McKinsey Quarterly*, 3, 31–34.
- Kevin, K. (2002). Sustainable competitive advantage. *Bulletin of McKinsey*, 1, 50–54.
- Kozhevina, O.V. (2012). *The concept of competitive stability: Theory, Practice*, Moscow: GUU.
- Kondratyev, V. S. (2013). Manufacturing industry: secrets and trends. *Direct Investments*, 136(8), 41-45.
- Krivorotov, V.V., et al. (2014) *Competitiveness of social and economic systems: challenges of the new time*. Moscow: Publishing House of Economics.
- Leonard, M. (2015). Geopolitics vs Globalization: How Companies and States Can Become Winners in the Age of Geo-economics Research report: Geo-economics Seven Challenges to Globalization. Global Agenda Councils, World Economic Forum.
- Marshall, A. (1961). *Principles of Economics. Variorum edition overseen by C. Guillebaud*. McMillan Press.
- Mazilkina, E.I. (2007). *Management of competitiveness*. Moscow: Omega-L.
- Ogoleva, L.N., & Radikov, V. M. (2003). Innovative engineering. *Economic Analysis*, 10, 2–15.
- Post, J.E., Preston, L.E., & Sachs, S. (2002). Managing the extended enterprise: The new stakeholder view. *California Management Review*, 45(1), 6-28.
- Rumelt, R.P. (1997). *Towards a strategic theory of the firm. Resources, firms, and strategies: A reader in the resource-based perspective*, Oxford University Press, 131-145.
- Unternehmerische Innovationspolitik in Deutschland: ein Situationsbericht. Materials consulting firms «SCI Unternehmensberatung Görlitz». (n.d.). Retrieved from <http://www.unternehmensberatung-goerlitz.de/>
- Wolfgang, Burr. (2004). Concept of sustainable competitive advantage. *Problems of Management Theory and Practice*, 4, 107–113.