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STRATEGIC MANAGEMENT OF THE COMPETITIVENESS OF INDUSTRIAL COMPANIES IN AN UNSTABLE ECONOMY

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Abstract. This paper is devoted to developing a set of strategic areas within the system of managing an industrial company in an unstable market economy. The authors have explored the genesis of the theory of competitiveness to identify some of the key attributes of industrial companies' competitiveness in the short and long run. It has been established that both in the short and long run of major significance are financial-economic indicators. The authors have assessed the degree of financial leverage as a summarizing indicator among a set of financial-economic indicators of competitiveness in sectors within Russia's industry within the period 2015–2017, which, overall, has a negative value. Among the key reasons behind Russia's current trends are high levels of financial dependence among companies, low returns on assets, and high interest rates on loans. The authors have identified and analyzed three major strategic areas in the management of industrial companies in an unstable economy, which are as follows: (1) development of a corporate strategy for fostering and boosting companies' competitiveness on an innovation basis; (2) implementation of strategic marketing; (3) implementation of strategic controlling. The paper brings forward a set of priority strategies for competitive industrial companies (horizontal diversification, innovation, or integrated growth), proposes a set of tools of strategic marketing for stimulating technological processes within the industrial complex in an unstable economy, and identifies a set of areas for implementing strategic controlling as a way to practically implement deviation management. The authors accentuate the need to implement a scenario approach to managing an industrial company. The paper brings forward a technique for assessing the effectiveness of a corporate strategy based on gaps between an industrial company's strategic plan and its real potential.

Keywords: industrial complex; unstable economy; strategy for development; strategic marketing; strategic controlling

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1. Introduction

In a climate of an unstable market economy, stiffening competition, and consumers growing more demanding with regard to product quality, of major significance to managing an industrial enterprise are strategic areas that can help minimize the negative impact of the external environment. Taking a strategic approach to managing an

industrial enterprise implies fostering and actualizing competitive advantage and employing appropriate methods for competing which would enable the business entity to operate in the marketplace long and sustainably. Above all, competitive advantage ought to be predicated on the sustainable, advanced, and innovation-focused technological development of the nation's industrial complex (Eddelani, et al., 2019; El Idrissi et al., 2019; Caurkubule et al., 2020).

The Russian economy is currently characterized by unstable development, which largely is due to the effect of economic sanctions imposed by the EU and the US. These restraining measures imply sanctions imposed in a targeted manner, which has found reflection in restrictions that are imposed not on the entire state as a whole but on particular sectors, companies, and natural persons. The imposition of sanctions not only has not stopped but is becoming more stringent, progressive, and uncertain in prospect. In a climate of external restrictions and uncertainty, which may well be long-term in nature, the Russian economy may need to, above all, be oriented toward the use of strategic approaches to managing the competitiveness of the nation's industrial companies.

2. Methods

2.1. Nature of and factors for the competitiveness of industrial companies

Reorienting Russia's economic system from the traditional model of development to an innovation-focused one has been recognized by scholars and practitioners as a key strategic area for the nation's development. Otherwise, the Russian economy risks being long left out of the picture of scientific-technological progress, with most domestic companies currently characterized by low levels of competitiveness.

Despite the fact that Russian industry has a multiparadigm technological base and features production operations of the fifth and sixth technological paradigms, the nation's real sector of the economy is, however, characterized by significant technological lags at this time. More specifically, in machinery manufacturing and machine-tool building Russia is trailing behind the rest of the world by one and a half to two technological generations, which is approximately 20–30 years, given that a generation is 10–15 years.

The current economic climate is having quite a tangible effect on the rate and caliber of economic growth in Russia and the dynamics of its GDP. In the period 2012–2016, the Russian economy posted an average decline of 0.2%, a considerable role in this was played by Western economic sanctions, which only have exacerbated the negative trend (Ministry of Education and Science of the Russian Federation, 2009; Rosstat, n.d.). In order to accelerate economic growth, the state needs to galvanize the activity of the nation's industrial companies, for it takes them less time to adapt to an adverse economic situation and restore equilibrium than it does across the entire national economy as a whole – and that is owing to industrial companies' ability to stay competitive.

Competitiveness, which is a key element of market relations, may be viewed as a complex, multilevel socio-economic system, which suggests the possibility of analyzing, forecasting, and managing it. The first level is the competitiveness of the product, which has a direct immediate effect on the competitiveness of the rest of the remaining levels (the business entity, sector, region, and country). This approach makes it possible to view a company's product as a tool for engaging in intrasectoral and intersectoral competition.

Linked with the competitiveness of the product is the competitiveness of the production company itself, which is characterized by the degree to which the firm's potential for turning out a product is aligned with consumer preferences with regard to its quality and is in keeping with the existing supply and the way the company is operating under existing conditions in the marketplace and its ability to withstand pressure from competitors at a certain point *in* or over a certain period *of* time.

Since the 1970s, competitiveness theory has been subject to significant changes (Table 1).

Table 1. Genesis of Theoretical Approaches to Construing Competitive Advantage

Theory	Founder	Time period	Description
Firm and industry equilibrium theory	A. Marshall (1993)	1890s	A key criterion of competitiveness is that a company possesses factors of production that can be put to more effective use than those employed by its competitors.
Theory whereby differences among countries are based on variations in the relative endowments of factors of production	E.F. Heckscher (2006) and B.G. Ohlin	1920s–1930s	Countries tend to export goods that are manufactured using surplus factors and import goods that require the use of, mainly, scarce factors to manufacture.
Monopoly and competition theory	J.A. Schumpeter (1982)	1930s	Monopolies organically incorporate subdivisions that implement innovations, producing an “effective monopoly” – a driver of economic growth.
Competitive forces model	M.E. Porter (2006)	1990s	There are five major forces which form the structure of an industry: (1) threat of new entrants; (2) threat of substitutes; (3) bargaining power of customers; (4) bargaining power of suppliers; (5) competitive rivalry.
Competitive rationality theory	P.R. Dickson (2007)	Late 20 th century	Companies strive to be consistent in organizing their exchange with consumers in the ever-evolving marketplace based on making proper marketing decisions, which has come to be known as competitive rationality.
Strategic competitiveness theory	R.A. Fatkhutdinov (2005)	2000s	A methodology for forecasting competitiveness which reflects an entity’s potential ability to compete with similar entities in the future within a given marketplace.

Source: Compiled by authors

In order to boost the competitiveness of domestic industrial companies going forward, the state must find a way to influence a set of factors which shape it. These factors may be divided into two major groups – short-term (operational) and long-term (strategic).

In the short run, a competitive enterprise is characterized by the following attributes:

- ability to achieve medium rates of increase in sales proceeds and revenue;
- ability to achieve the average regional indicators of profitability;
- ability to meet consumer demand across key groups of products on a par with the closest competitors;
- limited ability to expand the product range and implement cutting-edge production and information technology due to lack of funding;
- ability to maintain its share of the market for a year.

However, in the long run the competitiveness of industrial companies is characterized by somewhat different attributes, which include the following:

- sustainable dynamics of increase in sales proceeds and the profitability of the company’s financial-business activity;
- availability of financial reserves to ensure the company’s sustainable development and improved working and social conditions for its workforce;
- the company’s product mix volume and structure fully matching consumer demand in all consumer segments;
- optimum product price and quality ratios;
- high levels of manpower potential;
- good condition of the company’s material-technical production base, above all its fixed assets;
- high-quality pre- and post-sales service for the target consumer, including warranty service, which is the basis of the client’s long-term allegiance to the company;

- the company facing little to no risk of getting pushed out of the market by its competitors for a period of 5 years and up;
- high investment attractiveness and potential for implementing large investment projects using both the company's own and borrowed funds (Egorova, 2011).

Thus, the concept of and factors for competitiveness may vary depending on the period under review. The short-term period is dominated by operational indicators, while the long-term one – by strategic indicators of competitiveness. Strategic areas for managing the competitiveness of industrial companies ought to be oriented, mainly, toward strategic indicators in combination with current indicators.

2.2. Assessing the effect of financial-economic factors on the competitiveness of industrial companies based on the degree of financial leverage

The authors' analysis revealed that, when it comes to assessing the effect of various factors on the competitiveness of industrial companies, the effect of financial-economic indicators is there both short- and long-term. A summarizing indicator of the effect of financial-economic indicators on the competitiveness of industrial companies is the degree of financial leverage (DFL), which can be computed in the following way:

$$DFL = DER \cdot (ROA - LIR) \cdot (1 - T) \tag{1}$$

where

DER is the debt-to-equity ratio;

ROA is the return on assets;

LIR is the average interest rate on loans;

T is the profit tax rate.

A positive value for the DFL signals boosts in return on a firm's equity capital, which has a favorable effect on its investment attractiveness and its competitiveness in the internal and external markets. The authors estimated the DFL across the key types of activity by Russia's industrial companies based on the average interest rates on loans (13.0% in 2015 and 9.4% in 2017) (Table 2).

Table 2. An Assessment of the Degree of Financial Leverage across Particular Types of Economic Activity by Russian Industrial Companies within the Period 2015–2017

Type of activity	Debt-to-equity ratio		Return on assets, %		Degree of financial leverage, %	
	2015	2017	2015	2017	2015	2017
Extraction of mineral resources	0.88	0.85	11.7	10.4	-0.95	0.68
Manufacturing, including:	2.75	2.47	4.0	4.4	19.8	9.9
-production of food products	2.65	1.95	5.9	6.5	15.1	4.5
-production of chemical substances and chemical products	2.44	1.45	9.5	8.1	6.8	1.5
-metallurgical production	2.10	1.52	6.7	10.6	- 10.6	1.5
-production of machinery and equipment	2.89	8.90	2.1	-12.4	- 25.2	- 153.8
-production of electrical equipment	1.98	1.55	5.6	6.0	-11.7	- 4.2

Source: Data from Rosstat (n.d.).

Thus, as clearly evidenced from Table 2, the situation is adverse in most sectors within the nation's industry. In 2017, Russia's DFL had a positive value only in extraction of mineral resources and metallurgical production. The situation is most complicated when it comes to machinery and equipment production, which is testimony to

the uncompetitiveness of industrial companies engaged in this type of economic activity. On the whole, notably, the period 2015–2017 was characterized by positive dynamics in manufacturing, especially in chemical production, production of electrical equipment, and production of food.

The DFL's negative value is associated with the lack of macroeconomic coordination between the efficiency of the production sector and lending policy pursued in the financial sector of the economy. The average interest rate in European countries is a lot lower than in Russia. For instance, in 2016 it was 5.9% in Germany, 4.8% in Italy, 3.9% in the Czech Republic, and 2.7% in Switzerland. The lowest interest rates on loans were recorded in Asian countries, namely 4.4% in China, 3.4% in South Korea, and 1.0% in Japan (Rosstat, n.d.). With interest rates on loans this low, the DFL's value will, obviously, be positive in the majority of a nation's production companies.

3. Discussion

The current slow-down in Russia's industrial growth is associated with a number of factors related to an unstable economic environment, which have exhibited negative dynamics on account of a sanctions package introduced by the EU and the US.

Russia's industrial production has been impacted by a plethora of negative factors that are specific to this particular nation, like declines in the investment attractiveness of the manufacturing industry, a poor scientific-technical component, a primary focus on raw materials, and declining consumption due to drops in the population's real income.

Below is an outline of some of the key strategic areas for managing the competitiveness of industrial companies (Figure 1).



Fig. 1. Key strategic areas for managing the competitiveness of industrial companies in an unstable economy

Source: Compiled by authors

Thus, a unifying beginning is the development of a corporate strategy aimed at fostering and boosting the competitiveness of industrial companies. This strategy provides the framework conditions for systematic and long-term activity aimed at minimizing threats imposed by competitors, identifying competitor vulnerabilities and designing effective ways to exploit them, and identifying effective channels for avoiding head-on collision with competitors as a result of the development of a new product or business model (Heckscher, 2006).

Once there is in place a strategic focus on marketing, it will increasingly play a major role in the overall management of a firm. It may be stated with confidence that at the present stage the entire model of managing a company is essentially founded on interaction between strategic and operational marketing.

An area that can also help enhance strategic management and boost the effectiveness of managerial decision making is strategic controlling. There is a great deal of relevance in employing strategic controlling to help resolve issues related to the formalization of a firm's strategic objectives and development of scenarios for its future development.

3.1. Corporate strategies for fostering and boosting a company's competitiveness on an innovation basis

The right choice of strategy is a determining factor for boosts in the competitiveness of industrial companies. In the long-run, strategies for competitive companies must rely on long-term factors for competitiveness and be oriented toward radical action on their part, including the development and introduction of new goods and services. This approach is most optimal for large and medium-sized industrial companies that hold sway in the marketplace. Thus, industrial companies with this level of competitiveness may want to adopt strategies of horizontal diversification, innovation, or integrated growth.

A strategy of horizontal integration facilitates the formation of technological chains among companies, which will help achieve favorable terms on the purchase of raw materials and supplies and provide the best potential for the pursuit of a uniform production-industrial policy. A strategy of diversification stimulates boosts in a company's market share via greater sales proceeds and increases in the number of regular customers and suppliers, and, ultimately, helps ensure the optimum distribution of resources and stable growth in revenue.

Uncompetitive enterprises may need to mainly focus on the use of defensive strategies aimed at maintaining their positions and surviving in the marketplace – only after having accumulated the required resource and innovation potential will they be able to proceed to the next, higher, level of competitiveness.

Corporate strategies may vary significantly depending on different phases within the lifecycle of the innovation process. Of particular note are strategies of investing in the initial and final stages of the innovation-investment process. Industrial companies that pursue the first type of strategy have in place innovation-related units that are engaged in research and development. This type of companies possesses significant innovation potential and increased investment attractiveness and helps develop various creative types of economic activity within their sector.

Strategies of investing in the final stages of the innovation-investment process are common among industrial companies with a small innovation potential. These companies tend to employ process or product imitations and engage in the technological transfer of early majority innovative insights, which they adapt to the conditions of their own business system, having in consideration the market niche they occupy and their potential for selling the product within an existing group of consumers. This type of innovation strategies is practiced by followers and the late majority.

3.2. Implementing strategic marketing within the model of corporate management

An analysis of various models of management of present-day companies indicates that there, actually, is a very deep and dynamic interrelationship between strategic marketing and strategic management. In today's climate of market transformations and increased orientation toward the consumer, strategic marketing may be viewed as a

significant management tool which helps draw together and coordinate all functional units within the company based on the corporate strategy adopted.

A comparative analysis of the way strategic marketing is organized in Russian and certain foreign enterprises indicates that the development of the market economy in Russia is characterized by a poor focus on the development and practical implementation of marketing efforts. Note that not all companies within industry have marketing units in place, and those that do tend to have them perform functions that normally would lie outside their ambit, i.e. often there is no clearly defined domain of issues for these staff members to be concerned with and no sound system of marketing research in place, with market exploration mostly performed in a haphazard manner.

Within strategic marketing, a leading role is played by innovations marketing, which has a prospective orientation and a focus on performing functions that are associated with the determination of consumers' informed preferences in respect of an innovative product; the conduct of integrated research into the market and economic conditions surrounding industrial production; the design of particular features of an innovative product based on the monitoring of consumer preferences in real time; the development and implementation of a marketing plan for promoting innovations; adjustment of the marketing plan by reference to deviations detected; the monitoring of the efficiency of the firm's marketing activities.

The average expenditure by Russian companies on the marketing of innovative products is not more than 10–15% of all expenditure on innovation activity, which is not enough to ensure the effective commercialization of innovations. In addition, in Russia the share of organizations engaged in marketing innovation is not more than 1.5%. Industrial companies prioritize technological innovation, followed in degree of significance by organizational innovation, with marketing innovation bringing up the rear on the list.

A key reason behind the insufficient implementation of innovations marketing in the activity of industrial companies is the predominant use of outmoded mechanisms for managing innovation processes. Members of the senior management of innovation-focused companies tend to set a primary focus on an innovation's useful features; they will then focus on looking for sources of funding – and only lastly will they focus on identifying potential sales markets and analyzing their capacity.

Thus, there may be inconsistencies in the relationship between the innovation-focused organization and the end consumer of the innovative product. Resolving this issue may require putting in place an intermediary that will help the firm better conduct its innovation activity, i.e. developing new organizational-economic forms of entrepreneurship – centers for commercialization of technology and technological platforms.

It may help to undertake the following activities right in the early stages of the innovation-investment process:

- putting together and getting to the developer of strategic marketing a set of “selling information” indicators in the form of its “selling aspects”, which will shape consumer competencies and informed needs;
- developing fundamental functionalities via non-technological (marketing and organizational) innovation;
- developing appropriate measures to prevent and counteract risks at all stages of the innovation process;
- putting together investment guides at the meso and micro levels.

Thus, based on the product's commercial viability, functionality employed in the innovation process may be viewed as fulfilled only after the innovation is perceived by the mass end consumer. This is a long-term process that is based on the implementation in industrial companies of the concept of strategic marketing (Romanova, 2007).

3.3. Implementing strategic controlling in managing an industrial company

In a climate of the ever-growing complexity of market relationships, a highly uncertain external environment, and a complicated financial-economic situation, companies are getting increasingly keen on the use of the latest scientific approaches to substantiate their strategic managerial decisions. Many European countries have made successful use of strategic controlling, which is known to help facilitate positive dynamics of strategic management in industrial companies, boost their competitiveness, and foster the long-term development of their scientific-technical and resource potential. A strategy developed by reference to fundamental techniques and tools of strategic controlling should enable a company to achieve a competitive edge in the long run and attain boosts in indicators of return on its financial-economic activity, which can ensure positive values for the DFL.

One of the key areas of strategic controlling is diagnosing the effectiveness of a strategy. An industrial company must compare on a regular basis the desired and expected trajectories of its development. The desired trajectory of development is determined by the company's strategic objectives, while its expected trajectory is established via forecasting. If the above trajectories diverge, there will be a gap between desired and expected indicators (Romanova, 2007).

The effectiveness of an industrial company's corporate strategy is determined by the gap between its strategic plan and its real potential. To boost the effectiveness of the corporate strategy, one needs to develop appropriate activities to eliminate the gap. A possible preventive activity aimed at overcoming such gaps is the scenaric method. Major indicators employed in working out scenarios for the development of industrial companies are those that are subject to open publication in and are calculated based on financial reporting (sales proceeds, sales profit, return on investment, return on assets, return on equity, and product profitability).

Scenaric analysis is a crucial theoretical-methodological component of strategic controlling. The effectiveness of corporate strategy may be viewed as high if the gap between the industrial company's strategic plan and its real potential is no more than 15%, medium – 16–30%, reduced – 31–49%, low – 50–70%, and very low (unsatisfactory) – 71% and up. Thus, deviations inside the first four zones may be viewed as acceptable, while they should be seen as unacceptable inside the fifth zone.

A key role in assessing the efficiency of commercial companies must be played by the analysis of rates of increase in economic value added, and in assessing that of stock companies – in shareholder added value, following the implementation of an innovation project (Buckley, Clegg, & Wang, 2007).

This tenet is predicated on that it is economic (shareholder) value added that reflects in full measure a company's attractiveness from a standpoint of the value-oriented approach and improvements in the caliber of decision making aimed the achievement of strategic objectives for its development (Gnezdova, Kugelev, Romanova, & Romanova, 2016).

Given that the technological development of the Russian economy is hardly possible without the use of relevant marketing tools at the federal and regional levels, it may be advisable to conduct marketing research via the latest organizational-economic forms of entrepreneurship (e.g., technological platforms and innovation-focused industrial clusters), which can facilitate boosts in the commercial effectiveness of activity by industrial companies. A key purpose behind the use of the tools of marketing in a context of this kind is to create a favorable environment for the effective activity of science-driven production operations within the Russian economy via the implementation of horizontal and vertical integration and optimization of business processes at industrial companies (Austrade, 2010; Sölvell, Lindqvist, & Ketels, 2003).

Conclusion

The authors' analysis revealed that the potential for managing the competitiveness of industrial companies is, above all, determined by their strategic focus. To be able to achieve major changes in the structure of their production and enhance their innovation component, companies need to ramp up their innovation potential based on the development of a sound corporate strategy and implementation of strategic marketing and strategic controlling.

Some of the key areas in a strategic approach to managing an industrial company that is oriented toward an innovation-based path of development include:

- identifying the “principal link” in the company’s production-business process and focusing on it the bulk of its managing effort;
- employing strategies of horizontal diversification, innovation, or integrated growth;
- ensuring systemicity in the operation of production and functional units, with a targeted focus on orienting their activity toward the implementation of long-term plans for innovation-investment development.

The implementation of strategic marketing within the model of corporate management envisages the following activities:

- putting together and getting to the developer of strategic marketing a set of “selling information” indicators, which will shape consumer competencies and informed needs;
- developing fundamental functionalities via marketing and organizational innovation;
- putting together investment guides for potential investors at the regional, sectoral, and corporate levels.

The implementation of the concept of strategic controlling in managing an industrial company envisages the following set of activities:

- implementing a system of deviation-based management of the company;
- employing a scenaric approach as a methodological component of strategic controlling;
- assessing the effectiveness of corporate strategy based on gaps between the industrial company’s strategic plan and its real potential and developing a set of preventive activities on precluding these gaps from emerging.

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