

Diagnosics of Flexibility and Adaptability of Enterprises' Production and Marketing Value Based Control Systems

(aspects of corporate control systems' harmonization with regional industrial policy)

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Abstract— Increasing of competition on the domestic market, as well as a set of strategic threats associated with instability on the financial and investment markets, require flexibility and adaptability of enterprises' production and marketing value based control systems. Ensuring of this kind of managerial capabilities is largely determined by the availability of specific diagnostic tools. Corresponding diagnostic system is presented in this paper. Developed diagnostic system contains indicators and groups of indicators of the level of flexibility and adaptability of production and marketing value based control system to the adverse effects of environmental factors. Research is aimed on harmonization of corporate control systems' with regional industrial policy, as a leading external influence factor.

Keywords—*diagnosics, control system, flexibility, adaptability, stability*

I. INTRODUCTION

The results of analytical operations carried out at the level of research of the national economy, industrial branches, sectors, regions are an important source for the formulation of findings about strategic threats and opportunities for enterprises. However, crisis conditions determine the high relevance of the problem of analysis and diagnosis of the internal environment of enterprises in the direction of identification of their strengths and simultaneous decompensation of the weaknesses. This is what determines the ability and potential of enterprises to respond to strategic challenges in a timely manner, and most importantly – their ability to generate positive changes and additional benefits, which together create additional value for stakeholders. This value is accumulated in the total value of the enterprise.

In the enterprise management system, one of the leading roles is performed by a specific subsystem, the allocation of which in its pure form determines its structure, content and features. This subsystem has received a functional load aimed

at increasing the market value of the enterprise. Taking in consideration the specific goals, objectives, tools and functions of this management subsystem, it is quite obvious that it is related to the strategic level of planning. Accordingly, it is also a question of the overall level of enterprise management. This makes it possible to state that such functional direction as enterprise value management belongs to the highest (strategic) level in the hierarchy of the general management control system.

Based on the opinion of the vast majority of specialists [1, 2; 4, 5], it should be noted that strategic management in general is characterized by a low level of organization in most Russian industrial enterprises, which in practice is confirmed by the low adaptability of business structures to the adverse effects of environmental factors. This kind of conclusions were especially vivid in the context of the crisis and formation of the key challenges of our time. Management of enterprises pays much attention to solving current problems, while strategic and tactical operations are characterized by non-system performing.

Such circumstances determine the feasibility of diagnostics of the internal environment of enterprises, in particular such characteristics as flexibility and adaptability. The purpose of diagnostics is to identify the key characteristics of the control system, as well as the ability to perform their functions and achieve goals on the strategic planning horizon in different conditions.

II. RELEVANCE, SCIENTIFIC SIGNIFICANCE OF THE INDUSTRIAL ENTERPRISES' DEVELOPMENT PROCESSES MANAGEMENT. A BRIEF LITERATURE REVIEW

In scientific-practical and methodical literature the question of diagnostics of enterprises' value management control systems is paid a certain attention, however, the majority of the approaches stated in the analyzed works

assume implementation of the financial analysis of separate aspects and results of financial and economic activity of the enterprise. At the same time, the diagnostics of the control system elements, not enough attention was given. In works [1; 2; 3] elements of the classification of factors that can be used in the diagnostics of the internal environment of the enterprise, in particular its subsystems of value management, were proposed, however, in the analyzed sources, the designated systems of factors were not sufficiently tested. On the base of the research results, described in [5; 6] was improved the system of diagnostic indicators, which among others, was aimed on assessing the potential of enterprises to generate additional value, as well as the analysis of additional benefits of enterprises materialized in excess profit margins. Das K. K., Upadhyay A. K., & Das S. [7] proposed an approach according to which the diagnostics of internal systems in the enterprise, in particular management control systems, requires the use of a two-part analysis, combining the study of the processes of implementation of functions by management, as well as the quality and timeliness of accounting (response) to changes in environmental factors. In this regard, we should also agree with Judeh M. [8], Levenson A. R., Van Der Stede, W. A., & Cohen, S. G. [9] and Andrews R. [10, 11] with regard to the influence of the flexibility of the internal environment of the enterprise on its strategic potential to generate additional economic value defined in their works, which eventually converts into an increase in economic benefits for owners (as well as other interested parties) and as a result increases the level of the market value of the enterprise. At the same time, the object of diagnostics of this kind of flexibility was determined by the level of accounting in the management process (including operational, financial, marketing and investment) of strategic environmental factors.

III. PROBLEM STATEMENT

The aim of the article is to substantiate the methodological foundations of diagnostics of flexibility and adaptability of enterprises' production and marketing control systems. Solving of this scientific problem gives opportunity to improve the efficiency of the management process and ensure the development of production and marketing business processes.

IV. THE PRACTICAL SIGNIFICANCE OF THE PROPOSAL

The analysis of foreign experience of carrying out the analytical researches of internal environment of production and marketing corporate control systems' gives the opportunity to claim about overwhelming adherence of foreign researchers of the agent theory and the modern concept of value based management. As a result, among the leading factors of influence on the value of the enterprise, the level of implementation of management functions by departments and individual employees (generalized organizational units) was determined. At the same time, the main object of evaluation is a group of qualitative or otherwise formalized indicators, on the basis of which conclusions are drawn as to whether the process of implementation of a particular function (subfunction or a separate activity, defined during the decomposition of functions) to create additional benefits or

cash flows to invested capital. In this case, the assessment of the so-called organizational value in terms of the implementation of the functional load of individual units or organizational units.

The formation of diagnostic tools is based on: the results of a theoretical study of the processes of production and marketing management of enterprises; the content of the key provisions of scientific and practical sources on the strategic diagnosis of the internal environment of enterprises (including the analysis of the value management subsystem); the provisions of the formed methodological foundations of the analytical study. Taking into account this methodological basis, the following target orientation of analytical work was determined. It is planned to diagnose the flexibility and adaptability of the control system to changes and adverse effects of environmental factors. In this case, we are talking about the identification of factors that discourage the ability of the enterprise to generate profit, value added and economic benefits in a volume sufficient to meet the objective expectations of stakeholders (investors).

The results of this kind of diagnostics will provide an opportunity to obtain quantitative values of indicators that characterize the potential of the enterprise management system to solve problems in the field of formation of value added to the capital invested by owners, which in turn is achieved through the effective and optimal use of resources, capabilities and production factors, as well as the flexibility and timeliness of responding to threats and challenges that are formed in the external environment. Achievement of the indicated result is the basis for designing the organizational component of the mechanism of strategic management of enterprise development.

The diagnostic system aimed on the quantitative formalized interpretation of the level of flexibility and adaptability of enterprises' production and marketing control systems to the adverse effects of environmental factors is presented on the table 1. In this system, diagnostic indicators were grouped on the basis of belonging to the factors of macro- and microeconomics environment.

Further, during calculations, estimations of the first level indicators are summed up and on their basis value indicators of the second level are estimated as average arithmetic of first level indicators. Accordingly, integrated assessments of the entire diagnostic system are also evaluated. The assessment of the individual indicators of diagnostic systems and their groups was decided not to weigh by the appropriate coefficients, due to the objective lack of significant characteristics that can be allocated to the different indicators according to their level of importance within the formed groups of indicators. Another important factor that justifies the use of the formula simple average arithmetic is the relative simplicity of calculations and the use of developed diagnostic systems in practice, which contributes to a wider approbation of this development during its introduction into the practice of management of the studied enterprises.

Table 1. Indicators and groups of indicators to measure the level of flexibility and adaptability of production and marketing value based control systems to the adverse effects of environmental factors

External factors influencing the value of firms	Groups of diagnostic indicators of the level of decompensation of threats and best use of the opportunities	Diagnostic indicators of the level of decompensation of threats and best use of the opportunities of the environment in the processes of production and marketing value based control
1. Macroeconomic factors	1.1. General economic indicators	1.1.1. The rate of growth of the national economy
		1.1.2. Inflation expectations and the current dynamics of consumer prices
		1.1.3. Unemployment and business activity
		1.1.4. Dynamics of incomes of the population
	1.2. Fiscal indicators	1.2.1. The level of effective tax burden
		1.2.2. Government expenditure policy
		1.2.3. State regulation and administration of business activities
	1.3. Monetary indicators	1.3.1. The dynamics of the discount rate and rates on short-term and long-term loans
		1.3.2. Currency fluctuations
	2. Microeconomic factors	2.1. The performance of the key resource markets
2.1.2. Labor market		
2.1.3. Commodity markets		
2.2. Indicators of development of foreign economic activity		2.2.1. Dynamics of volumes of trade and prices in world and regional markets of raw materials and finished products
		2.2.2. Trade restrictions, barriers to entering new markets
		2.2.3. Foreign trade policy of the state

V. SUMMARY

The presented diagnostic system is the basis for empirical research of marketing and production management processes. Further, approbation of the specified development that will give the chance to draw conclusions about its efficiency and

adequacy of the received results is actual. It should be noted that the results of diagnostics of flexibility and adaptability of value based control systems are characterized by the significant interest of external users, including investors, financial analysts, credit and financial institutions. The significant potential of this kind of diagnostic systems for conducting stress-tests determines the interest of external users to apply them during determination of the projects' financing parameters.

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