

Assessment of Application of Modern Management Technologies by Russian Regional Business under Conditions of New Industrialization Development

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Abstract – This paper concerns modern management technologies that relate to the current stage of the new industrialization development. It proves that methods and tools of management, owing to the development of the new industrialization, ought to undergo changes to provide an efficient solution to current tasks of management. It also proves that methods and tools of management differ. The article provides scientific definitions of the notions “method of management” and “tool of management”. It presents a critical analysis of findings of ten-year ranking reviews by Bain & Company, which operates in the field of consultancy, related to the most popular tools that management of international and national companies apply in the early 21st century. We have used the findings of research conducted by Astrakhan Region’s scientists over 2006-2016 as empiric material. This paper presents a set of modern management technologies that managers of regional enterprises apply under the current post-crisis development stage; it also gives grounds for application of this or that technology. It reveals why four classic technologies have been the most popular and efficient ones: strategic planning, benchmarking, balanced scorecard (BSc), and customer relationship management (CRM). We have researched the six of ten best management tools that Russian CEOs apply. This article proves that a number of management technologies (strategic planning, mission and vision declaration, core competencies, and BSc) are particular tools of the method that provides efficient management of a modern company – strategic management. Special attention is paid to BSc, which are an efficient tool to manage realization of a corporate strategy; it is topical to introduce them as part of a strategic management system at Russian enterprises.

Keywords – *method, management tool, management technologies, ranking, new industrialization, strategy, management.*

I. INTRODUCTION

The problem of identification of key methods and tools of efficient management of Russian enterprises is still an urgent one, owing to the current conditions of new industrialization development. The latter implies changes in the very base of industrialization, which are related to a large-scale introduction of nano-bio-info-cognitive (NBIC) technologies into the production process. Nowadays fundamental changes are taking place; first of all, they concern the processing industry, which is the industrial base of the world’s developed countries. Both industrial production and management apply key technologies of management that provide the most efficient solution to management tasks at each stage of historic development. Those technologies, as well as the set of methods and tools of management, undergo changes in their significance, role, structure, etc. No doubt, under conditions of the new industrialization development, management methods and tools ought to undergo changes as well.

II. RESEARCH METHODOLOGY

This article applies the research methods of economical, historical, and statistical analysis, comparison, and analogy; it also applies the empiric approach to analyze the dynamics of the management tools that managers apply. As for our empiric data, we have used the findings of a field research conducted by scientists of Astrakhan Region over 2006-2016, as well as findings of ranking reviews of Bain & Company over 2000-2013 related to the most popular tools of management in the early 21st century.

III. RESULTS & DISCUSSION

There are different viewpoints upon the essence of management methods and their correlation with management tools. Advocates of one of those viewpoints state that a management method and a management tool are different things. In contrast, supporters of another viewpoint do not differentiate management tools (as techniques) from methods (as means); in our view, it is not quite correct [3; 4]. In our opinion, management methods determine the path, the tendencies of movement, as well as the speed of advancement towards the set goal; they also show how a manager could influence an object of their managerial activities to make a management team operate efficiently. In this sense, methods of management are means to perform managerial activities; they contribute to an efficient execution of this or that management function, to performance of business processes by forming a system of rules and regulations, management tools that provide a productive application of resources to achieve the set goals [5, p. 104-105]. Management methods should be comprehended as means that make it possible to not only put in the right order, set the right goal, and arrange an efficient execution of management functions and corporate business processes, but also influence the internal mechanisms and impulses of self-organization and self-development of the corporate staff. The difference between a method and a tool of management is that a definite set of tools represents the very essence of this or that method of management. The tools are techniques of management activities; their realization reduces costs of time, energy, and other resources to achieve the set goals and provide the right conditions for the best realization of a management method. As for a management tool, we would interpret it as a particular technique that provides solution to particular tasks and contributes to achievement of the set goal; we would interpret a management method as a means to achieve the set goal, which makes it possible to apply tools or their sets consecutively, stage-by-stage.

Methods of management as means to perform managerial activities, similar to other methods to research any other activities, cannot remain unchanged; they ought to change "in their essence together with the object at which they aim" [6, p. 199]. In their activities, managers of modern companies may and ought to apply any methods and tools that appear the most suitable for them under conditions of the new industrialization.

That is why it is quite essential to answer the question: "what modern management technologies (methods and tools) do managers of regional companies apply under the current conditions of post-crisis development and introduction of economic sanctions?" It is quite obvious that management of various regional companies react to negative changes in their external settings differently; they apply different technologies of management that determine their companies' relation to their consumers, competitors, innovations, and the local community at different stages of business development.

Before analyzing and assessing the management tools that regional companies apply, let us consider the findings related to worldwide application of management technologies.

Since 1993, the well-known consulting agency Bain & Company has been conducting regular polls of several thousands of CEOs to identify the most frequently applied methods of management. Its annual reviews include various tools of management based on how actively top management has applied them. The below table provides findings of polling related to the most popular management tools for CEOs in the early 21st century [7, 8, 9, 10, 11, 12]. The polling findings have been assessed depending on a percentage of CEOs who have used this or that tool of the total number of managers and on efficiency of that tool for the company. In most parameters, quantitative rates correlate to the qualitative ones.

One should remark that based of the above definitions of the notions "method" and "tool", practically all the "tools" provided in this table are actually methods of management.

TABLE I. MOST FREQUENTLY APPLIED TOOLS OF MANAGEMENT OVER 2000-2013

<i>Ranking #</i>	<i>2000</i>	<i>2004</i>	<i>2006</i>	<i>2008</i>	<i>2010</i>	<i>2013</i>
1	strategic planning	strategic planning	strategic planning	benchmarking	benchmarking	balanced scorecard (BSc)
2	mission and vision declaration	CRM	CRM	strategic planning	strategic planning	benchmarking
3	benchmarking	benchmarking	segmentation of customers	mission and vision declaration	mission and vision declaration	Big Data analysis
4	outsourcing	outsourcing	benchmarking	CRM	CRM	business process reengineering
5	customer satisfaction indicators	segmentation of customers	core competencies	outsourcing	outsourcing	management program change
6	core competencies	mission and vision declaration	mission and vision declaration	balanced scorecard (BSc)	balanced scorecard (BSc)	complexity reduction
7	complex quality management	core competencies	outsourcing	segmentation of customers	management program change	core competencies
8	cycle time reduction	strategic alliances	business process reengineering	business process reengineering	core competencies	CRM
9	business process reengineering	growth strategy tools	knowledge management	core competencies	strategic alliances	segmentation of customers
10	balanced scorecard (BSc)	business process reengineering	planning based on scenarios and anticipation of unforeseen circumstances	mergers and acquisitions	segmentation of customers	decision-making methods

Source: Bain & Company

Analysis of dynamics of tools that CEOs have been applying over the last years confirms the fact that the most popular and efficient methods of management are four classical technologies: strategic planning (as a tool of the strategic management method), benchmarking, balanced scorecard (BSc), and customer relationship management (CRM). Over the last years, the ranking positions of such tools as balanced scorecard (BSc), core competencies, outsourcing, and benchmarking (application of the best business practices in production and sales) have risen. One should point out that managers apply different approaches in different countries and industries. In particular, managers of large companies apply a larger number of tools than management of medium-sized and small organizations. In addition, the average number of management tools that top managers apply worldwide has been decreasing sustainably – from 15 tools in 2006 to 10 tools in 2011.

For the first time, the tool “Big Data analysis” emerged in the 2013 polling, thanks to the digital economy development. It assumed the 3rd position among the applied tools at once. Even though Russia lags behind the UAS and Europe considerably in application of Big Data and other complicated analytics, many Russian companies apply Big Data for their point sale strategy – Metro, VimpelCom, Lenta, the Alba footwear retail chain, and the Sourcedata and Revo startups [13]. Therefore, application of the Big Data digital tool provides a new source of growth and favorable opportunities for Russian companies, thanks to a profound segmentation of consumer base, application of software, and development of new industrialization technologies.

Of the top ten management tools, according to the Bain’s Russian partner, Russian top management applied just five ones: benchmarking, strategic planning, CRM, core competencies, and strategic alliances [14]. Benchmarking is quite popular among Russian companies (at least 80 % of them apply it more or less actively). Practice shows that CEOs of successful companies often make comparisons with their competitors, regarding comparison of their own performance with the best benchmarks of business practices as a core process of their management activities. Those comparisons involve practically all the members of staff; frequently it is an obligatory stage in making any strategic decision. Direct competitors and market leaders are selected as benchmarks as well, since only market leaders apply the best practices.

For instance, Aeroflot searches for benchmarks continuously. The process of its comparison with its competitors consists of a number of stages: at first, its specialists analyze the competition environment, which includes the benchmarked companies; then they analyze their comparative advantages. As for an efficiency benchmark, Aeroflot applies the Ryan Air. It uses the Turkish Airlines as a growth rate benchmark, the Lufthansa as a sales volume one, and the Air China as a business capitalization one.

Once one has analyzed the dynamics of findings of managers’ polling, it becomes obvious that the tool “strategic planning” is always at the top of the ranking list. No doubt, this is because over 88 % of companies apply it worldwide.

According to particular assessments, over 70 % of Russian large companies use this tool in their everyday activities. Managers of well-known large Russian companies (ROSN, MTS, Rosatom, Transmachholding, Kamaz, etc.) apply strategic planning actively; they have special committees for strategy. Those committees hold regular sessions to develop strategic plans and enhance the functional and general organizational strategies. The Balakovo Nuclear Power Plant, Transmachholding, and other advanced companies even implement a further development of strategic planning – hoshin kanri, which is one of the most efficient systems to develop a corporate strategy and plans.

A general review of management tools according to the Bain & Company’s ranking confirms importance of the tool “strategic planning” for managements’ everyday activities; most of those tools are tools of the strategic management method. It is well-known that the object of strategic management is “...identification of sources of comparative advantages and efficient mechanisms to achieve them in order to provide a company’s survival under conditions of a continuously changing business environment” [15, p. 1]. Besides strategic planning, core competencies, mission and vision declarations, and balanced scorecard are actually particular tools of the method “strategic management”.

Since 1990s, managers’ satisfaction of applying this tool has risen owing to the changed approach towards competition – from a structure-based one (according to M. Porter) to a resource-based one, which dwells on development of core competencies. Thus, according to the Bain & Company’s polling, satisfaction from applying the core competencies has risen from 3.83 of 5 points in 2000 to 3.9 in 2010.

Obsolescence of the structure-based approach towards competition is due to the fact that, on the one hand, many companies, which applied tools of the competition analysis by M. Porter, have learnt how to provide a good analysis of their industries, how to position their companies objectively and develop the right strategy. On the other hand, it resulted in a large-scale imitation of each other’s strategies and intensified competition. To differ from their competitors, companies had to learn how to develop their positive differentiating organizational specific features, i.e. their core competencies; their internal resources and capacities (i.e. what differentiates them from their competitors in a beneficial way) were to be of top priority. More and more frequently, corporate resources and capacities were regarded as the main source of comparative advantage and the base to form the corporate strategy. It is well-known that the core competencies must, firstly, be of undoubted value for consumers, secondly, it must be difficult for competitors to imitate them, and thirdly, they must provide access to numerous markets. Therefore, the core competencies are a tool of strategic management, which, as a process of strategic learning, aims to create and apply special distinctive competencies that are quite difficult for competitors to reproduce.

In Bain & Company's 2013 ranking review, the balanced scorecard (BSc) assumed the 1st position absolutely naturally; it was continuously rising from the 10th position in 2000 to the 1st one in 2013. One could fully agree with the assessment of this tool that the Harvard Business Review provided; this journal acknowledges BSc as the most significant tool of management over the last 75 years. Its authors – R. Kaplan and D. Norton – became management gurus recognized worldwide. In our view, the main contribution of BSc is that it has become an efficient tool to manage **the corporate strategy realization**, which is quite a topical task in setting a strategic management system at enterprises. Meanwhile, according to some researchers, under 10 % of US corporation realized their thoroughly planned strategies successfully in early 1980s [16]. It was revealed that the reason for their failures was mostly not the quality of the very strategies, but numerous errors in their realization, disagreement of strategic plans with everyday activities of staff members. Strategies were developed by top managers and executed by common staffers, who were not involved in strategy development and therefore were not financially interested in execution of that strategy.

The polling revealed a large-scale worldwide application of this tool. According to the Fortune journal, BSc is the main tool to realize strategic goals in 402 of 500 companies included in the Fortune-500 ranking (General Electric, BMW, Coca-Cola, etc.). In Russia, BSc is applied by not only large companies (LUKOIL, Severstal, etc.), but also medium-sized and small enterprises nationwide.

BSc does not substitute strategy development; it is a tool of its successful realization; it helps realize strategic plans by translating them into the language of operational management and controlling the strategy realization based on the KPI – key performance indicators.

The basic idea of BSc is to provide managers with necessary information to control realization of the selected strategy in a concise and well-structured form, as a system of indicators. BSc is a modern management technique, a mechanism of staff members' continuous informing of corporate goals and control of their achievement by applying the KPI.

During the BSc implementation process, the strategy is displayed as a strategic map (SM), which links different-level strategic goals with causative-consecutive links. At any company, the BSc setting process includes the following stages:

1. Development of strategic goals in all the four projections (constituents) of BSc: finances, market (clients), internal business processes, personnel training and development.

2. Composition of a strategic map to display the logical causative-consecutive link between goals of different projections and the general goal of the organization in a visual graphical form.

3. Determination of the key performance indicators (KPI) to estimate the degree of achievement of the set goals (they help assess advancement towards the general goal).

4. Determination of the target values of indicators (by grounding on the basic values that have been achieved by the current moment).

5. Development of strategic events (initiatives, projects, programs, proposals that are realized to achieve the strategic goals).

To realize the strategy efficiently, it is necessary to coordinate each staffer's and each unit's efforts on the base of BSc and direct them to achieve the corporate strategic goals. The selected new strategy is continuously realized by introducing strategic changes in top management, in organizational management structures, in information and control systems, in application of human resources and their motivation, which are to support the strategy developed by the organization.

The BSc technology of management unites two concepts in the most efficient way. Those are the concept of selection of quite a simple tool to manage the strategy realization and the concept of KPI large-scale application. Practical experience of BSc application at Astrakhan Region's enterprises confirms that the balanced scorecard system is a widely spread management technology that managers of mainly small and medium-sized companies apply; it frequently assumes the top positions in ranking lists of management tools.

IV. CONCLUSION

Based on the findings of our research, one could conclude that the most popular tools of strategic management in the region are the following four tools: BSc, CRM, benchmarking, and strategic planning. Our field survey was conducted among CEOs of Astrakhan Region in 2012-2016. The undertaken analysis has proved that efficiency of applying a number of management tools at regional enterprises was decreasing considerably owing to substantial drawbacks in their application.

First of all, it concerns BSc and KPI, which are in close relation with it. The main drawback, owing to which a well-developed corporate strategy was not eventually executed successfully, relates to managers' inattention to annual correction of KPI in accordance with changes of the general strategy. KPI, which reflect the strategy development directions in each strategic projection and which relate to material bonuses for their achievement, were not corrected on an annual basis, so common staffers' efforts were directed to goals that do not arise of the adopted strategy. The tool of strategic planning was applied rather formally in many organizations; common members of staff were not involved in development of strategic goals as per the BSc projections; thus, ordinary staffers did not participate in formation of the corporate strategy.

P. Drucker's MBO (management by objectives), which has been applied for a long time, is used at a rather small number of regional enterprises; there was even a precedent when a new CEO liquidated the MBO system that had been performing successfully.

Even though the list of tools by Bain & Company does not include MBO, or self-organizing teams (holacracy), or flexible methods of management such as the Agile adaptive model, or other tools typical for the new industrialization, emergence of the Big Data tool on the 3rd position of its 2013 list acknowledges the birth and development of the era of digital economy, for which many regional enterprises are already getting prepared. The most active companies of Astrakhan Region are already applying ideas of the new industrialization in practice by implementing the most modern management techniques (the Agile flexible technology, the principles of self-organizing holacracy), launching requisite organizations, etc. First of all, those are the Astrakhan Branch of Sberbank and a number of regional IT companies (Pilot, Agent Plus, Adeptika Plus, Best Soft, etc.) [17, 18]. As for self-organizing companies, only two Russian organizations have adopted holacracy – Knopka from Yekaterinburg and the Tochka online service, which is a branch of the Bank Otkritie. These companies emphasize each staffer's self-control, establishment of a control system based on the horizontal principle, when your colleagues' assessment is of primary importance for you. The conducted research has also proved regional managers' strong belief that the new industrialization is impossible, first, without formation of a new type of a manager – a leader who can motivate people and sustain the team spirit, second, with all the staff members' active participation in their joint work; most staffers should be entitled to make decisions.

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