

The efficiency of enterprise management system and ways of its improvement

The article offers an approach to determining the effectiveness of the enterprise management system. A strategy for development of the system in the conditions of the crisis observed in the domestic and world economy is worked out.

Strategic management, the effectiveness of management systems, ways of enterprises competitiveness improving.



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At the present time in connection with the observed in the world crisis phenomena forcing many companies to move to a regime of strict economy, one of the most important and widely discussed questions is about searching for ways to improve the enterprises' efficiency.

Let us determine the views on this issue.

Improving the efficiency of an enterprise is possible in two cases: a) when the cost of resources is fixed the value of the goods or services is increasing, b) when the value of the goods or services is constant the required resources production is decreasing. Of course, the greatest result is achieved when the value of goods (services) is increasing and the costs of resources is reduced at the same time, but subject to the crisis and in order to improve competitiveness the second option is still more preferable.

Acceptance of this proposition allows considering factors limiting the possibility of the resources cost reducing with a constant value of cost. The main of them, in our opinion, are:

1. Technical capability of the production system.
2. The available labor force, characterized by quantitative and qualitative (including skills and motivation) parameters.
3. The control system efficiency.

There is understanding that enhancement of the effectiveness of the company without the modernization of the production system is impossible on the vast majority of domestic enterprises. This is expressively demonstrated by the increase in the cost of technological innovation in Russia in fact, current prices for the period from 2000 to 2006 increased from 62,1 billion rubles to 211,4 billion rubles or

by 3,4 times. At the same time, the number of advanced production technology increased by 2,4 times (in 2006 it was introduced 168.3 thousand whereas in 2000 – only 70)¹. However technical re-equipment is usually one of the most expensive ways to increase productivity.

Questions of staff training have always been and remain in the area of management's attention. However, although the process of staff training and retraining is not so expensive compared to technical re-equipment², it is much longer. Another problem related to human resources is that a person comes to a company with already-formed attitudes, values, principles, and it is almost impossible to change and adjust them without his/her desire. But as practice shows, the vast majority of workers do not have this desire. In addition, increasing the skills of workers significantly and thus their competitiveness, the company runs the risk to waste resources in case the workers quit.

The fact that management system is improved can increase the company's efficiency significantly has been known since the time of *F.W. Taylor*. For example in the book "The principles of scientific management" he writes: "... the destruction of slow and listless work in all its forms and the establishment of such relations between entrepreneurs and workers, under which each worker will work for most benefits for themselves and with maximum productivity, combined with the maximum cooperation of workers with the Directorate of the company and assistance provided by management, as a result should lead to an increase in output per worker and per machine, in average almost twice. What other reforms ... can give

so much to increase welfare, reduce poverty and alleviate suffering?"³.

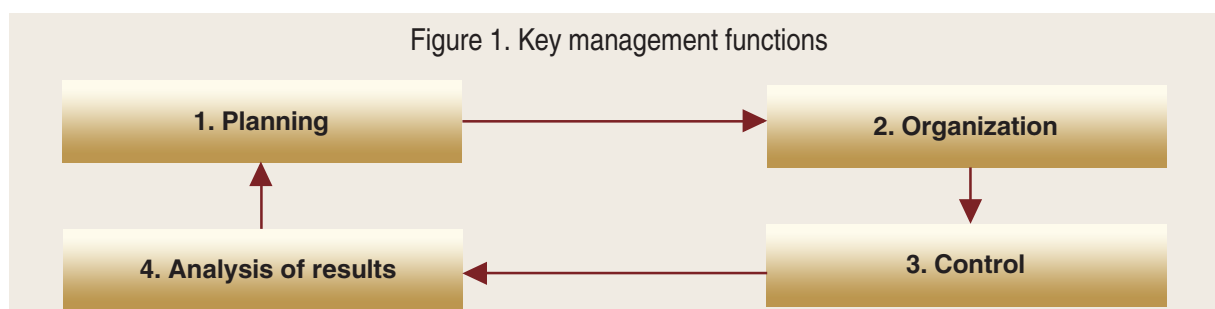
Using a systematic approach to management allows visually illustrate and confirm this proposition. Thus, the control system is designed to ensure consistent implementation of a number of basic management functions⁴ listed in *figure 1*.

Since in this case we are dealing with a system, its efficiency will be determined by analogy with the calculation of the efficiency in technical systems by the product of the efficiency performance of each of the designated functions.

Given the importance of the analogy defining the further logic we compare the definition of efficiency and effectiveness ratio that is used in the economics.

Efficiency is the characteristic of the system efficiency (devices, machine) in respect of energy conversion or transfer, it is determined by the ratio of the used energy to the total amount of energy received by the system. Because of the inevitable loss of energy to friction, heat, etc., efficiency is always less than unity. Accordingly it is expressed in fractions of spent energy, i. e. as a proper fraction or in percentage, and is a dimensionless quantity.

The efficiency coefficient (EC) is qualitative indicator of the level of economic efficiency expressed in the relative value. It is the ratio of the obtained economic results (e.g., the amount of profits or savings from the reduction of production cost) to the incurred costs. The efficiency coefficient can characterize the economic efficiency of production as a whole, investment, cost-effectiveness of new technology, etc.⁵



The definition shows that the efficiency characterizes energy conversion efficiency. Let us hypothesize that the same is happening at the enterprise or organization, the difference in the accounting system – power is measured by money and time. As a result, we get a lot of options for the management system operation depicted in *figure 1*.

Let us list the major ones:

Option 1. “The control system is working perfectly”.

$$EC 1 = 1 \times 1 \times 1 \times 1 = 1$$

Option 2. “Effectiveness of one of the management system functions implementation is less than the other functions”.

$$EC 2 = 1 \times 1 \times 1 \times 0,8 = 0,8$$

Option 3. “One of the management system functions is not working”.

$$EC 3 = 1 \times 1 \times 1 \times 0 = 0$$

Option 4. “All management system functions work, but insufficient”.

$$EC 4 = 0,5 \times 0,5 \times 0,5 \times 0,5 = 0,0625$$

The given examples show that the difference in the effectiveness of the control system between the first and fourth options is 16 times! At the same time, the fourth option (or one close to it in its point) is, in our opinion, the most common⁶.

The performed calculations allow formulating several conclusions:

1. If at least one of the main management functions is not fulfilled, the entire system does not work; as a result the defined goals are not achieved by the management object.

2. Management system efficiency is determined by the efficiency of the most poorly implemented function (the «weak link» principle)⁷.

3. The more levels management system has (subsystems, components), the lower the efficiency of its operation.

4. With the growing complexity management system effectiveness is reducing. At the same time, its complexity must be adequate to the complexity of the management object.

5. The more inefficient the management system, the more resources (time, financial, material) to achieve specified results are required.

The fifth statement is the most important for the purpose of enhancing the effective company functioning. *figure 2* presents it in practice.

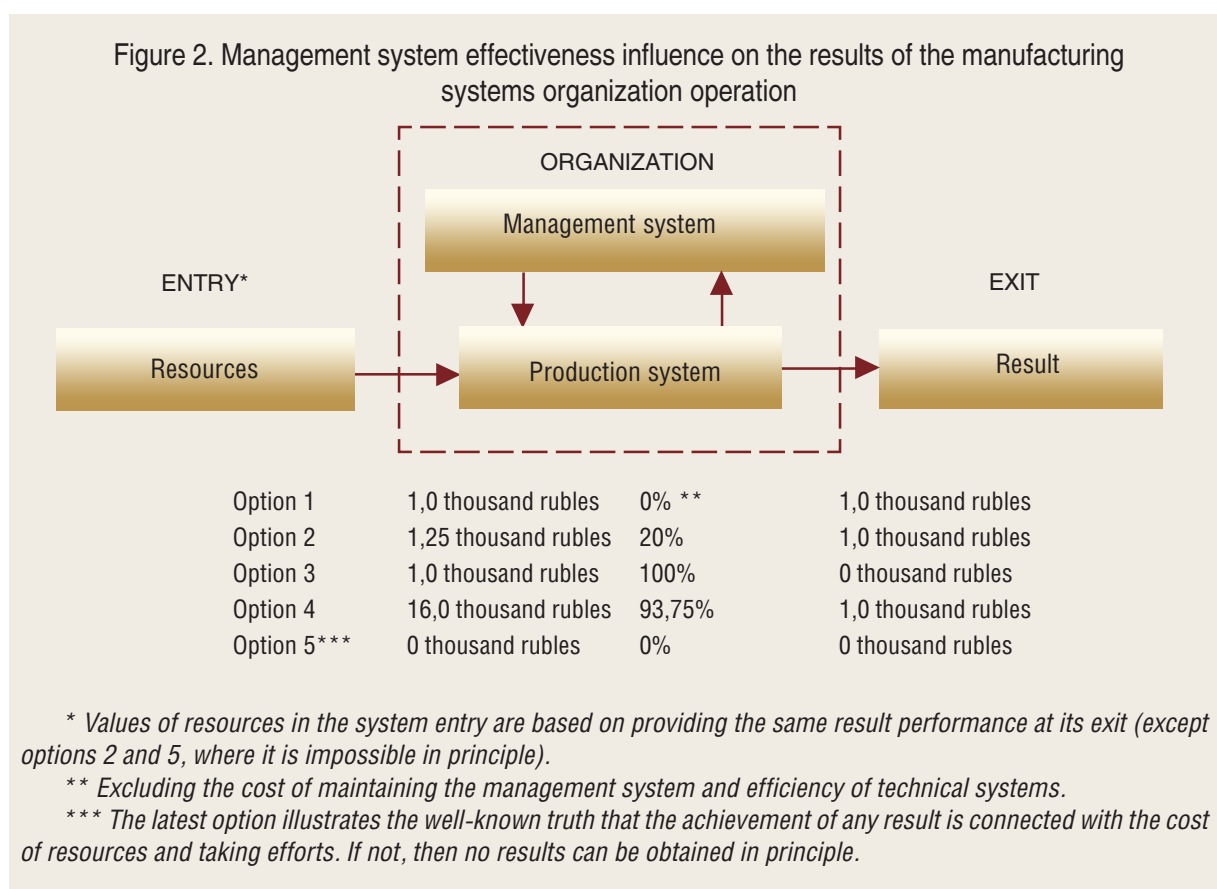
It should be noted that if the cost of material and financial resources to carry out various tasks and projects for companies and organizations in one form or another are recorded, the time and its losses are usually not taken into account (except in situations where the accrual of wages or prices require calculation labor)⁸. This is particularly true of the managers' and employees' time.

In what direction should the management system be changed? Which strategy should be followed? As is clear from the above scheme (see *figure 1*), *the first step* is to draw attention to how well the company performs the basic management functions (planning, motivation, accounting, control, etc.).

The second step is optimization of “conversion”, relations between the functions and the professionals responsible for them, under the management system.

The third step is improving the effective implementation of management functions across the management levels. The tasks to be resolved at each level differ in complexity fundamentally and require different competencies (*fig. 3*).

Many chief executives are able to match tasks and resources well (operational level), but there are very little professionals able to deal with strategic objectives – to determine the mission of the company, to develop a vision, etc., yet⁹. An example is the following fact. Number of mobile phone users in Russia has increased tenfold from 2000 to 2007! Try now to identify a market segment, which in the coming years, and in addition during the world crisis, is expected to grow at the same pace.



At this stage the tasks must be resolved and distributed according to management levels priorities and responsibilities. Each manager must primarily focus on issues in the area of personal responsibility. This is especially important for senior managers who are inclined to devote too much time on operational matters at the expense of strategic ones¹⁰.

The fourth step is improving management system in the context of functional areas (fig. 4).

Let us consider how the management of domestic companies in recent decades was developing. Most chief executives, who worked under command-administrative system of governance, were responsible only for making operational and tactical decisions. Their primary function was to ensure the uninterrupted release of the desired output of certain range and quality in the required time. Policy issues – what to produce, where to produce, etc. – were within the competence of certain ministries and departments.

Under the transition to the market “plants» – the production units – have become “companies”. The area of the chief executive’s responsibility included additional issues of developing and implementing strategies, and issues related to finance (pricing, marketing, investments, etc.). This has required managers to experience a range of entirely new skills. It is natural that not all of them were able to fit into the new environment quickly.

Further development strategy, the need for which is due to the increasing competition, should focus on two areas of work – to build effective relationships with customers and innovation development. These actions, as well as in the previous case, require substantial changes in the management system, its complexity and again the chief executives develop new skills.

Why didn’t these changes occur large-scale in recent years? The answer is obvious. Any change requires costs, which, accordingly, should be covered. At the same time, the

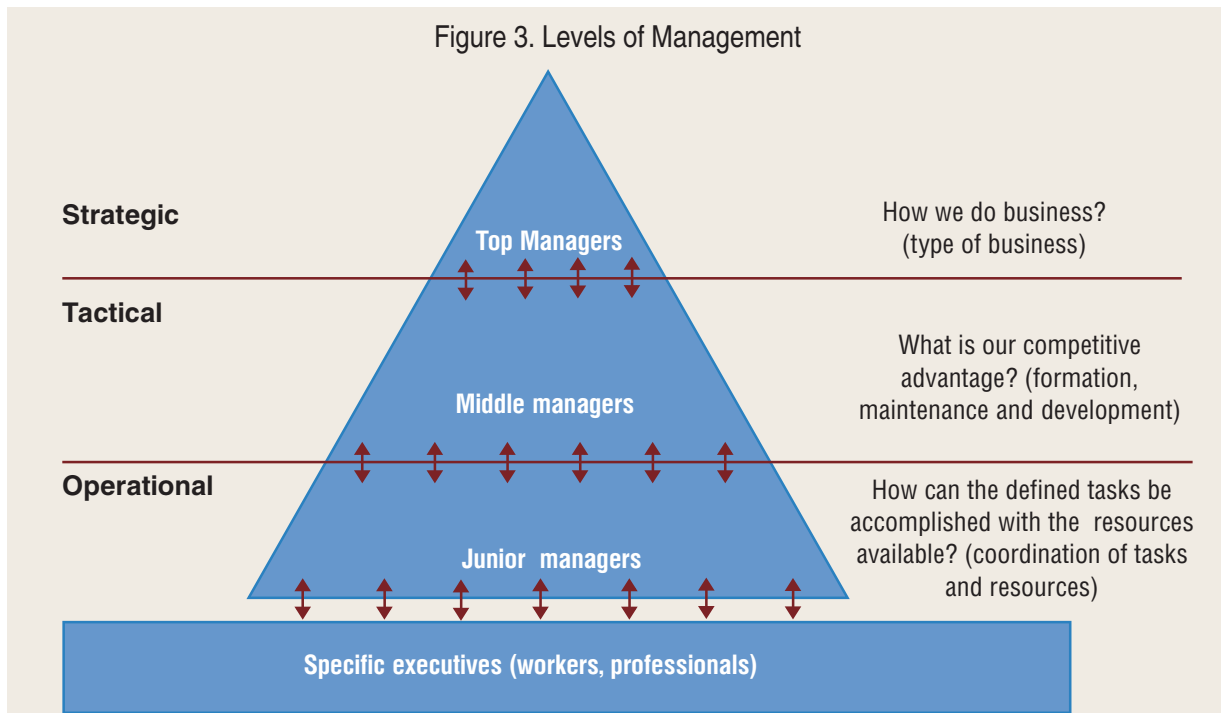


Figure 4. The development of management systems in Russia

The matrix shows the development of management systems in Russia. The vertical axis represents Levels of management (Strategic, Tactical, Operational), and the horizontal axis represents Areas of analysis (Time, Quality, Cost, Relations with customers, Innovations). A blue arrow points upwards from the Operational level to the Strategic level, and a red arrow points downwards from the Strategic level to the Operational level. A red arrow also points from the right side of the matrix back to the left side.

Areas of analysis \ Levels of management	Time	Quality	Cost	Relations with customers	Innovations
Strategic	Yellow	Yellow	Yellow		
Tactical	Light Blue	Light Blue	Yellow		
Operational	Light Blue	Light Blue	Yellow		

objective of changes in the management system is to get new or retain existing competitive advantages. Thus, if competition in the market on which the company works is not growing, then there is no incentive to change something fundamentally (e. g. a monopoly). However, when competition is rapidly increasing, as now,

when the number of paying customers is declining, the changes are necessary. The experience of large domestic companies operating in the highly competitive global market can be given as evidence: they have organized both work with clients, and research and development departments long ago.

This refers to companies that were formed on the basis of production capacity and created in Soviet times. It is clear that if a company starts “from point zero”, the first question that the owner or manager must answer is: what’s new and valuable can be offered to a customer? And based on the answer to this question tactical and operational management is organized.

Each square of the above scheme (see figure 4) contains all the basic management functions. That is, for example, there is a strategic, tactical and operational management of time. It includes strategic, tactical and operational

time planning, time accounting and control, etc. And if at the top level one can operate for decades, at the operational one minutes and seconds are often considered.

Having briefly described the sequence of steps that can be taken in the direction of management system development, in conclusion it should be stressed once again that the efficient management system is a powerful competitive advantage of companies. In crisis the system is of particular value, as a tool to interact with the external environment effectively, to achieve the defined goals at the lowest cost and losses.

Notes

¹ Regions of Russia. 2007: stat. coll. / Rosstat. – M., 2007. – P. 824; Russian statistical yearbook. 2007: Stat. coll. / Rosstat. – M., 2007. – P. 619-620.

² Except certain professions.

³ Taylor, F.W. The principles of scientific management / F.W. Taylor [Electronic resource]. – Access mode: <http://ek-lit.narod.ru/tail001.htm>

⁴ The composition of the basic management functions from the time of their discovery by H. Fayol varies. Here is only one of the available treatments, but for the purposes of this study, this fact is not crucial.

⁵ Source: [Electronic resource]. – Access mode: <http://vseslova.com.ua>

⁶ Since we have identified similarities in the calculation of the technical and socio-economic systems efficiency, then we venture to suggest that the effectiveness of the company or organization as a whole (or its structural units) are determined by the product of technical efficiency of management systems’ efficiency coefficient.

⁷ The logical conclusion here is that firstly the management system should be improved by this “weak link” elimination. Then the following «weak link» is defined and also is eliminated, then the next, etc. This approach differs significantly from the generally accepted, i. e. to improve the performance of all management functions at all levels at the same time. It is much cheaper and easier.

⁸ It should be noted that since every organization is an open social and economic system, the resources it draws from its external environment and the results of its work are also directed to meet the needs of the external environment. Under these conditions the organization’s effectiveness depends on the ability of its management system to organize the effective interaction with the external environment to a certain degree. However, these issues require further research and are beyond the scope of this article.

⁹ For example, the data we obtained during the special questionnaire survey of managers shows that in 2008 only 45% of the Vologda region enterprises had a formalized strategic development plan. The proportion of enterprises having ready business plans to implement was at 36%.

¹⁰ As a basis here you can take the structure of senior managers’ time proposed by R.A. Fathutdinov: 40% of the time is devoted to strategic objectives; 25% – tactical, 35% – operational (www.elitarium.ru).