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**THE IMPACT OF THE KEY QUALITY OF A SYSTEM
ON THE SHAPING OF STRATEGIC METHODS
OF CONTROLLING**

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**О ВЛИЯНИИ ОСНОВНОГО КАЧЕСТВА СИСТЕМЫ
НА ФОРМИРОВАНИЕ СТРАТЕГИЧЕСКИХ ТЕХНОЛОГИЙ
КОНТРОЛЛИНГА**

The paper deals with the nature and role of the key quality of a system as the element of the systemic concept of controlling; we consider the impact that the key system quality may have on how a company chooses its strategic activity areas.

SYSTEM APPROACH, CONTROLLING, KEY SYSTEM QUALITY, ENVIRONMENTALLY RESPONSIBLE BUSINESS, QUALITY MANAGEMENT STRATEGY.

Обсуждается содержание и роль основного качества системы как элемента системной концепции контроллинга, рассмотрено влияние основного качества системы на выбор фирмой стратегического направления деятельности

СИСТЕМНЫЙ ПОДХОД, КОНТРОЛЛИНГ, ОСНОВНОЕ КАЧЕСТВО СИСТЕМЫ, ЭКОЛОГИЧЕСКИ ОТВЕТСТВЕННОЕ ПОВЕДЕНИЕ ФИРМЫ, СТРАТЕГИЯ УПРАВЛЕНИЯ КАЧЕСТВОМ.

The processes going on in various business areas (a necessity to consider market turbulences, the increasingly important role of intellectual resources, more focus on social and environmental responsibility of businesses, etc.) make us consider the fact that a system approach to the nature of an enterprise, to the forms and methods of controlling it have to be revised.

An enterprise (company, firm, organization) has been traditionally regarded as a system. However, existing views on the nature of such a system are undergoing a substantial change. For a long time, an enterprise has been looked upon as a complicated or even an extremely complicated system; on the other hand, the approach used to analyze such systems has been similar to that applied to engineering systems. However, thanks to the works of several biologists both Russian and Western (P.K. Anokhin [1], U. Maturana and F. Varela [2]) who have revealed a resemblance between functions of biological and social objects, a company began to be viewed as something similar to a living organism. In the recent decades, we have witnessed the shaping of a new

approach of considering to an enterprise is a social-cultural system [3–5].

The evolution of ideas concerning how we understand the nature of an enterprise requires an adequate interpretation of what the term «to control a company» means. In social economic systems, processes of control proceed in a conscious, intention-based way, i. e. they takes the form of controlling. It should be noted that the concept «controlling» has not been widely accepted in its uniform, standardized meaning. Currently, we can talk about several co-existent schools of «scientific controlling», most authoritative of which are the Anglo-American school and the Continental school (German language).¹ The research of various aspects of controlling done by Russian scholars, demonstrates a heterogeneity of approaches among which we can single out the *instrumental*, the *vector-based* and the *systemic* ones. The most promising of them, from the point of view of

¹ A review of different definitions of «controlling» reflecting the approaches of the mentioned schools of science can be found, for instance, in [6].



how the nature of controlling is revealed, we believe to be the systemic approach.² One of the essential features of the system-based concept of controlling is the notion of the «key system quality» that largely defines the behaviour of a system (in this case – of a company).

Regardless of the fact that, there are different approaches to the interpretation of the nature of controlling, all theoretical and practical schools of controlling focus currently on the development of strategic methods for the intra-company control.

The purpose of this paper is to consider and analyze the notion «key system quality» applied to a commercial enterprise, and to characterize how this key quality of a company impacts its strategic line of activity.

Key System Quality

The term «key system quality» is used in the system theory to explain the nature of a control process. Thus, in [11] we read: «control is a function of a system focused either on the maintenance of the key system quality, i. e. the combination of features the loss of which leads to the destruction of the system in a changing environment, or on the implementation of a plan aimed at ensuring stable work, homeostasis and attainment of a certain goal».

For a long time, however, as applied to social economic systems, the term «control», in a systemic sense,³ has been considered in the context of the so-called teleological approach [5, 12, 16] that implies primarily the goal-oriented function of a company. There is an opinion that control without a goal is impossible. This approach is typical of the mechanistic description model of the nature of an enterprise (the first phase of the evolution of views on the nature of a company).

At the same time, the systems theory discriminates between the notions [11, p. 774] of «the goal of activity» (an actual specific goal) and the «goal – aspiration» (the goal = the ideal, a potential goal). This stance has been

² Various aspects of this concept have been worked out by the author of the paper in [7–10, 25].

³ As is well known, «control» is often fully identified with «management». See criticism of this approach in [9]. «Controlling» as the implementation of a control cycle in social economic systems implies directing («pushing») a company's management along the channel of a control cycle in its systemic meaning.

recently supported, for instance, in the works of G.B. Kleiner who writes [13]: «In the systemic paradigm, the goal of setting up a company can be specified in independent terms, while the goal of the work of a company (its day-to-day activity) can be formulated only as the creation of conditions for carrying on and improving this process».

The evolution of views on the nature of a company and the development of the systemic paradigm has led to the shift in views on the role of a *goal*. Thus, for instance, following the ideas of Ya. Kornai [14], B.G. Kleiner draws attention to the neutrality of the systemic paradigm in relation to the teleological approach to the analysis of an enterprise [13]. The concept of living systems (the second phase of the evolution) and the social cultural approach (the third phase of the evolution) do not place so much importance on a goal, as is the case within the framework of the mechanistic approach. Today new aspects are coming to the foreground [3], as follows: the goal of existence of a «living system» is regarded to be survival; social cultural approach entails focusing on the matching of the interests of goal-seeking elements between each other and with the whole of the system.

In relation to the above, in order to explain the meaning of the process of controlling a company (enterprise/organization) it seems to be quite reasonable to use the term «key system quality» (KSQ), that is, as we remember, a combination of features and properties the loss of which brings about the end of a system. In the light of today's views on the nature of an enterprise, it is the revealing of the combination of such features which becomes one of the most essential problems to be solved on the way towards ensuring a company's success in its day-to-day business activities: it means that we have to know what needs to be protected and preserved.

Taking into consideration the fact that a company is an economic system, the necessity to follow economic principles is to be naturally reckoned among these qualities and features, that is, to ensure a combination of production factors: following an economic principle reflecting the fact that resources a company has at hand are limited, following the principle of financial balance, following the principle of profitability of commercial enterprises. On the other hand, the above principles can not be used for characterization of a

specific given company as they are to be followed and complied with by all and everybody.

At the same time, a company is a system that can be classified as a social one. Recently several colleagues have paid special attention to this fact: see [4, 5, 15, 16]. In our view, it is this that exerts a substantial influence on the shaping of the KSQ. There are grounds to believe that within the paradigm of a living system this process is defined by the personality who runs a company (see, for instance, [17]) and builds around him/herself a «club» of co-workers. To reveal the specific features of the process of shaping the KSQ of a «multi-mind system» means to carry out additional research. On the other hand, as J.Garaedagi maintains [3], it is the common corporate values that keep the organization members together.

In theoretical perspective, the problem of defining KSQ is similar to defining a system's identity. In his papers and books, U. Maturana stresses that «identity», when used to characterize, in particular, a human being as a system, is the «only stable element in all transformations throughout his/her personal history»[19].

Apparently, the key quality of a system should be reasonably interpreted as the identifiable image of a system that can be formulated as a combination of the principles of its functioning, among which the common corporate values have a special place. The setting of functional (local) goals is defined by the particularities of the key system quality, naturally enough, with regard to the existing specific context.

The problem of defining the KSQ of a system can not be recognized as sufficiently meaningful, unless we trace its impact upon the behaviour of the system. In our opinion, this impact, or influence, can be revealed, for instance, by means of analyzing the motives a company is guided by when it chooses between strategic methods of intra-company control it wants to adopt.

The Influence of the Key System Quality upon the Choice of Strategic Methods of Intra-company Control

We shall examine the manifestations of the influence of KSQ upon strategic company management decisions by the example of various types of company behaviour in relation to the problem of environmental responsibility of business entities.

The fact that companies begin developing and implementing their own environmental policies should be first and foremost linked to the specific nature of today's institutional environment which is more than rich in requirements to and limitations on business activities impacting their ecological setting. In this situation, each company responds to existing institutional limitations in its own particular way, showing various degrees of voluntariness to obey. At the same time, such enterprises still have to meet their economic challenges. But in this case, as in each and every other one, the problem of voluntariness is of no small importance. As is widely known, some companies opt for a total disregard for the problem of environment and pay fines, while others try to avoid such situations. We can say more than that: it often happens nowadays that implementation of socially and environmentally responsible policies is viewed by businesses as another way of commercializing. Alongside with this, as we know, there are other companies that provide support for various environmental measures on charity grounds. In our view, these differences are the manifestation of the forms of the «key quality» specific to each particular company, i. e. of the set of principles by which the management of a company is guided in its decisions.

The differing degree of voluntariness in choosing a strategy towards institutional and traditionally economic aspects of doing business helps us rubricate enterprises with the aim of subsequently characterizing the particular features of the functional methods of controlling adopted by each of the below groups.

First of all, in respect of the voluntariness of compliance with institutional requirements, all companies can be divided in two groups. The first group comprises the enterprises for which a commitment to comply with institutional environmental norms is not an element of their key quality but is caused by other factors; the second group comprises companies which view the socially and environmentally responsible behaviour as one of the basic principles of their business. In connection with this, one may expect that entities in the first group will carry out their business always looking back at environmental problems but in a forced, involuntary way; companies belonging to the second group, on the contrary, will opt for environmental policies willingly.

Degree of voluntariness of complying with institutional requirements	High	Businesses supporting environmental measures by way of philanthropy (IV)	Businesses using environmental measures as an instrument of economic effect (III)
	Low	Companies for which environmental measures are a side-work required by law (I)	Companies whose economic performance relies on whether the environmental characteristics of the control object are ensured and maintained (II)
		No	Yes
Taking account of how the fulfillment of a company's' environmental commitments impacts its performance			

Fig. 1. Company positioning in relation to the degree of voluntariness of their commitment to take account of the institutional and traditionally economic aspects of business activity during implementation of environmentally responsible policies

Next, each of the two groups, in its turn, can be further broken down into two sub-groups depending on how important it is for a company that its compliance with environmental requirements might potentially improve its economic performance.

With regard to the circumstances mentioned above, we can, eventually, single out four categories of business enterprises. It seems to be obvious that each of the company categories has an intrinsic specificity related to how control problems are solved, and, consequently, which functionally particular methods of controlling are used. Thus, for instance, companies in group I, for which environmental measures are a forced choice, are usually engaged in mineral resource extraction and processing. Their business activity is done in circumstances that involve serious institutional limitations. For them the most important controlling instruments shall be as follows: collection and taking account of environmentally significant data; monitoring and evaluation of environmental conditions; environmental risk insurance, along with carrying out research in the field of environmental protection and implementation of state-of-the-art green technologies [26].

Companies in group II are enterprises relying on use of natural resources, i. e. viewing such resources as the object of control (agriculture, recreational woodland management, etc.). A necessity to pay attention to environmental problems in this case proceeds from not institutional requirements but the properties (nature) of the object of control. It often happens in such companies that for them the most significant management problem is to find

and apply appropriate instruments and tools in the area of «production» management. Solution of such problems in international practice is often linked to the concept of «adaptive management» (see, for instance, [20, 21]).

For business entities that make their commitments to environmental protection with the aim of attaining better economic results (group III), this type of behaviour is coupled with the necessity to take into account the concept of the strategic cost-generating factors (see, for instance, [22]).

For companies that view environmental protection activity as their corporate charity (group IV), the analysis of a company's business goal pattern with regard not only to traditional goals (growth, development and profit) seems to be more important, but also to such a goal as implementation of social environmental policies.

Obviously, the above typification can not and should not be too «strict». We understand, for instance, that companies in groups I and IV may have certain economic interests linked to environmental protection measures. At the same time, some companies in group II may quite as well disregard the requirements of environmental friendliness towards the controlled ecosystem, not caring about their own future but only formally complying with legislation and paying fines and penalties if necessary, thus shifting towards group I or even altogether leaving the boundaries of the proposed classification¹.

¹ See more on the issues of positioning (classifying) companies by the degree of voluntariness of their compliance with institutional and traditionally economic requirements while choosing a responsible environmental policy in [23].

A similar approach can also be applied to the analysis of how KSQ impacts the choice of certain quality control policies by companies. It is well known that the actual quality level is determined by measures generating two types of cost [24]: *quality assurance costs*, aimed at eliminating the possibility of faulty products, and *quality non-compliance costs* generated if faulty products occur. Depending on what stance a company's management take, as determined by the chosen company mission and the degree of responsibility on the part of the management and the personnel (which reflects the KSQ of the business), different types of enterprises may be found which view the problem of quality assurance and, accordingly, the control schemes to be used for this purpose, in their own way. In Fig.2 we show a diagram of company grouping that reflects how the KSQ manifests itself in relation to the product quality control concept.

Focus on measures generating «quality assurance» costs	I	IV	III
	+	I	II
		+	-
	Focus on measures generating «quality non-compliance» costs		

Fig. 2. Company positioning by the degree of focus on quality assurance or quality non-compliance costs

Companies in group I strive to minimize costs related to both «quality assurance» and «quality non-compliance» measures, which may not lead

to the elimination of faulty product. Group II companies try to minimize «quality non-compliance» costs by investing more resources in «quality assurance»; ideally this leads to the 100% quality of product. Group IV companies minimize costs linked to «quality assurance», which, accordingly, increase the possibility of faulty products and «non-compliance» costs. Obviously, these companies can not be called client-oriented. And, finally, group III: apparently, such businesses are inexistent. If no attention is paid to the problem of quality, such companies will most probably get into group IV.

Conclusion. The evolution of views on the nature of an enterprise and on the idea of a control process as a system draws out attention to the concept of the «key system quality».

The key quality of a system should be interpreted as the identifiable image of a system that can be formulated as a combination of the principles of its function, among which the common corporate values have a special place.

The setting of functional (local) goals is defined by the particularities of the key system quality with regard to the existing specific context.

The impact the KSQ on how a company chooses certain forms and methods of environmentally responsible behaviour (policies) manifests itself in the appearance of several types of enterprises depending on which specific tools and technologies of strategic intra-company control they apply.

The analysis of the KSQ impact on the choice of certain quality control policies by companies helps us define a range of enterprises which view the tasks of product quality assurance in their own specific way.

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