

## THE APPLICATION OF SYSTEM APPROACH IN MANAGEMENT THE ACTIVITIES OF THE ENTERPRISE

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The article describes the chronology of the creation of the concept of «system approach» given the evolution of the content of this concept. Proven the usefulness of systemic approach in the organization management, and the stages of its progressive implementation to the management.

**Keywords:** system, management, system approach, organization, systems thinking.

**Statement of the problem.** The current economic situation is characterized by dynamic changes in the external environment. Market changes, characterized by integration and globalization processes have significant influence on the process of interaction of the enterprise with the external environment. The influence of the second constantly increasing. The successful functioning of a modern business entity that is a complex open socio-economic system, efficiency is determined by the interaction of the management system elements within an organization and the organization with the external environment.

**Analysis of recent researches and publications.** The study of the development activity of enterprises and organizations from positions of the system approach focuses on the work of many domestic and foreign scientists. Among them, A. A. Belyaev, E. M. Korotkov, Y. A. Smirnov, V. M. Yachmeniova, J. K. Lafta and others. The idea of consideration of the organization from positions of the system approach in the scientific circulation, introduced by Ch. Barnard, which was later developed by such scientists as R. Ackoff, L. von Bertalanffy, C. Bier, N. Wiener, M. Jackson and V. Ashby, R. Kahn, P. Case, J. Olhou, P. Chaklandon, S. Churchman, V. Ulrich, and many others. A significant contribution to the understanding of this issue was contributed by soviet scientists, including A. Bogdanov, I. V. Blauberg, I. N. Grivtsova, V. P. Kazaryan, E. M. Mirsky, V. G. Sorina, V. N. Sadovskii, V. S. Tuchin, A. I. Umov, Yu. A. Urmantsev and others.

**The purpose of the article.** To prove necessity of application of system approach in organization management, to determine the chronology of the creation of the concept.

**The results of the researches.** Different authors viewed from different positions. Smirnov Is. A. [9], for example, considers the enterprise as a process and phenomenon as a system. As the process organization is the set of actions leading to the formation and improvement of interrelations between parts of a whole. The phenomenon is the merging of

elements for the implementation of the program goals and acting based on certain rules and procedures. As a system enterprise is a whole created from parts and elements for purposeful activity. Such a system has an input, internal environment, output, feedback, external environment.

In our study any business may be presented as some targeted system that can be explored on the basis of system analysis. In this consideration arises the need to study the enterprise as a system, i.e. as a set of basic elements and the relationships between them.

The term «system» describes the orderliness, integrity, availability of certain patterns and relationships. This concept is constantly being used if necessary the description of an object or phenomenon, consisting of different parts that have certain characteristics, qualities, and characteristics that are subject to certain laws of functioning. The concept of «system» is used for a long time and has many definitions. Their analysis shows that the definition of «system» has changed its form and content in a long time. So, L. Von Bertalanffy [10] defined a system as «a complex of interacting components» or as «the set of elements that are in certain relations with each other and with the environment». Time system is defined as a set of interacting elements. Signs system are many of its components, the main goal of unity for all elements, the links between them, the integrity, the presence of structure and hierarchy, relative autonomy and a system of management of these elements [9]. According to the economic-mathematical encyclopedic dictionary [12, p. 479], the system is a set of elements that are in the relationship, the relationship, and thus represent a certain integrity. According to Big dictionary of Economics [2, p. 1017], the system (from the Greek. system – whole composed of parts, connections) as a set of interacting elements that are in relationship with each other, and the components of holistic education.

System approach in management theory the definition denotes the organization as a set of interrelated elements that are focused

on achieving the same the ultimate goal in the environmental conditions, changes, and which include shared values, strategic orientation, structure, style of management, the staff, the combination of theoretical knowledge and practical experience.

Formation of market relations in Ukraine requires a thorough study of new theoretical principles and develop practical approaches to the management of enterprises. For effective management of the enterprise it is necessary to use the following methods: abstract-logical, balance, correlation, modeling and more. During the development of the organization of enterprise management is widely used functional and system approaches that allow for justification the function and structure of governments.

According to a systemic approach to the enterprise as an open system, there are certain features [6; 10; 11; 13]:

- open character in relation to the external environment, which acts as competitors of the company, suppliers, consumers, the legislative and legal framework, the economic situation in the state in general;

- dynamism – defines the ability of the enterprise to change, to evolve, to move from one qualitative state to another, while remaining system;

- hierarchy – describes the ability to consistently dissect the system into its components top to bottom – from more complex and larger systems to subsystems, components, etc.;

- integrity (emergencies) – assumes that all parts of the system are aimed at achieving the same goals and share some common properties, characteristics and behavior of the system;

- stability is the ability of a system to return to equilibrium after it has been out of this state derived under the influence of external influences or factors;

- self – regulation- determines the ability of enterprises to adapt to changes occurring in the external environment;

- self-organization – characterizes the ability of the system to reach a new level of development, and, increasingly, to exercise such powers as the ability to resist the processes in the external environment and adapt to new conditions, if necessary altering its own structure, while maintaining certain stability;

- adaptability – determines the system's ability to perform active operations in response to diverse external and internal factors.

The essence of a systematic approach to management is as follows: the formulation of goals and the establishment of their hierarchy before the start of any activity associated with control; to obtain the maximum effect, i.e. achieving the set goals through a comparative

analysis of alternative routes and methods of achieving goals and making choices; quantification of goals and means to achieve them, based on a comprehensive assessment of all possible and anticipated results of operations. The emergence of a systemic approach to management has allowed us to integrate the positive aspects of all schools, which at different times dominated the scientific management. Another important contribution of the system approach to the theory and practice of management has been the recognition of marketing as an essential management function.

A systematic approach involves close communication goals with the programs, plans and their implementation. Thus is solved the main question about the allocation and use of resources, which is reflected in the budget and financial reporting and provides the information necessary for rational planning of production.

A systematic approach is inextricably linked with the development of such disciplines as Cybernetics, systems analysis, operations research, decision theory. They share a common methodology, involves the concept of system object and not as a simple sum of its components and as a single evolving whole.

In governance in modern conditions the development of methods of system analysis operations research, systematic methods of the firm management, which include: management by objectives, project management, methods development organization (change of structure, systems, procedures and behavior of the firm).

The essence of a systems approach many authors advocating its usefulness and necessity, reduce to the following:

- a) formulation of goals and establishing their hierarchy prior to beginning any activity associated with governance, particularly decision-making;

- b) achievement of objectives at minimum cost through comparative analysis of alternative routes and methods of achieving goals and implementing an appropriate selection;

- b) quantification of objectives, methods and means of achieving them, based on partial criteria, and on a broad and comprehensive assessment of all possible and anticipated results of operations.

The management of the organization through the use of a systematic approach involves three successive stages:

- the first stage defines the scope of system approach, clarifies the sector and scope of activity of the subject of control, are (roughly) adequate field, industry and the scale of business information needs;

- in the second stage, carried out the necessary research (system analysis);

– in the third phase, you develop alternative solutions to defined problems and selecting the optimal variant for each problem (expert assessments are used, including independent assessment).

The main purpose of the system approach lies not just in the analysis of some systems and the system in consideration of some sets of elements and relations between them, which according to the researcher defines its objectives as a system.

Moreover, on the basis of the same test object can be modeled in different systems: depending on the selected criterion, i.e. a component or property to be defined as so-called system storage sign.

Undoubted advantage of the system approach is to focus on weakly structured problems, to find the optimal ways of their solution. Such problems occur at the level of complex systems.

It should also be noted that a systematic approach can be applied at different levels – from some of the plot to the whole enterprise. In each case, the control object is treated as a holistic system. Manage the better, the more optimized matched system elements and coordinated action.

Given the current realities of the economic life of Ukraine, where the crisis is evident, there is a need to study possibilities of application of system approach to problem solving for the difficult situation of domestic enterprises. Recently in Ukraine, significant attention was paid to the study of crisis management issues, published many scientific treatises and textbooks, in which prevails a unilateral approach to the study of crisis management mechanisms, is constantly searching for the so-called «bottlenecks» of the existing problem, the whole complex of factors is allocated only one. This approach cannot be fully effective. For the effective management requires a systematic approach that allows to consider the object of management in a comprehensive manner.

Another problem that requires solution in the field of using a systematic approach, connected with the need to improve the quality of the products manufactured by domestic enterprises. This issue is considered today as a crucial condition for its competitiveness on domestic and foreign markets. The competitiveness of products largely determines the country's prestige and helps to increase national wealth. In industrialized States, many enterprises operate quality systems, successfully providing high quality and competitiveness of their products. The whole experience of the work on solving the problem of product quality in Western companies has identified the need for a systematic approach. Sys-

tematic approach in quality management at the enterprises is the result of the evolution of forms and methods of quality works, ranging from individual forms of organization of works on quality and finishing with the introduction of a universal system of work organization on quality.

In the context of the investigated issue needs to be resolved and the problem of a systematic approach to personnel management. In today's dynamic world, everything clearly manifests the dependence of efficiency of activity of companies from the so-called «soft factors», associated with the management of individuals, corporate culture and company values [4].

The company can «copy» «hard factors» of success of its competitors, such as technology, business processes, equipment and the like, but is not able to quickly reproduce the «soft factors». It is therefore extremely important to nurture them within the enterprise, and often this process takes time. New approaches will require reviewing existing processes of human resources management, application of information technology with the world's best practices that should be adapted in accordance with the specifics of each individual company as a whole system.

Despite all the advantages, systems thinking still has not fulfilled its most important purpose. The claim that it will allow the use of modern scientific management approach is still not implemented. This is partially due to the fact that large-scale systems are very complex. A systematic approach to enterprise management requires a transition from isolated, individual models of the economy, the isolated consideration of economic categories and individual questions to the General concept, which would allow to see the whole system of connections and relationships in the economy, the whole complex of parameters, defining the best ways of contributing to the development and implementation of the established plans. The same approach should be used when making decisions at the level of individual organizations and enterprises.

**Conclusion.** Take into account the systemic approach in management is very important for any organization.

Each company has its own system. Each system has its own inherent properties, its reaction to the controls, their possible forms of deviation from the program, their ability to respond to various impacts.

The systems approach presupposes a special unity system with the environment, which is defined as the totality of external elements that affect the interaction of the system elements.

A comprehensive study of the relations of elements (subsystems) necessary to build the

model of object of management of the company or enterprise. Experiments with the model give the opportunity to improve management decisions, i.e. to find the most effective way to achieve common goals.

Thus, for management research means a systematic approach is an important element

the basics: they contribute to a deeper understanding into the structural and functional content management phenomena, their multifaceted interactions between themselves and the social environment, the actions of the various systemic factors, their existence and development.

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## ЗАСТОСУВАННЯ СИСТЕМНОГО ПІДХОДУ В УПРАВЛІННІ ДІЯЛЬНІСТЮ ПІДПРИЄМСТВА

### Анотація

У статті описано хронологію створення поняття «системний підхід», наведена еволюція змісту цього поняття. Доведена корисність застосування системного підходу при управлінні організацією, а також етапи його послідовного впровадження в управління.

**Ключові слова:** організація, система, системний підхід, системне мислення, управління.

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### Аннотация

В статье описывается хронология создания понятия «системный подход», приведена эволюция содержания этого понятия. Доказана полезность применения системного подхода при управлении организацией, а также этапы его последовательного внедрения в управление.

**Ключевые слова:** организация, система, системный подход, системное мышление, управление.