

## SYNERGY AS A METHODOLOGICAL COMPONENT OF ECONOMIC THEORY

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**Keywords:** complex systems, organization of economic systems, economic chaos, the elements of economic system, system levels, the gen of economic systems organization, the nanolevel of economic systems.

The article considers the problems of the start of synergy trend in the methodology of economic theory as a phenomenon that reflects the complex processes of modern social development. The necessity to study this trend in the methodology of economic theory is underlined as well as its application in the applied economic research.

Modern economic theory is full of various approaches, methods, tools of scientific analysis, synthesis, forecasting the tendencies of developing the economic situation, as well as its possible future changes.

At the same time developing exact sciences, new achievements in the sphere of physics, biology, chemistry, sociology, psychology, philosophy make it possible to expand the scientific methodology of economic sciences, firstly its general theory component.

The epoch of industrial development based on technical revolution has made the economic processes, structures and links more complex. In order to give the grounds for economic forecasts it is necessary not only to show the static model (scheme) of real economic phenomena, but reveal the dynamics of these processes as well, find the impulses and the factors of these dynamics, foresee the possible structural changes. It requires both static and dynamic approach. Many authors of economic publications understand the notion "economic system" as a static set of economic elements and their interrelation. G. Harvey in his course of "Modern economic theory" defines that "... any economic system consists of two elements: 1. companies - business structures that decide what goods or services to produce; 2. households consuming goods and services and submitting the resources. In other words the economic system provides the link between the companies and households".

Rapid development of market sphere in the epoch of industrial revolution, complication of its structure, increasing the amount of exogenous influencing factors requires the analysis of process dynamics both as a positive trend (revealing new and more qualitative tendencies)

and evaluation the processes of structure regression and decomposition. The theory of economic dynamics was essential. This trend was reflected in the research of historical school, the works of Marx and Engels. More intensively the problems of economic dynamics were developed in the second half of XIX - XX centuries in relation to economic crisis. These were the works of K. Zhuglyar, M.I. Tugan-Baranovskiy, U. Mitchel and etc. Special attention to economic dynamics was paid by Gevons, Valras, Klark, Pareto and etc. N.D. Kondratyev pointed out in his report "...the world of economic events is changeable. The events of economic life can be sometimes more or less stable and stable and reach static condition. However, they can never be in such condition, as there is no absolute peace in a physical world. Hence, in reality it is possible to observe the dynamics of events". It combines these two approaches applying the notion of economic conjuncture.

N.D. Kondratyev gives his own definition to conjuncture "... this direction and the degree of the change of the aggregate of economic life elements in comparison to the preceding moment ... are observed and decreasing and increasing changes of the elements of economic life are observed; in general, it is possible to observe the improvement of the conditions of economic life and activity... but the changes of separate elements of economic life can be great, especially if they are under the perturbation influence, ... that is observed in the period of disorder of these or those branches or the whole economic organism". In fact N.D. Kondratyev predetermines system approach in economic analysis. He understands the necessity of the overall methodological theory of complicated

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economic processes. The new step in the development of the methodology of economic analysis is the general system theory and its branch - synergy.

The system theory appeared in the period of rapid economic and social transformations: revolutionary shocks, world economic crisis of the beginning and first half of the XXth century. Economic and social systems as well as biological ones are not created artificially, but are formed spontaneously in the process of social evolution from the simple systems of primary societies to modern national social and economic systems and global international system establishments. The studies in the sphere of synergy gave a new impulse to the development of the theory of self-organized systems. The term "synergy" was for the first time introduced by German physician G. Khaken. But even earlier Ilya Prigozhin came to the ideas of synergy, putting in the basis the conclusions about the nonlinear thermo dynamics (he got Nobel prize in chemistry for this in 1975 ).

The study of nonlinear thermodynamic processes made it possible to introduce such notions as : big systems, complex systems, self-organized systems, dynamic chaos, etc. German biologist Leon Fon Bertalanfy became the founder of system theory in the 30-s of the XXth century. He was the first who introduced the notion of open system and explained its regularities, integrity, hierarchical character. The theory became popular and was widely used in scientific circles.

The scientists were interested in finding the sources system establishment. It is important to define the interaction of economic space and its elements. In this aspect defining the interaction of economic space and its elements is of key value. The notion "economic space" is introduced into the analysis by Russian scientists L. Evstigneeva and R. Evstigneev.

G. Kleyner introduces the notion "nano economic world" in the meaning of micro world. He understands nano world as a genetic prima-

ry impulse that defines the dynamics of the whole system. This impulse is represented by cognitive potential and underlines the specific character of the laws of "nano economic world". Economic micro world is the level of space where economic subjects representing the complex structures inside the system interact. Economic macro world is the level of system organization in general. Nano world is the phenomenon of continuous relations revealing the intellect of human being. The initial field of interaction is the information one. Socializing is common to animals as well, but this fact reveals their intuitive characteristics not the ability to think. For homo sapiens information is the thing that stimulates activity.

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*Received for publication on 15.08.2009*