

## Principles of the Organization of the Global Economic System

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### ABSTRACT

The development of the economic system is not a spontaneous but a programmed and controlled process. Economy is always a controlled system in which there is always an appropriate subject of management. The article considers principles of the organization of the global economic system. The characteristic of the principle of “hierarchy of dominants”, types of economic systems in terms of “order - chaos” (unstable, non-equilibrium order, soft, evolutionary chaos, rigid, deterministic chaos). It highlights the major institutions in the layered structure of the global economic system.

### KEYWORDS

Entropy, global economic system, hierarchy of the dominant purposes, institutions, information capacity, levels, methodology, structure, synergy

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## Introduction

In the context of the developing global financial and economic crisis the old industrial market theory (economics) is not able to explain adequately the new information network era patterns and causes of the global crisis and is not able to offer effective mechanisms for overcoming it. It was noted by the Nobel Prize laureate in Economics P. Krugman (2009) in his work “The Return of the Great Depression?!”: “The true rarity in the world – that is not the resources ... but understanding of what is happening”. New scientific understanding and awareness of what is happening requires a change in economic thinking, rejection of economics stereotypes. A Nobel Prize laureate in Economics D.

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North (2010) rightly notes: “The attempt to understand the economic, political and social change ... requires a fundamental restructuring of our thinking”.

In the framework of substantially information paradigm of social and economic development (Dyatlov, 1995) the socio-economic reality corresponds expedient holistically organized system of open type, operation and development of which is carried out according to the laws of information. In a system like this, all the processes are not completely free and spontaneous; they are carried out with taking into account existing limitations in boundaries caused by deliberate aims and the interests of human society development and by deterministic type, the level and form of its concrete existence.

The development of the economic system is not a spontaneous but a programmed and controlled process. Economy is always a controlled system in which there is always an appropriate subject of management. Within the framework of information paradigm of the society development the conclusion that spontaneously developing economy in reality does not exist, and the economic system without a proper subject of management, in principle, cannot exist, is natural and logical.

Society or the economy represents a complete system with a complex multilevel, structural and functional organization, consisting of subordinated levels and various elements (of a large number of business units, customers, financial intermediaries, management structures and institutions which are in continuous interaction). The economy has a pronounced hierarchical multilevel structure; herewith each level of the hierarchy is integrated into a complete system and interacts with the other levels and elements with particular expedient and informational caused rules and algorithms.

We can make a fundamental conclusion that the functioning of human society as a holistic system bases on multilevel network of organizational and technological principles, i.e. human society is organized in a network multilevel manner. We consider it necessary to emphasize that the above stated principle of organization of human society has become the prototype of creating World Wide Web, i.e. Internet was created in the likeness of pre-existing multilevel humanitarian networks of human society.

Both order and chaos in the economic systems are always determined by the actions of certain subjects of management, the relationship between them can be described by the laws of information and data exchange patterns. The measure of order (orderliness) or chaos (disorganization) of socio-economic system is information in its certain quantitative and qualitative characteristics. The provision on information ordering of socio-economic systems presupposes the existence of absolute controllability of the development of these systems. Under this approach, we have the following provision: both order and chaos in the socio-economic systems are always determined by the actions of certain subjects of management and the relationship between them can be described by the laws of information. The measure of order or chaos of socio-economic system is the information in its certain quantitative and qualitative characteristics.

Open complex systems, first of all, socio-economic systems, in our opinion, may be found not only in the state of order or chaos. They may also be in transition states. In our opinion, it should be divided into three main types of transition states:

- Unstable, nonequilibrium order that in weak impulses from inside or outside influences is able to go into a state of less shown or languidly flowing chaos);

- Soft, evolutionary chaos that presupposes evolutionary boost to the chaos of the system and the subsequent maintenance of its ageing conditions, and with ageing and enhancing of all necessary prerequisites and conditions the transfer of the system into the state of hard-deterministic chaos;

- Hard, revolutionary, deterministic chaos that involves drastic removal of the system from the state of order, its collapse and translation into the state of strategic chaos.

It should be noted that in any system, there specific “germs” of instability, uncertainty, chaos and stability, awareness, order, which are called attractors which are potentially always, in one way or another really arise and become apparent (or are brought into the system from the outside by other subjects). Herewith the transition of order into chaos and vice versa, in such systems may occur more slowly or quickly (sometimes very quickly). In this case, the process is known as “falling of the system on an attractor”.

As subjects of influence, actors and attractors, which characterize the occurrence of the processes of order and chaos in the system, may act the followings:

- Properties of the elements, conditions and functional characteristics of the internal organization of the system;

- The conditions and characteristics of organizational interaction at the boundaries of the system with the external environment (including driving gear characteristics, actions and behavior of intermediaries);

- External impulses and organizational impact (interaction) with the elements of the external environment, including features of the behavior and actions of competitors and allies);

- Super-system determining impacts and influences of metasystem (super-system), with respect to which the system is a subordinate subsystem.

### **Methodological Framework**

Keep in mind that the structural and specific diversity of conditions, actors and attractors causes extreme complexity of linear forecasting (prediction) of the future state of the system, and sometimes unpredictable behavior of a particular system. Therefore, we propose to use the principle of “dominant” and the principle of “hierarchy of dominants” (hierarchy of subordinate dominant influences), according to which we should allocate the base level dominant attractor, which has a major, dominant influence (character, force and effect degree) on the state of balance “chaos - order” of the system, and sets the main vector of its development, the main parameters of the future state of the system (Dyatlov, 2015b).

The concept of “global economy” for its meaningful characteristics differs from the concept of “world economy”. The world economy requires availability of control international organizations that regulate the interaction of economically interdependent, but independent, state-national entities. R. Whiting (2013), Professor of Leeds University, claims that an important dimension of crisis is not only the question of regulation, but also the importance of moral behavior in



markets; that is, a vital component of behavior in markets comes not from the universal influences of the global economy but from attitudes formed by the traditions of particular societies (Whiting, 2013).

The transition from the international aspect to the global implies a qualitative transformation of formally equal national economic systems, which occupy segmented place in the international division of labor, perform strictly not deterministic functions and have state autonomy in macrodecision, to formally dependent on the global regulatory megastructures national subsystems that occupy subordinated localized place in the global economy system, perform quite strictly regulated functions and have limited opportunities in making macroeconomic decisions. At the same time national economies cease to be independent centers of making mega- and macrodecisions not only at global, but also at the level of the national economy.

In this regard, a well-known western economist L.K. Thurow (1999) noted: “To make the global economy work we will have to largely sacrifice national sovereignty”.

The world economy, transformed into a global economic system, is a supranational megaformation which has global supranational centers of making management decisions, in which the national economies play a role of subordination. In the global megaeconomy one of the most important and difficult problems is determination of the principles of its structural and functional organization and identification of national economies.

The main system forming characteristics of the global megaeconomy is control over most important segments of the global market resources, the primacy of financial and exchange regulatory mechanisms, megaconcentration of powerful authorities and management functions, determination and localization of the role and functions of national subsystems. The identification process involves identifying of constituent elements and determination of the subordinated position of each of them in megastructure of global economy.

The problem of the global economy was reflected in the scientific works of W.R. White (2015).

“System malfunction: The global economy is rife with imbalances that cannot be fixed under the present international monetary (non) system” (White, 2015); O. Blanchard (2008), “Cracks in the system: Repairing the damaged global economy”; N. Nanda (2008) “Expanding frontiers of global trade rules: The political economy dynamics of the international trading system”.

## Results

The problem of globalization and global economy is investigated in the works of T. Hirai (2015), “Financial globalization and the instability of the world economy”; D. Ushakov and S. Chich-Jen (2014), who made both statistical and comparative analysis of modern cities economical performances, their position in global economic affairs, and also the arranged an original methodology for urban business structure evaluation. They also allowed setting some theoretical findings about internal and external sources of urban business system competitiveness and effectiveness in a globalizing economy (Ushakov & Chich-Jen, 2014). Theoretical issues of Russian economy development in the context of globalization, internal and external factors, forming tendencies of structural changes of national production are considered in the work of A.R. Toumashev

(Toumashev, et al. 2015). In the structure of the global megaeconomic system the following related institutions (elements of megasystem) that perform strictly regulated functions in accordance with the subordinate levels of globalization may be found:

1. Local national economic systems with limited regulatory macrofunctions, even in the national economy (economic system of a separate middle-income country, such as Mexico, whose economy can be attributed to the type of small economies and which is heavily dependent on the US economy).

2. Segmented international entities, which coordinate their regulatory actions that have a limited incidence, but do not have a significant impact on the world economic system (e.g., CIS).

3. Central banks (and other regulatory authorities) of the countries with small economies, whose activity does not affect the global financial currency markets, but has a certain influence on separate countries with small economies or segmented international entities (for example, the Central Bank of Russia, whose decisions in the particular affect the countries of the former USSR).

4. The largest transnational financial and industrial corporations, the scope and role of which is equal to the great economic systems or global innovative hypercompetitive companies (e.g., IBM, Microsoft, Intel).

5. Central banks of the leading developed countries and inter-governmental entities of a new globally-oriented type that establishes world interest rates and issuer of the world's currencies of the US dollar and the euro (such as the US Federal Reserve System and the Central Bank of EU-EBRD), which regulate functions and importance of which are crucial for the world economy and national economies of other countries.

6. International financial organizations which have functions of coordination of international financial and credit processes and settlement, capital mobility and the regulation of offset of debts, macroeconomic policies in separate countries or segmented international entities (for example, the International Monetary Fund, the International Bank for Reconstruction and Development, the Bank for International settlements, UNIDO, the leading rating companies Standard & Poors, Moody's, which determine the country investment and credit ratings of separate countries and corporations).

7. Global controlling-coordinating financial megacenters, which have a complex subordinated, structural and functional organization and carry out the functions of managing the global economy and its financial and credit sector, with all its local international segments and separate national elements using the whole complex of traditional and latest informational technologies and methods of regulation and control.

8. Intergovernmental integration entities and trade and economic unions (EU, Pacific Rim, BRICS, EAEU, NAFTA, Mercosur, TPP). Intergovernmental and interregional integration entities and trade and economic unions have their own specific formation, functioning and regulation. The logic of relating the national, the intergovernmental and integration (interregional) and the global relate to each other as dialectical category of a single, special and universal.

9. In the stage of formation, the global personified network-dispersed, information and financial authoritative management megasystem, which implements its functions and authorities on a qualitative new basis - on the

basis of advanced hypercompetitive technologies and methods of global-total programming of the future state of national, regional, corporate, local and nano-subsystems, vector impact on the interests and motives of national actors, target impact on their decisions and managing their behavior.

Global controlling and coordinating centers actively use traditional methods and new hypercompetitive methods of redistribution (unequal exchange between countries), the world's resources (raw materials, capital, labor), created by the world's gross domestic product (wealth). The most important mechanisms of this redistribution are the following procedures:

- Unsecured on real assets, emission of global currency (the US dollar) and derivative securities (derivatives);
- Sustainable understating (deviation from purchasing power parity) of national currencies of weak and moderately developed countries compared to world currencies of more developed countries (for example, the ruble to the dollar);
- Price discrepancy, tariffs and sanctions in international trade (for example, unfair price competition, customs restrictions, violation of WTO rules, introduction of penalty provisions);
- Debt crediting of the US economy (cover its debts and budget deficit) by purchasing by national central banks of other countries dollars and keeping them as a major reserve currency, etc.

At the same time the global regulatory structures and the most advanced economy of the world, the issuer of the world currency (such as the US economy), along with non-equivalent redistribution of global resources and the world gross income assign the world seigniorage, the global arbitration of exchange and global rent, as well as through export of credit resources (unsecured newly issued dollars) inflation is exported to other countries.

On the ninth level of globalization, national economic subsystems become from the subject of management and the subject of making macrodecisions to the control object and the object of vector information impact (of manipulation and transformation) by the governing bodies of the global megasystem. At the same time there naturally arises the systemic conflict of interests that develops to polysystemic contradictions within the global megasystem that increases its entropy and violates the stability of its functioning (Dyatlov et al., 2015a).

## Discussions

The modern global economy is an informational network, intellectual and psychological economy, with its hyper-competitive technologies and methods of information and psychological, programmable-driven effect on consciousness, mind and will of people (producers and consumers). Guided by leading countries, the global information and intellectual, organizational and management megasystem, with its asymmetrically regulated dataflows through which into consciousness and psyche of potential competitors implement (program by introducing into the consciousness of competitors information structured arrays of decisions with predetermined entropy parameters) entropy stereotypes of behavior and is called entropic logic of making ineffective decisions.

## Conclusion

All of the above-enumerated problems of transformation of global regulatory system to global managing megasystem demands, through the use of interdisciplinary entropy-synergetic approach, a new scientific understanding, classification and identification of its structural elements, structurally and functionally subordinated to sublevels, as well as development of an organizational mechanism of resolving polysystemic contradictions of the global economy and provision of its sustainable development (Dyatlov, 2015c).

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