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SECURING OF ECONOMIC EQUILIBRIUM AND ECOLOGIC BALANCE

Abstract

The article, from the viewpoint of modern economic studies, argues that economic development and economic equilibrium are increasingly more determined by limitations of natural resources and ecology issues. Current complicated ecologic situation, decreasing productivity of geo-ecosystems, depletion of natural resources, and reducing bio-diversity are interpreted as non-equilibrium of living environment and of productive activity of a society, or as the threat to ecology. Special attention is drawn to interconnection and interrelation between stable ecology-friendly development and development in economy. The economic development in author's opinion brings about new quality of productive forces, leads to changes in production relationships, and renews factors of production and vital functions by reducing consumption of natural resources. Development based on non-traditional factors, such as innovative technological, institutional and nature-efficient, is defined in the article as biosphere-compatible and able to ensure equilibrium and security in a wide scope – economic, social, and ecological.

1. Economic development and equilibrium as a precondition for global equilibrium and stable development

Considering the problems of system transformation in a society based on stable development, the close attention should be focused on determining the nature and driving forces of economic development, modernisation factors that

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effect it, and on searching management methods of interrelationship between economy, nature and society.

According to the theory of economic development by J. Shumpeter, «the world of management is characterized by virtual independence as it is of prerogative meaning in people's life, for the most part constituting or influencing it» [1, 150]. Hence, development of objective reality – economic progress – causes not only qualitative changes, but also changes in radical re-structurisation of production relations, social and territorial labour distribution, in social and institutional spheres. As J. Shumpeter stated, «economic phenomena and processes should be viewed from economic perspective, even if the entire group of actual reasons is not related to economy at all» [1, 150]. As a consequence, tendency, dynamics and effectiveness of economic development to a great extent modify the paradigm of social development. Along with all that, it is essential to consider that «one or another economic situation... is a result not merely of previous economic situation of society, but of its previous general situation» [1, 150], that pre-eminesces universal interrelationship and interdependence of real phenomena and processes with economic ones.

As a component of global social evolution, economic development has a cyclical character. The phases of production growth involve rotation of declines, crises, depressions, and regressions.

Economic cycles were studied by many scientists – M. D. Kondratiev, J. Shumpeter, K. Marx, S. Kuznets, E. Hansen, R. Harroda, R. Sollow, and others. According to the theory of market cycles, every economic cycle starts on the lowest point of economic activity, goes through the phase of growth and hits the highest point. Then again follows the stage of recession reaching the next lowest point. Thus, the full economic cycle comprises economic activity that goes its way from one point to another.

Economic cycles have their universal characteristic features, which, nevertheless, do not specify their identity in different spheres (investment, construction, innovation and technology, logistics, etc), especially in some countries. Peculiarity of their emergence depends on the level of development, the degree of economic openness, concentration of internal market, and on other factors. Market cycles considerably depend on the interrelationship between the national economy and the world economy processes, mainly in the world finance, currency and commodities markets, markets of technologies and other intellectual products. J. Shumpeter believes that the duration of cycles «cannot be explained by any statistics since it depends on explicit situation. It can be generally explained by the growth that goes down and the depression that arises until the products of new enterprises appear on the market. The new upswing follows the depression after the process of new products absorption is complete» [1, 386].

Identifying economic development with a «cycle recurring annually in the same way», J. Shumpeter underlines that this process entails non-continual transformations going beyond the usual boundaries, changing the normal course and, not referring to a cycle.

Consequently, the theory of economic development is interrelated with the theory of universal economic equilibrium that reveals the peculiarities of economic development on micro-level. In 19–early 20 centuries, famous western economists L. Valras, A. Kurno, W. Jewons and A. Marshall formulated the concept of economic equilibrium and others in their studies [4, 44].

The theory of economic development and the theory of universal economic equilibrium as the two fundamental trends of modern economics are interactive and complementary. The analysis of any existent economic entity requires its comparison with an «ideal» equilibrant.

The fundamental nature of economic equilibrium lies in relevancy between physical and value elements of a social product, supply and demand on market (commodity, finance, investment, labour, service or technology market, etc.) Economic equilibrium is a requisite state of economic system and the single case of its display [4, 44]. It is a multi-factor phenomenon which is stimulated and de-stimulated by natural, geographic, social, political, economic, national, ethnic, historical, and other factors.

At present, the problem of material equilibrium is being complicated and aggravated by growing depletion of natural resources and upsetting natural balance that threatens the global equilibrium.

2. Concepts and factors of transition for a stable and self-sustained development

Global economic equilibrium, the essence of which was formulated by E. Pestel [5], member of Rome Club, denotes the state, in which the size of population and the volume of capital remain stable, and the forces that influence their increase or decrease, are also steady. The global equilibrium would be attained only if:

- the volumes of capital and total population are stable, the birth/mortality rates and investments/depreciation demand are equal;
- initial birth, mortality, investment and depreciation values are minimal;
- the society establishes the levels of stabilization of capital and population size and their relationship only according to its needs [3, 45];

The preconditions of global equilibrium formulated by E. Pestel can arise only on the level of national economy in which the state can influence the dynamics, structure and quality of economic development in some economic or other ways. Within this context the meaning of economic strategies of stable development is hard to overestimate. Relationship of national economy complexes, on the one hand, and impulses of the world market, on the other, is a precondition for global economic equilibrium.

Regional economic equilibrium is revealed in common harmonized policy within integration and regional economic systems. Disruption of economic ties and as a result of that intensifying problem of resource economy, economic crisis and insufficient financing of nature protection, lack of legislation for executive bodies in the sphere of environmental protection – these causes and some others intensify the role of regions in guaranteeing stable regional equilibrium.

For economic development to be stable and have clear prospects, the economic equilibrium should be sustained by continual changes, brought about by the economy itself, by renewal of factors and production technologies, changes in the use of natural resources, introduction of ecologic management, etc. Affected by prevailing negative factors (shade economy, interests of separate groups including political, etc), the economy can be in quasi-equilibrium [6, 32]. Economic systems of countries can sustain such equilibrium for a long time. According to V. Geyets, it is possible to upset economic quasi-equilibrium by implementation of one of the following alternative scenarios: a) reestablishment of authoritative state; b) foreign financial support; c) social partnership [6, 32–33].

Western economy theories suggest various variants for disturbing economic quasi-equilibrium. Thus, the famous model of economic growth with two deficits by H. Cheneri, M. Bruno and others apply middle- and long-term regressive models to confirm that the growth rate is defined by the deficit of national (deficit of savings) and foreign (trade deficit) resources [7, 154] that lead to certain stages of modernization. Replacement of foreign financing by national, imported goods by domestic, creation of conditions to eliminate foreign financial dependence would mean development (modernization).

The conception of transition to self-sustained growth by R. Rostow is based on stimulation of technological and economic characteristics of a management system: the level of technology development, segmental structure of the economy, share of production accumulation in the national income, structure of consumption, etc. [7, 143]. These impulses allow for accelerating the transition from industrial stage of development through the phase of «maturity» (establishment) and mass production to the informational stage.

Investments are interpreted in theories of R. Harrod–E. Domar and J. Keynes as the catalysts of development.

Innovation and technology factor can be found among the most essential aspects of modern economic dynamics and economic equilibrium disturbance. Theories of market cycles by M. D. Kondratiev and J. Shumpeter, view scientific and technological progress with technological innovations as the element which is not external, but organically integrated into a mechanism of major cycles able to «change the cycle path and shift the equilibrium» [1; 157]. Spontaneous and discrete modifications of the cycle path and shift of equilibrium under the influence of new combinations of resources and production factors cause the chain reaction in the economy producing new technologies, new organization of production, and new markets.

Economic development and equilibrium of such non-traditional (especially for transition economies) factor as management (institutional factor) requires more fundamental study and theoretical substantiation. Management factor can be found among the three key elements of economic development, formulated by J. Shumpeter [1]. The famous economist underlines that with only exclusively new opportunities the necessity in specific management function, new type of individual «manager» arises [1, 184]. Under new opportunities the scientist implies objective preconditions for qualitative changes in economic development which he defines as «new combinations of resources and factors of production» or «creative destruction» [1]. According to J. Shumpeter, these «new opportunities are dead by themselves. Management function is supposed to make them more vivid, real, to implement them» [1, 184].

The issue of introducing effective management is particularly urgent during modern market transformations in our country.

Current transformation (non-equilibriums) and problems in transition to economic growth are interpreted by Academician A. Chukhno as results of institutional and economic crisis [8].

Economic development and economic equilibrium are more often limited by natural resources and ecology. Emphasizing the role of ecologic and economic factor, A. Pigou pointed out the following functions of natural environment: 1) public consumption; 2) allocation of waste; 3) territorial basis for economic activity of economic entities; 4) raw material resources [9]. Every function initially restrained by relationship of production factors diminishes possible economic growth as a result of quantitative and qualitative depletion [10, 48].

The above characterized non-traditional factors of economic equilibrium and development, such as innovation and technological, institutional, ecologic and environmental, have much in common – they are of high intellectual capacity. Activation of these three factors based on knowledge can provide long-term equilibrium and progress along with economic and ecologic security.

According to competent forecast, in the nearest future, ecologic, scientific and technological safety of products would become the alternative for the present price, quality and product competition. Therefore, it is strategically important for Ukraine to develop, industrially probate and employ the prospective «niches» on the world market of science-intensive technologies and services for environmental protection and ecologic standardization of national products.

3. Stable development and security

The considered theoretical postulates of economic equilibrium and development allow to comprehend the essence of stable development. Scientific categories of «equilibrium» and «development» are the correlatives of «stable development», which imply stable equilibrium of the «nature-economy-society» system, progress, qualitative and quantitative changes, and positive dynamics of

every element of this system. The same as economic development, stable development – a more extensive notion – is a cyclic movement starting from initial level of basic equilibrium, upsetting it and terminating its cycle by reforming the equilibrium on a qualitatively new structural level.

The modern science views the interrelationship of levels of economic development and ecologic security in a very controversial and ambiguous way, as there is insufficient scientific and practical background.

The representatives of engineering cybernetics (D. Forrester, D. H. Meadows, D. L. Meadows, G. Taylor, K. Boulding and others) reject the possibility of economic stabilization within social and economic growth. Some of them recommend reducing the production hazardous to natural environment. Thus, K. Boulding and D. L. Meadows argue that nothing but economic stagnation and constricted reproduction can save the humankind from ecologic catastrophe [11, 12].

The majority of economists consider the social and economic growth and development to be a must for prevention of global ecologic cataclysm. Thus, T. Tietenberg, R. Solow, A. Endres and others suggest effective economic instruments for market regulation of nature exploitation.

A number of scientists, adherents of social and economic progress (M. Mesarovich, E. Pestel, A. King and others), support the new quality of economic growth based on socio-ecologic imperatives [5, 15].

Social and economic development by combining market tools with state regulated protection of ecology is able to overcome ecologic crisis and harmonize the relationship of society and nature.

Taking into account the fact that no alternatives to development and progress exist nowadays, the best part of hypotheses (excluding the concept of ecotopy) are not focused on conservation of nature and its resources, but on their co-evolution, stimulation of human intellect in search of the ways and instruments for safe economic activity and to form multi-level – local (enterprises), regional, national and global – system of economic and ecologic security.

Theories of modernization of industrial and post-industrial society that consider problems of economic growth and improvement of its technological and production basis, gradually formed the basis for assessment of quality of life (including its ecology element) as an economic category. Famous theories and models of development have one more essential feature – they unanimously acknowledge the fact that the main cause of present ecologic problems is imperfect production relations. This emphasizes the special role of management in development and security.

Therefore, ecologic problems, their character, importance, availability or lack of efficient instruments to solve them, are essential components of economic and ecologic equilibrium predetermined by transition to stable development.

Security as a structural notion is three-sided – no ecology protection can be achieved apart from economic and social security. Only the economic system (global, national and regional) that allows for efficient functioning of economy and guarantees social standards is able to protect ecology. Stable economic development secures constant reproductive processes and proportions in ecological and social spheres, while ecologic security is a precondition for extended economic reproduction, qualitative changes in production factors, for the interests of society and its members.

Economic security implies such state of national economy (subject of economy) that allows to resist internal and external threats and is able to meet the needs of an individual, family, group, or state. Resistance and stability of economy involves steadfastness and reliability of all elements of economic system, ability to resist the destabilizing factors» [20, 5].

The most profoundly and comprehensively the strategy of economic security was defined by M. Dolishnyy, S. Mochernyy, V. Shlemko, I. Binko, and others [16; 17; 18].

Social security as an element of stable development comprises sufficient level of peoples' well-being, social security of its most vulnerable segments, and harmonic development of every member of society, regardless of nationality, religion or political views.

Ecologic security, as we view it, is the harmonious relationship of society and environment which ensures economic development free from the destabilizing effect of shortage and exhaustion of natural resources, healthy environment, and stable balance of geo-ecosystems.

Every kind of security, mentioned above, is crucial for the stable development.

The notion «security» symbolizes equilibrium of socio-economic and ecologic systems. Non-equilibriums are denoted as «threats».

Transformations are far from being equilibrium [19, 58]; as a result, they cause different kinds of threats – misbalances of economic and socio-natural subsystems.

While considering threats as misbalances, it is worth to underline their special regulating function for self-organization on different territorial levels. D. Chystilin argues that the most constructive efforts of society in transition should be applied to form such structure of national economy which through self-organization would be able to reach equilibrium when overcomes the cyclic crisis... [19, 59]. Skilful and qualified managerial decisions define the «rules of game» within the economic scope that ensures the so-called Pareto-efficiency by M. Alle in distribution of limited resources for GDP including production of material welfare [19, 49].

Organization of interrelation when resource distribution for production of goods and services (including ecological) should serve the purpose to guarantee

the equilibrium of social and natural system. When social conscience is transformed on the basis of socio-ecology, Pareto-efficiency and equilibrium are affected considerably by the level of ecologic efficiency, which is the core of ecologic security. The principle of minimal exploitation of natural resources and the maximum ecologic stability in a society is implemented in efficient economic system.

Taking into consideration the complicity and diversity of economic problems accumulated during traditional production development, their solution is a multi-stage process. The most urgent are the ecologic problems caused by careless attitude to nature and violation of current ecologic standards. On this stage it is essential to make the production activity meet already set ecologic standards and the norms that are being introduced. The next step is to decrease environmental pollution and limit the use of biosphere resources. With this purpose the profound changes are needed in social and national relationship based on resource economy, on implementation of new technology processes, on social organization and management able to solve ecologic problems and eliminate any ecologic threat (deficit of resources, pollution, accidents, disasters, catastrophes, etc).

The implementation of the aforementioned transformations will create preconditions to harmonize demographic, productive and ecologic processes on the basis of ecologic technologies that are biosphere compatible.

4. Conclusions

National strategy of development is not separate from economic, social and ecologic activities, but is to secure economic and social equilibrium, and co-evolution. The integral part of social and economic transformations should be the measures of ecology policy that are evaluated by authorities and businesses not as capital-consuming and costly, but as the factor of competitiveness and promising way of development.

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