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CURRENT TASKS, PROCEDURES AND TOOLS OF INNOVATION-HIGH-TECH DEVELOPMENT OF UKRAINE

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Introduction. An objective understanding of the existing problems and strategic miscalculations in attempts to reform and develop the state economy in the previous years contributed to the search for effective ways of transition of the domestic economy to an innovative model of sustainable economic growth.

Overview of recent researches and publications. Well-known domestic and foreign scientists I. Balabanov, V. Bilyakov, I. Blank, S. Valdaytsev, Z. Varnaliy, V. Vasylenko, A. Vasiliev, G. Vasilkov, O. Vostryakov, O. Gavrylrulk, I. Halytsia, V. Geets, N. Goncharova, O. Grebeshkova, V. Grynyov, V. Grishko, V. Gunin, M. Denysenko, V. Dubishchev and others have made a significant contribution to the study of problems and tasks of the domestic economic complex modernization, development of theoretical justifications and practical procedures for managing innovative processes and development of high-tech production.

Analysis of well-known publications [1-17] showed that although today there are some researches in the field of theory and practice of reforming and developing the state economy, but there are still problems of innovative development of the domestic economy, its scientific, technical and technological sphere.

The purpose of the article is to highlight the results of theoretical research and practical recommendations for finding effective ways to transition the domestic economy to an innovative model of sustainable economic growth, Ukraine's transition to world economic standards and ensure competitiveness. The analytical method of researches was used in the article. The methodological basis of the study was a systems approach, which was based on such principles as integrity, structure, the relationship of system and environment.

Basic material and results. Summarizing the views of leading scientists and based on the results of our own analysis of global approaches to modern innovation and technological progress and sustainable growth of industrialized countries and leading companies in the world [1,2], we must first give our vision of the main features of Ukraine's strategy high-tech development. Among the key issues to be addressed are: the existing problems of innovative development and the main reasons for the inefficiency of the domestic economy, its scientific, technical and technological sphere; strategic aspects of high-tech production in Ukraine; innovative incentives and moderators of its sustainable economic growth; new modern mechanisms and standards.

In our opinion, the main problems of the national economy, which cause its low efficiency and competitiveness, today are:

a) the decline in the level of innovation, technology and economic potential of the national economy and the lack of its progress over the past 30 years;

b) inconsistency and weakness of the state policy of innovative development to ensure sustainable growth of the national economy.

The main reasons for the inefficiency of the economy are: inconsistency of previous economic reforms; insufficiency of legislative, normative, scientific-methodical base of National Innovative System formation and high-tech production; the absence of the National Strategy and Development Program, a clear state policy of innovative economic development, the mechanism of their implementation; limited and inefficient funding; lack of economic incentives for business entities; weakness and inefficiency of National Innovative System, including as a result of violation of its links with the needs of production and consumers, etc.

To eliminate these negative causes that arose during the previous period of the domestic economy formation, it is necessary to develop a more advanced and modern mechanism for its qualitative and systematic modernization, which would ensure the development of high-tech production:

1. The main goal of innovation and technological progress of the state should be the formation of a modern mechanism for increasing the quality, productivity, energy efficiency and competitiveness of the national economy through its technical and technological modernization, raising to world standards processes of creation and production of science-intensive products, as well as the use of high technology, advanced forms of organization and management to ensure sustainable economic development.

2. The main tasks of creating an advanced National Innovative System are:

a) ensuring the effectiveness and competitiveness of the domestic innovation sector and development through: advanced education focused on innovative and high-tech development of Ukraine and its economy; increasing the efficiency and competitiveness of the domestic research and development sector, ensuring its integration into the European Research Area; ensuring the integration of academic and university science, higher education with the processes of economic development and production;

b) progress of innovation infrastructure due to: financial and credit support of innovative projects and programs; improvement of production and technological innovation infrastructure, strengthening its role in modernizing the economy; development of information and communication and consulting systems; expansion of volumes and quality of technology transfer and capitalization of intellectual work results, attraction of the newest systems of carrying out scientific researches, the organization and management of manufacture;

c) improvement of state support and the system of levers for accelerating the modernization of the economy on the basis of innovation and technology through: state stimulation of priority areas of economic development; introduction of an effective mechanism of public-private partnership; ensuring the protection of domestic interests and producers in domestic and foreign markets;

d) growth of society innovative culture by: creating a positive attitude to innovation and engineering activities aimed at scientific, technical and high-tech progress of the state; development of professional skills and human resources in the field of innovation and in the implementation of targeted programs of innovation and technological progress of the domestic economy.

3. The main goals of innovative and technological development of production and industry are: modernization of technical and technological base; improving the quality of production and products; development of international cooperation and national priorities in the world market; protection of the state interests in the field of its technological security; formation of transnational high-tech systems, scientific and technical alliances for the creation and transfer of advanced technologies and production systems to Ukraine; development and implementation of priority programs for the development of high-tech research and production systems.

Innovation and strategic moderators of the national economy transformation and the foundations' formation for the beginning of sustainable state economic growth should be the development and implementation of: national concept, strategy and program of innovative development; mutually agreed with them relevant concepts, strategies and programs of regional and sectoral development; mechanism and standards of project and program-target development management.

The main tasks of these strategic measures and processes should be: ensuring the state innovation policy of balanced interaction of scientific, educational, technical, investment and entrepreneurial potentials; development and implementation of a mechanism for intensifying the innovation activities of economic systems and entities; dissemination of innovation and development in all areas of the economy.

We believe that the National Development Strategy should integrate: specific measures of national and regional progress, which are carried out with direct budget funding and implement the priority

development goals; implementation of innovative activities by economic entities, investments of innovative nature, as well as increasing the supply of innovative products, technologies and knowledge.

All this will provide a synergistic effect due to: preservation and progress of domestic scientific, technical and innovative potential; improving the legislative and regulatory framework for development; systematic and consistent implementation of economic management functional principles and its innovation sphere; organic coverage of all elements of innovative development in National Innovative System; elimination of disparities in the industrial and innovation potential of the state different regions; creation of Ukraine innovative development modern centers; harmonization of relations between the authorities, both among themselves and with the business, scientific and educational sectors of the economy and territories; transfer to Ukraine of high and critical technologies, as well as their diffusion from the sphere of military-industrial complex to civilian application in the economy; growth of the share of venture investments in high-tech production to 70% of all innovative investments in production; attracting private capital in the scientific and technical sphere; growth of turnover on the stock market of the share of securities issued by small high-tech firms.

The above strategic parameters of innovation and technological modernization of the national economy require the formation of modern mechanisms and standards for their effective implementation. The analysis of world experience in this area allows us to recommend the following procedure for improving the state policy of Ukraine innovative development and its management system:

a) planning and legislative consolidation of the National Strategy of state-political, social and socio-economic progress of Ukraine for the next ten years. This document should determine the directions and pace of the state transformation in this strategic period of its development;

b) formation of a better strategic and current state innovation development policy, which covers the legislatively and procedurally defined Concept, Strategy, Innovation Development Program, procedures and tools for their implementation;

c) the formation of clear and effective mechanisms for their coordination with strategic management processes in other areas of economic development;

d) transition to the methodology of strategic program-target and development project management, the main elements of which should be: definition of modern social needs and interests; macroeconomic forecasting and planning; hierarchical definition of strategic, tactical, current development goals; ensuring the social orientation of the economy and development processes; development and approval of a new Concept of sustainable socio-economic and innovative development and its state regulation; development and approval of a new National Strategy for Sustainable Socio-Economic Development and a Plan for its implementation with the definition of mechanisms of state innovation policy in this area; transition to a unified methodology of strategic program-target planning and development implementation, including through the improvement and application of PMBoK project management standards [3];

e) taking into account the world and national experience of planning, organization, coordination, control and regulation of the implementation and ensuring the effectiveness of development results.

In our opinion, the mechanism of strategic program-target and project management of priority directions development and spheres of economy should cover the following groups of unified procedures and standards: development and substantiation of the development program concept; evaluating the program effectiveness taking into account the risk factor; feasibility study of the program and draft program examination, its main measures and parameters; planning of management activities for the design of program activities and processes of their implementation at all program life cycle stages; development of the program subject area, its budget, financial plans, their state examination and approval; selection of organizational structures for professional program management, its main performers and other participants on a competitive basis; contract, information and communication activities to ensure software transformation; organization of software transformations, including procurement and supply of resources, transfer of high and critical technologies; organization and coordination of the team and program participants; implementation of constant controlling, regulation and making changes; organization of effective completion of key stages and target projects of the program, transition to a new phase of development and transformation; maximum consideration of the so-called "human factor", the system of professional activity standards and program modern management and its results; comprehensive evaluation of projects and programs effectiveness, their investment support, expected and actual results.

Today, industry is the largest in volume and importance, unique in complexity of material production and part of the national economy, in which economic entities extract raw materials, fuel, other minerals, produce the whole set of tools, most of the items of labor and consumption based on application, modern

equipment, advanced technologies, various forms of production organization, business processes and management.

Considering industry as a complex economic system, it should be determined that its main features are integrity, hierarchical construction, exogenous nature and continuity of development.

The best practices of modern industrial progress show that the economic growth of the EU countries is largely due to profound structural changes that have ensured the implementation of high innovation and technological developments and measures, economic and rational use of resources, and other positive effects. The dynamic growth of production in most countries of Southeast Asia, China, India, Brazil was due to accelerated innovation and technological development in the most promising industries that today create and manufacture: air and space aircraft; computers and other office equipment; pharmacy; devices and complex electronic systems for radio, television, telemetry and communication systems; appliances and sophisticated appliances; cars, unique vehicles and other high-tech machines; science-intensive and complex products of chemical synthesis; the latest equipment for advanced production systems, etc.

The general characteristic of the industrialized countries' economy is that the innovation level of their products is 70…90% of total industrial production, and technical and technological equipment generally corresponds to the highest level of technological structure in the relevant field of industrial production.

Considering the current state and structure of industry in Ukraine, it should be noted that among the main factors in the formation of negative trends in its development are the main structural imbalances, which include:

1. Loss of progressive social orientation as a result of long-term unilateral orientation only to armaments (during the former Soviet Union) and the lack of effective socio-economic, structural and other reforms during the previous period of independence of Ukraine.

2. Violation of the optimal reproductive proportions, as to date remains undeveloped modern production of consumer goods (group "B"), which has not reached the optimal proportions compared to the production of means (group "A"), the quality of which also does not meet world standards.

3. Significant differentiation of the production level in different industries, as well as in enterprises of one industry. This situation is the result of a disproportion in the field of investment, in the distribution of material resources, pricing.

4. Resource- and energy-intensive unreasonably costly nature of production. In terms of energy consumption per unit of output, Ukraine exceeds the indicators of the advanced countries of the world by 1.5…5 times, especially in energy-intensive industries (metallurgy, chemistry, mechanical engineering, etc.).

5. Limited fuel, energy and mineral resources, which in recent years have become an acute problem for non-modernized and obsolete production systems in Ukraine.

6. High level of production concentration, insufficient number and economic capacity of "small" enterprises, their low role in the main production and technological.

7. Low "marketability" of the final product, raw materials and semi-finished exports. As already mentioned, today Ukraine exports very small volumes of high-tech competitive products with a high level of added value.

Today the following complexes should be strategic and tactical priority spheres and branches of innovative and high-tech development of the domestic industry:

1. Technical and technological modernization of power plants, creation and development of new and renewable energy sources, the latest resource-saving and energy-saving technologies. This complex includes: means of labor protection and safety; modern equipment for difficult conditions of coal mining; equipment for methane extraction and preparation for consumption; energy efficient motors and electric drives for basic sectors of the economy; various electrical equipment, etc.

2. Mechanical engineering and instrument making, which must ensure the high-tech development of all industries.

3. Nanotechnology, microelectronics, information technology, telecommunications and computer systems.

4. Development of chemical technologies, new materials. The progress of biotechnology includes: development of genetic engineering technologies; immunobiological drugs and biocompatible materials; modern construction materials, etc.

5. Machines and mechanisms, other industrial products for high-tech development of agriculture and processing industry.

6. Transport systems; construction, reconstruction, technical re-equipment and modernization.

7. Human health and economic sphere, which include: diagnostic and treatment software; energy efficient, resource-saving, modular, ecologically safe equipment for water treatment systems, water purification, heat supply and means of their management.

8. Development of information and communication systems and technologies.

Along with identifying and guaranteeing the implementation of priority areas for the domestic industry development, modern mechanisms of state structural policy should provide measures to: stimulate the flow of investment and other resources in priority areas; support for the development of innovative and high-tech industries; protecting and providing financial support to industries that are in a state of stagnation, diversification and optimization; rehabilitation or closure of production in depressed industries; development of state strategic, tactical and other plans, target programs, national, sectoral and regional projects; solving problems related to the focus of capital in the priority and capital-intensive areas of structural adjustment.

Mechanisms for implementing state policy in these areas of domestic industry development should include:

• methods of direct influence, which include: the provision of financial assistance in the form of investment allowances, subsidies, loans and grants for the development of individual industries, regions and territories; use of the public procurement system;

• methods of indirect regulation, which include: strategic and indicative planning (and science-based forecasting); providing tax and credit benefits with their differentiation by different industries and areas of production, which are identified as priorities; implementation of the policy of accelerated depreciation; conducting flexible pricing and export-import policies, including the establishment of rational import and export tariffs.

Conclusions. The authors are convinced that the implementation of the above measures will facilitate Ukraine's rapid transition to world economic standards and ensure competitiveness, will allow moving to an innovative model of dynamic sustainable development not only of the real domestic economy sector but also society as a whole.

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Ключові слова: модернізація, інноваційний розвиток, конкурентоспроможність, структура промисловості.

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Redkin Oleksandr, Candidate of Technical Sciences, Associate Professor. **Zyma Oleksandr**, Candidate of Technical Sciences, Associate Professor. **Pahomov Roman**, Candidate of Technical Sciences, Associate Professor. **Tsvihunenko Olha**, PhD student. National University "Yuri Kondratyuk Poltava Polytechnic". **Current tasks, procedures and tools of innovation-high-tech development of Ukraine.** Based on the analysis, the main problems and reasons for low efficiency and non-competitiveness of the Ukrainian economy, the decline of innovation, technology and economic potential of its enterprises were formulated. Improved mechanism for renovation and deep modernization of the domestic economy, first of all high-tech industrial and other enterprises, defines the main purpose, main tasks of National Innovative System development, methods and ways of their implementation were purposed in the article. The study formulates not only innovation and technological goals of production progress in Ukraine, but also identifies

key moderators of national economy transformation and procedures for forming fundamental foundations for sustainable economic growth in the process of its development and adaptation to world standards of progress and competitiveness. The main points and procedure for the development and implementation of the National Strategy and Program of Innovative Development, procedures and tools for the implementation of "turnkey" of these strategic decisions are also proposed. The article lists the main sectors of the economy and industry of Ukraine, which should become the locomotives of innovation and technological progress of the state and its enterprises. The practical implementation of the conclusions and recommendations proposed in the study will contribute to the rapid transition of Ukraine to world standards of management, modern progress and ensure the competitiveness not only of the domestic economy but also of society as a whole.

Keywords: modernization, innovative development, competitiveness, industry structure.