

The Value of the Analysis of Scientific and Technical Research in the Strategy of Innovative Development of the World Economy



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Opinion

The problem of forming a strategy of innovative economic development, the implementation of which could ensure a high socio-economic level of the state, remains relevant for Ukraine and the world level. Improving the quality and efficiency of the domestic knowledge generation sector as the foundation of an innovative economy helps to solve this problem. Conducting systematic monitoring research of scientific and scientific-technical activities makes it possible to assess the state and effectiveness of the sector of scientific research and scientific-technical (experimental) developments today and to determine the prospects for future development.

In order to control the development of domestic scientific and scientific-technical activities, it is necessary to analyze the sector of scientific and technical developments annually by groups of indicators [1]:

- a) quantitative assessment of scientific organizations and staffing of the scientific sphere of Ukraine
- b) financial support of the scientific sphere of Ukraine: by sources, sectors of activity, types of scientific research and scientific and technical (experimental) developments, directions of budgetary financing, main managers of budgetary funds, priority directions of development of science and technology
- c) quantitative assessment of performed and completed scientific (scientific and technical) work in the reporting year: by areas of budget funding, the main managers, priority areas
- d) quantitative assessment of created and implemented scientific (scientific and technical) products in the reporting year:

by areas of budget funding, types of STP, main managers, priority areas

- e) quantitative assessment of continuity of stages (types) of the scientific process
- f) quantitative assessment of publishing activities: by types of printed works, areas of budget funding, the main managers
- g) quantitative assessment of patent activity: by areas of budget funding, the main managers
- h) quantitative assessment of the state of the scientific sphere of Ukraine in international comparisons.

Among the significant results of research and development on SCSTP should be noted [2]: SCSTC "State Targeted Scientific and Technical Program for Antarctic Research for 2011-2020", chief administrator - MES of Ukraine, executor - National Antarctic Research Center of MES of Ukraine. The study of climate change, in particular the impact of climate change on the course of natural processes in the Antarctic environment, including the dynamics of the oceans, sedimentation of marine and continental sediments, etc., is one of the priority areas of Antarctic research identified by the Antarctic Research Committee.

In the direction of "Geological and Geophysical Research" the reproduction of historical climatic data started in 2018 by studying the bottom sediments selected in the waters of the Argentine archipelago during the season of the 24th UAE, which recorded the stages of activation of glaciers and their reduction, temperature change water and plankton development. For the first time, the method of determining the surface volumes of island glaciers using the combined use of digital stereophotogrammetric

and UAV imaging was applied and the dynamics of their melting was studied. The data obtained are an important component of climate change forecasting.

According to the results of projects [3]:

a) conducted research on the most important issues of scientific and technical, socio-economic, socio-political, human potential to ensure the competitiveness of Ukraine in the world and sustainable development of society and the state

b) developed the latest and resource-saving technologies in energy, industry and agro-industrial complex; new substances and materials; information and new production technologies (laser, robotics, plasma, etc.); new technologies for the prevention and treatment of the most common diseases.

Assessment of the state of the scientific sphere, the results of scientific research in the world is carried out at the international level on many indicators of various authoritative ratings, including, in particular, the Global Innovation Index, the Global Competitiveness Index, the European Innovation Scoreboard. European Innovation Scoreboard) [4]. The Global Innovation Index (GII) is the result of a study of the innovation climate of countries, which has been conducted since 2007. The study evaluates the elements of national economies in relation to innovation processes.

GII is calculated on the basis of about 80 different variables that characterize in detail the innovative development of countries around the world at different levels of economic development. The authors of the study believe that the success of the economy is associated with both the availability of innovation potential and the conditions for its implementation.

GII is calculated as a weighted sum of estimates of two groups of indicators:

a) Available resources and conditions for innovation (Innovation Input):

- i. Institute Institutions
 - ii. Human capital and research
 - iii. Infrastructure
 - iv. market development (Market sophistication)
 - v. business development (Business sophistication)
- b) Achieved practical results of innovation (Innovation Output):
- i. Knowledge and technology outputs
 - ii. results of creative activity (Creative outputs)

Thus, the final GII is the ratio of costs and results, which allows you to objectively assess the effectiveness of innovation efforts in a country.

The ranking is made annually by Cornell University together with the international business school INSEAD and the World Intellectual Property Organization (WIPO, WIPO). GII covers more than 129 countries, home to 91.8% of the world's population and generating 96.8% of global GDP [3]. Therefore, the results of such ratings make a great contribution to the development of scientific progress.

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