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THE DIAGNOSTICS OF POTENTIAL INNOVATIVE INDUSTRY DEVELOPMENT IN UKRAINE

Domestic industry has a significant innovation potential that can provide the structural transformation of the national economy and a high level of scientific and technological development of the country as a whole. Meanwhile, till now, the production capacities reserves, which were not involved during the crisis period, and a favorable external conjuncture were a predominant source of growth in the industry in Ukraine. Preservation of the existing models of industrial sector development in Ukraine with a focus on low-tech manufacturing and exporting can lower the competitive positions of the national economy and further increase of the technological gap with the developed countries.

The continuing production recession in the industry proves the necessity of structural changes stimulation, creating the basis for a new national economic development model that will meet the peculiarities of the competitive challenges of the post-crisis world. Therefore, the priority is to predict the potential innovative industry development in Ukraine, which will allow to determine the probable consequences of accepted decisions, the outlooks of investment-innovative processes and to forecast the state of the economic system. In general, the forecasting – is a type of human cognitive activity aimed at fostering of object development predictions by analyzing the tendencies of its development. Consequently, to determine the potential of innovative industrial development of the country, it is reasonable to forecast the factors influence on innovation processes in the country.

In this context, to forecast the development of the investigated processes in the future it is necessary to study the dynamic series in the past. Thus, the main

purpose of quantitative time series analysis is to identify the tendencies of the phenomena being studied.

The determination of the relationship and interdependence between the existing phenomena and economic processes has the essential significance and allows describing causal relationship between them. The research of intensity, type and forms of causal effects inside the stochastic processes is based on methods of economic-mathematical modeling, including those based on econometric analysis of time series.

In the process of monitoring the innovative industry potential the important thing is the analysis of the dynamics parameters that affect the formation of innovative activities in the industry. Therefore, the main parameters that affect the dynamics of innovative activities include: the number of innovative active enterprises, the number of enterprises that implemented innovations, the total amount of innovative activities funding, the mastering of production of innovative products types, the volume of sales of innovative products both in Ukraine and abroad.

Comprehensive study of dynamic series must precede the stage of prediction of indices under investigation that will allow determining the trends changes of economic indicators data. The informational base for the mathematical modeling were official statistics data above for the period 2005-2012.

With the help of the STADIA package of statistics data processing the numerical economic and mathematical models of investigated indices dynamics are created on the basis of statistical data for the period 2005-2012. The constructed models are adequate to the experimental data and have high statistical estimates significance. This enables us to carry out a full analysis.

All economic and mathematical models are adequate to the experimental data and have high correlation coefficient significance. This gives grounds to make a forecast for 5 years and to conduct an economic analysis of these indicators behaviour. With the help of mathematical modeling means of the STADIA package of statistics data processing we attempted to build functions that allow to

predict and evaluate the funding volumes of innovation activity in Ukraine. The economic and mathematical models of investigated indicators behaviour are based on this analysis. Investigated informational files are described with the help of several types of models and are characterized by a high value of multiple correlation coefficients, which indicates the high reliability of the results.

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