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Threats to economic security of Ukraine: the mechanism of deflection and the regulatory process

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Abstract

The necessity of introduction and implementation of organizational and economic mechanism against threats to the economic security of the national economy. The attention that the economic security of Ukraine's economy in current conditions based on situational responding to threats that have arisen, and therefore provides for the liquidation process and neutralize the negative impact. In contrast to the existing inefficient mechanism developed organizational and economic mechanism preventing threats to the economic security of the national economy, which allows for rapid adjustment of economic policy.

Keywords: Economic security of the national economy; Economic security threats; Threats warning mechanism; Government regulation threat prevention process

The necessity to an introduction and implementation organizational and economic threats preventing mechanism of the economic security of the national economy had been grounded. It's focusing that providing the economic security of the national economy in current conditions based on situational responding to threats that have arisen already. And result assumed the process of eliminating and neutralizing the negative impact.

The article purpose is to highlight and proposing threats preventing mechanism the economic security of the national economy, which involves the introduction of tactical measures of a preventive nature.

The basis of the fundamental research methodology put the theory of the government's economic policy of growth. Methods of theoretical generalization were applied for study and systematization of scientific public policy concepts, to ensure economic security. The functional and conceptual approaches were used. The system structural analysis was applied in the study the formation priorities of ensuring the economic security of the national economy.

The organizational-economic threats preventing mechanism the economic security of the national economy presented in the article allow rapid adjustment of state economic policy. That based on the collection and analysis information about its effectiveness based on the effect of feedback received from civil society, which is of particular relevance in the integration of the national economy to the global economy.

Organizational and economic threats preventing mechanism the economic security of the national economy formed on the basis of advanced control using methods of scenario modeling. It enables among alternatives solutions to choose the best and most effective way of forecasting possible consequences as a result of each and aims to prevent the destructive impact of potential threats to the economic security system of the national economy.

The functions of state regulation of the prevention of threats to rely on the Department of Economic Strategy and Macroeconomic Forecasting Ministry of Economic Development and Trade of Ukraine, including organizational and methodological (introduction of modern information technology to meet the needs of management, improving the methodology of information-analytical management software, etc.), control (software likelihood, relevance, timeliness of statistical information, organization of monitoring according to the needs of management), analytical (assessment of economic security, evaluating the efficiency and competitiveness of the national economy and its individual sectors relative to international standards etc.), planning and forecasting (simulation threats to the economic security of the national economy, formation Weather-state program of economic and social development of Ukraine for the short, medium and long term, etc.).

Instruments of state regulation of preventing threats to the economic security of the national economy including economic (tax rates and benefits, transfers, direct budgetary investments, grants, concessional loans, the discount rate, rates, foreign exchange restrictions, etc.), institutional (government support, advice, assistance staffing, information support), institutional (budgetary funds, technology parks, business incubators, think tanks, etc.), administrative (registration, licensing, quotas, contests, tenders, etc.) and regulatory (decisions, decrees, orders, regulations, policies, concepts, plans, projections, programs, etc.) methods, instruments and tools.

Ministry of Economic Development and Trade of Ukraine is the body that coordinates the activities of institutions within its powers engaged in the implementation of administrative decisions prevent threats. These institutions include line ministries and other executive

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agencies, the National Bank of Ukraine and others. However, the formation of priority directions of economic security of the national economy based on revised data block using analytical software tools described above, appropriate management decisions, monitoring and control of the results achieved within the exclusive competence of the Ministry of Economic Development and Trade of Ukraine.

Mechanism for the prevention of threats to economic security, formed on the basis of advanced control using

References

- Baranovs'kyy O I 2000 Financial Security in Ukraine (assessment, methodology and mechanism for maintenance) Kyiv: Institute for Economic Forecasting of Ukrainian National Academy of Sciences (in Ukrainian)
- [2] Burkaltseva D D 2012 Institutional economic security of Ukraine Kyiv: Znannya Ukrayiny (in Ukrainian)
- [3] Varnaliy Z S, Burkal'tseva D D, Sayenko O S 2011 Economic security of Ukraine: problems and priorities of strengthening Kyiv: Znannya Ukrayiny (in Ukrainian)
- [4] Vlasyuk O S 2008 Theory and practice safety in the sciences of economics: research report Kyiv: National Institute of International

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methods of scenario modeling enables among alternatives solutions to choose the best and most effective way of forecasting possible consequences as a result of each and aims to prevent the destructive impact of potential threats to the system of economic security national economy. The introduction of a strategic monitoring, situational modeling and forecasting the development priorities of economic policy in the framework of an integrated study procedures and strategic decisions will form the fundamental principles of economic security of Ukraine based on advanced management.

Security Problems at the National Security and Defense Council of Ukraine (*in Ukrainian*)

- [5] Ministry of Economic Development and Trade of Ukraine 2013 Economic situation and forecasts. Retrieved from http://www.me.gov.ua/ (in Ukrainian)
- [6] Onishchenko S, Pugach A 2015 Threats to economic security of Ukraine: essence, evaluation and prevention mechanism Poltava: PoltNTU (in Ukrainian)
- [7] United Kingdom HM Treasury [E-resource]. Access mode: http://www.hm-treasury.gov.uk/