# THE SECURITY ASPECT OF THE MODELING OF FINANCIAL MONITORING AND ACCOUNTING OF THE INNOVATION CLUSTER ECONOMIC ACTIVITY

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## Abstract

Innovation clusters have a significant stimulating effect on the development and introduction of innovations in the economy. The implementation of innovative activities within the innovation cluster allows creating an innovative product or service by the efforts of all cluster subjects, which involves harmonious cooperation between them in the process of implementing innovative activities. However, a feature of the cluster functioning is the presence of competition between individual entities of the cluster, which leads to the complication of cluster management. In particular, the significant complexity and need to harmonize relations actualizes the problem of information support for the process of making managerial decisions both at the level of the cluster and at the level of individual cluster participants. It is the system of financial monitoring and accounting that should provide the management of the cluster with adequate information that characterizes the economic activity of the cluster in general and its individual elements. But the implementation of financial monitoring and accounting is associated with certain risks that must be taken into account in the process of modeling monitoring and accounting at the cluster level. The purpose of the study is the analysis of the security aspect of modeling and implementation of financial monitoring and accounting within the innovation cluster, as well as the development of a methodology for assessing the financial state of the innovation cluster, taking into account the security aspect.

The basis of the research is empirical data six national enterprises participating in the innovation cluster that characterize the economic activity of enterprises participating in the innovation cluster. The obtained data allow us to characterize the financial state and process of innovative activity of the enterprises that are part of the innovative cluster. Analytical methods were used during the research: method of factor analysis, and method of comparative analysis. The Fishburne method was used to develop an integral indicator of the cluster's financial condition.

As a result of the analysis, the risks that the participants of the innovation cluster may face in the process of financial monitoring and organization of accounting of innovative activities within the cluster were determined. The identified risks were grouped by the level of negative impact on the functioning of the innovation cluster. Taking into account the mentioned risks, a methodology for assessing the financial state of an innovation cluster using an integral indicator is proposed, which allows taking into account the characteristics of individual cluster participants. Thanks to the proposed approach, the probability of realizing the identified risks can be reduced, as well as the use of the proposed assessment methodology allows to improve the quality of information support of the management decision-making process both at the level of the innovation cluster and at the level of its individual participants.

In conditions of high uncertainty inherent in the current state of the national economy, managing an innovation cluster is a difficult task and requires high-quality information resources to ensure the process of management decision-making. The source of information on the cluster financial condition is the system of financial monitoring and accounting of economic activities of cluster participants. Risks that arise in the process of modeling financial monitoring and accounting can be divided into three groups according to the level of negative impact: critical risks, moderate risks, and minor risks. The use of an integral indicator, which takes into account the characteristics of individual cluster participants, allows to reduce the probability of the realization of risks and to achieve an increase in the efficiency of cluster management.

*Key words*: *Financial monitoring, Innovation cluster, Accounting, Security, Integral indicator.*