
Development of a risk management model in the system of economic security of interregional industrial cooperation

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For citation

Tsvetkov V.A., Bondarskaya O.V. Development of a risk management model in the system of economic security of interregional industrial cooperation // *Market economy problems.* – 2023. – No. 2. – Pp. 95-111 (In Russian).

DOI: <https://doi.org/10.33051/2500-2325-2023-2-95-111>

Abstract

The relevance of the study is confirmed by the fact that cooperative systems at the interregional level can increase the stability of participants through the formation of new economic ties. The process of manufacturing science-intensive products is presented as a chain of relationships between various enterprises, each of which contributes to increasing the sustainability of production. Involvement in the cooperation system of representatives of various types of activities allows you to maneuver the added value to reduce risks. The aim of the study is to form an approach to managing the risk of a cooperative system based on a typical algorithmic risk management model that takes into account the negative impacts on the economic security of economic entities participating in interregional industrial cooperation. In the article, the authors present an overview of the main components of the economic security of interregional industrial cooperation as a class of control objects. The objectives of the study are defined: firstly, to identify the main basic approaches to ensuring economic security on the scale of interregional industrial cooperation; secondly, to present a multi-level hierarchy of ensuring economic security, including the level of cooperative systems; thirdly, to build a typical algorithmic model of risk management in interregional industrial cooperation; fourthly, to form a procedure for the redistribution of risk between the participants of the cooperative system. As part of the study, the authors used the method of analysis and synthesis, the transition from particular to general, essential analysis, the method of logical imperatives. A risk analysis methodology is presented and justified, which is based on a fuzzy risk map, formed on the basis of the consolidation of vectors, which allows to combine all possible negative impacts that arise in the cooperative system, detailed depending on the stages of production of high-tech products available in the cooperative system. As a result of detailing, an integral risk cube is formed, covering all variants of negative events in relation to all objects of the cooperation system in the context of the main stages of the production of high-tech products. The principles of evaluating the effectiveness of risk management are substantiated, taking into account the behavioral characteristics of participants in a cooperative system in an innovative environment. A model of accumulation of effects and losses of stakeholders for assessing the effectiveness of risk management is formulated, which includes a set of criteria and rules for selecting

indicators, as well as sources of initial data provided by participants in the cooperative system.

Keywords: *regional cooperation, industrial cooperation, risk management, economic security, management model.*

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