HUME-OPTIMAL MANAGEMENT OF MULTIPLE-FACTOR RISKS IN INNOVATIVE PROJECTS

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The article deals with two-stage multiple-factor risks management oriented on experts' preferences and reducing the possibilities of manipulation according to the tasks of innovative projects risk-adjustment discount rate justification on the basis of linear and matrix models of transvection composition.

From the one point, expert appraisals subjectivism introduces in itself the possibility to use experts' professional knowledge in the risk management tasks, but, from the other point, can be the source of fixing risk-adjustment discount rates amount manipulating that influence on the innovative project attractiveness. The solving of this problem takes place in case of separation in time of 2 successive steps: risks model development, including risk bonuses.

The risks model, based on the traditional cumulative approach, concedes the combination of both steps and cost justification manipulation with management risks and its appraisals.

Two-stage risks management can be reached on the basis of weighting coefficient method with the use of universal binary matrix transvection increasing its effectiveness by sufficient justification of relation order on multitude of delaunched private criteria, here - ranging number of concerned risk events factors. Additional complexity emerges as a result of two-aspect character of every risk event: the possibility of risk event occurrence and the size of a loss in case of the event onset.

Matrix transvection universality means admissibility of general binary matrix[1] use for levels appraisal of all risk factors and assumes the fact that during the process of risk factors ranging experts take into consideration not only risk parameters aspects, aggregation of which, finally, influences on relations order between the factors.

Risk level and weighting coefficients establishment are believed to be the basic problems of weighting coefficients methods use. The solving of these problems can be implemented by means of universal matrix transvection use with topologic interpretation created on the known technique basis[2].

Linear transvection can play risk management variant of criterion effectiveness in *E*-domain of complex risk level described by origin collection of risk levels of all sufficient factors.

The second stage of risks management is characterized by the development and justification of hume-optional variants of decrease in risk events occurrence possibilities, the expected loss size and influence weakening of human factors as a potential manipulating source.

In the process of dealing with the task of innovative projects risk-adjustment discount rate justification management risks effectiveness will be evaluated according to the changes in known indices of investments economic effectiveness.

The article deals with the justification possibility of innovative projects risk-adjustment discount rate in a suggested variant of a linear and matrix model transvection combination with topological interpretation. The received investigation results discover the ways of implementation of two-stage multiple-factor risks management oriented on experts' preferences and preserving full value possibilities of valuable experts' professional knowledge use, thus, considerably limiting experts' appraisals subjectivism as a source of management risk costs manipulating and values of set risk-adjustment discount rates influencing on the innovative project attractiveness. The following goal can be achieved by the separation in time of two successive steps: risk model development and hume-optimal management of multiple-factor risks, including risk bonuses fixing.

[1] *Kharytonov V.A, Belykh A.A.* Modern Management Technologies under scientific editorship of V.A. Kharytonov. Perm, 2007. 190 p.

[2] *Kharytonov V.A., Alekseev A.O.* Risk Levels Quantitative Analysis on the Basis of Universal Binary Preferences Model LPR // Vestnik of Perm University. Series "Economics". 2009. № 2. P. 13-23.

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