

RISK ANALYSIS IN THE MANAGEMENT OF CONSTRUCTION INVESTMENT PROJECTS

Alina POLCANOVA, PhD., Assoc.prof.
Technical University of Moldova

Abstract: Effective Construction Investment Projects (CIP) contribute to sustainable economic development. Evaluation of the CIP aggregate risk index as a fundamental indicator is among the most topical issues in the Project management. Justification of the effectiveness of CIP related to the development of potentially dangerous territories in Moldova requires consideration of the regional geological conditions. On the terrain of Moldova, the greatest danger is the following geo-environmental processes: landslides, seismic phenomena, river and gully erosion, flooding and waterlogging, subsidence, karst suffusion, subsidence, swelling and shrinkage, anthropogenic processes. It should be noted the ineffective assessment of geocological risks, taking into account natural and difficult technogenic conditions. Despite numerous studies of uncertainty and risk, there is no adequate unified methodology for assessing these phenomena within the CIP evaluation. Analysis of traditional methods for assessing CIP under conditions of uncertainty and risk testifies to their theoretical significance, but unfortunately, in some cases – limited practical applicability due to the following reason: the mechanism for qualitative and quantitative risk analysis is not sufficiently standardized. Traditional methods (discount rate adjustment, method of proper equivalents, scenario modeling, building decision trees, Monte-Carlo simulation, etc.) are limited due to many simplifying model prerequisites, especially in the long-term CIP management. It is advisable to create a comprehensive risk-management model to improve the efficiency of CIP management under risk conditions. This model should be based on scenario modeling, as well as cumulative construction of the discount rate, taking into account the risk-free basis, inflationary expectations, and the weighted average risk level.

Keywords: construction investment projects; project management; risk analysis; geocological risks; risk-management model.