

Ivane Javakishvili Tbilisi State
University Faculty of Exact and Natural
Sciences Department of computer
sciences

Gocha Khorava

Modeling economic risk and uncertainties of large infrastructure projects

Master Program: Informational Systems

Master's thesis is done to obtain Master's degree of
Science in Information Systems

Head:

Teimuraz Manjapharashvili

Associate Professor

annotation

Our work is dedicated to reviewing new, modern (fuzzy) approaches to the financing of major infrastructure projects and financial implications. Two works are mainly discussed:

1. HANS SCHJÆR-JACOBSEN, MODELLING OF ECONOMIC RISK AND UNCERTAINTY IN LARGE INFRASTRUCTURE PROJECTS. Copenhagen University College of Engineering, 15 Lautrupvang DK-2750 Ballerup, Denmark.
2. KIM BANG SALLING, STEEN LELEUR, MODELLING OF TRANSPORT PROJECT UNCERTAINTIES: FEASIBILITY RISK ASSESSMENT AND SCENARIO ANALYSIS. European Journal of Transport and Infrastructure Research, 12(1), 2012.

The Appearance of these papers led to the Danish Transport Ministry set new requirements for budgeting, risk and uncertainties for large infrastructural projects. These papers provide a new approach that sets some central demands. The relevant value models are introduced to enable the impact of risk factors to limit the price, number, final value of the unit price, that change of the total value of the project. The uncertainties are modeled according to two basic principles, "probability" and "possibilities", as well as the calculation methods and the corresponding computation is based on a numerical example.

Key Words: Quantitative analysis of risk, scenario analysis, socio-economic analysis, assessment of transport infrastructure, prediction of base class, prediction of baseline scenario.