MCDA and Risk Analysis in Transport Infrastructure Appraisals: the Rail Baltica Case

This paper sets out a decision support system (DSS), COSIMA, involving the combination of cost-benefit analysis and multicriteria decision analysis (MCDA) for transport infrastructure appraisals embracing both economic and strategic impacts. However, some shortcomings appear in the methodology regarding the uncertainties embedded within the criteria weights in the MCDA-part of COSIMA. Therefore, this paper presents the perspective of introducing risk analysis and Monte Carlo simulation to the weighting profile in the MCDA-part. The DSS is presented through a case study concerning alternatives for the construction of the Rail Baltica railway line through the Baltic countries and Poland.

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