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Decision Framework for Cross-Border Railway Infrastructure Projects

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Abstract : Transport infrastructure assets are key components of the national asset portfolio. The decision to invest in a new infrastructure in transports could take from a few years to some decades. This is mainly because of the need to reserve and spent many capitals, the long payback period, the number of the stakeholders involved in decision process and –many times- the investment and business risks are high. Therefore, the decision assessment framework is an essential challenge linked with the key decision factors meet the stakeholder expectations highlighting project trade-offs, financial risks, business uncertainties and market limitations. This paper examines the decision process for new transport infrastructure projects in cross border regions, where a wide range of stakeholders with different expectation is involved. According to a consequences analysis systemic approach, the relationship of transport infrastructure development, economic system development and stakeholder expectation is analyzed. Adopting the on system of system methodological approach, the decision making framework, variables, inputs and outputs are defined, highlighting the key shareholder’s role and expectations. The application provides the methodology outputs presenting the proposed decision framework for a strategic railway project in north Greece deals with the upgrade of the existing railway corridor connecting Greece, Turkey and Bulgaria.

Keywords : decision making, system of system, cross-border, infrastructure project
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