



Smart Transportation Alliance

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& Innovation Awards

**Risk occurrence in transport
infrastructure projects linked to
big crises**

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Background

Transport infrastructures (TI)

- expensive
- with locked-in effect
- with uncertainty

Main risks

- cost overruns
- delays
- insufficient traffic
- insufficient revenues

Research gap

Although **risks** of TI planning are high, they are **treated insufficiently** in project appraisals.

Research objective

- to improve the process of TI planning and appraisal by developing an instrument that identifies ex ante the risk occurrence likelihood of TI projects.

Cases

51 projects

- 15 European countries
- all investment sizes
- publicly financed & PPPs
- all modes of TI

Samples

- Full
- Road
- PPPs
- Completed before crisis (2008)
- Completed after crisis (2008)

Method

- fuzzy set qualitative comparative analysis (fsQCA)

Governance, Procurement, Contractual Arrangement:
initiating public authority & decision and regulating ability; the procurement process and the contractual agreement; allocation of primary risks etc

Implementation Context:
societal; economic-financial; investment climate; political, policy and administrative capacity; legal and regulative; etc

Transport Mode Context:
transportation function; exclusivity; link vs node, respective regulations etc.

Transport Infrastructure Business Model:
value creation and capture dimension; locality; infrastructure provider; downstream market; etc.

Performance

Economic

Environmental

Social

Institutional

Funding Scheme:
characteristics & structure

Financing Scheme:
characteristics & structure

BEING ON COST

- **Before crisis:**

even with an **unfavorable financial-economic context**, projects could be on cost with a good contract, with EITHER high capability of the contractors involved OR favorable institutional context.

- **After crisis:**

to be on cost, having a **positive financial-economic context** was a key condition (together with a **positive institutional context**).

BEING OVER COST

- **Before crisis:**

low capability of the contractors involved is a key factor for projects to have cost overruns.

- **After crisis:**

unfavorable financial-economic context WITH EITHER unfavorable institutional context OR WITH low capability of the contractors involved.

Conclusions

- when financial-economic context is unfavorable, so as your project to be on cost, make sure you have a good contract, high skilled contractors or also a good institutional context.
- no recipes of success



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THANK YOU FOR YOUR ATTENTION

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