



ECTRI POSITION PAPER

“Research Needs in the field of Transport Funding, Procurement and Public Private Partnerships (PPP)”

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The European Conference of Transport Research Institutes (ECTRI) is an international non-profit association that was officially founded in April 2003. It is the first attempt to unite the forces of the foremost multimodal transport research centres across Europe and to thereby promote the excellence of European transport research.

Today, it includes 26 major transport research institutes or universities from 19 European countries. Together, they account for more than 4,000 European scientific and research staff in the field of transport. ECTRI as the leading European research association for sustainable and multimodal mobility is committed to provide the scientifically based competence, knowledge and advice to move towards a green, safe, efficient, and inclusive transport for people and goods.

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1. Introduction

In September 2007 ECTRI launched its Thematic Groups as a mean to facilitate exchanges among ECTRI researchers interested in similar research fields and in order to promote joint initiatives and positions. One of the groups is the Thematic Group on Transport Economics and Policy (TG-ECOPOL). It brings together 41 experts from 20 members of ECTRI. This group deals particularly with the following subjects: economic evaluation of transport projects and policies, transport regulation, transport pricing and financing, Public Private Partnerships (PPP) for transport, and transport policy.

TG-ECOPOL has identified that research in transport funding, procurement and PPPs is nowadays a key issue for the European Union to promote sustainable mobility. As the economic and financial crisis continues to rage and the public debt crisis is still unfolding, public private partnerships (PPPs) for transport, a key economic sector, can be an essential instrument to fuel the economic uptake. Understanding the functioning of PPPs under these conditions and exploring innovative approaches are therefore important research topics.

Although PPPs and funding issues for transport play an important role in the thoughts of the European Commission and the European Investment Bank, ECTRI thinks that given their importance these aspects should be well reflected as a research theme in the future programmes of “Horizon 2020”.

We are proposing 4 lines of research based on the conviction that further developing tendering instruments, and specifically PPPs, is not only a means for addressing the current financing crisis, but also a general instrument to increase the innovativeness and quality in the delivery of transport (infrastructure) services.

2. Dealing with PPPs in times of economic uncertainty for enhancing the Trans-European Transport Network (TEN-T)

Since the mid 80ies the Trans-European Transport Network (TEN-T) policy has been setting the framework for the development of infrastructure and services for the smooth functioning of the internal market within the European Union (EU). Public Private Partnerships (PPPs) have always been regarded by the EU as a key instrument to promote the TEN-T. In spite of this, until 2010, only a limited number of TEN-T projects had been delivered through PPPs. After the arrival of the economic recession, PPPs for financing the TEN-T became even more important due to the severe budgetary constraints endured by some member states. However, bank funding for large infrastructure projects has been substantially restricted in the last few years due to liquidity, maturity, and capital limitations of the major banks. To avoid this problem, the Commission of the EU has recently launched an initiative to promote EU support mechanisms, such as subordinated loans or senior debt guarantees, to facilitate the feasibility of PPPs for the TEN-T, and to make long-term project bonds more appealing for institutional investors such as pension funds or insurance companies.

Some countries have already implemented government support mechanisms and risk mitigation strategies to enhance large transport financing through PPPs. However, up to date, the scholarly literature has scarcely quantified the economic benefits stemming from the implementation of these approaches. Little research has also been conducted about the advantages of these mechanisms to foster the TEN-T. This research proposal intends to explore to what extent the use of these mechanisms could contribute to promote more efficient financial structures for TEN-T PPPs by mostly drawing long-term funding from institutional investors. The results of this research will contribute to avoid barriers within the EU by enhancing the TEN-T..

Some specific subjects included in this topic could be:

- PPPs and economic recovery.
- Defining a legal framework for promoting cross-border PPPs in Europe.
- The role PPPs for promoting the TEN-T.
- Enhancing the role of capital markets: Towards the Europe 2020 project Bond Initiative.

3. Enhancing efficiency in delivering transport infrastructure and services through PPPs

There are clear indications that Europe's construction industry is lagging behind other industrial sectors with respect to productivity growth. One candidate explanation for this is the contemporary types of tendering procedures used when a public sector buyer of construction services tenders a commercial construction firm. While these contracts may have valuable properties in other respects, they provide little scope for innovative thinking. This provides a motive for the further development of less rigid approaches for construction tendering. The purpose is to develop contracts which could be used as a lever for sharpening the incentives for innovativeness and quality in the delivery of transport infrastructure services. Public Private Partnerships (PPP) is one candidate instrument to achieve this end.

In order to provide a platform for the development of new tendering procedures, it is first necessary to establish state of the art with respect to the instruments for transport infrastructure and services provision used across Europe. This includes a deeper understanding of the performance of today's contracts. Relevant issues concern the frequency of delivery delay relative to initial time targets, the need to make additions to the original contract during the implementation phase, final cost realizations relative to contract costs, etc.

Some specific subjects included in this topic could be:

- Comparing standard procurement approaches with PPPs.
- Dealing with contract incompleteness and renegotiation.

- Designing the right incentives in order to deliver services at lowest possible costs to society.
- Regulation and governance of PPPs.

4. Having PPPs providing value for money through management and risk allocation

A core motive for PPPs to be of social value would be that, over the life cycle of a project, it is more beneficial to have it delivered in this way compared to using other types of contracts. Consequently, PPPs will be a better option if they maximize socio-economic benefits including environmental, and energy conservation aspects. For this to succeed there are multiple issues which have to be designed and implemented in a diligent way. If PPP costs are lower than costs under the alternative approach, a PPP would deliver value for money.

PPP design, regulation and governance are crucial building blocks in order to deliver value for money. There are a number of issues which have to be given particular attention in this. At the core of this challenge lies the incompleteness of any contract which is signed for infrastructure construction. Once a road, a railway, a port, an intermodal facility or a landing strip is opened for traffic it may look in precisely the way that the responsible agency intended. Under the surface the asset may still be of inferior quality. Any type of contract must therefore be designed in a way which ascertains that the costs to society are optimized over the life cycle of the asset.

Risk is an additional aspect of infrastructure construction and transport operation. One dimension of risk is related to the allocation of traffic risk: Is the cost to society lower if uncertainty about future traffic lies with the entrepreneur, or should traffic risk stay with society? There are also risks which are un-predictable at the time that a contract is signed, i.e. neither the private sector nor the public sector representative can foresee everything that can go wrong during the implementation of the contract. This is a larger challenge the longer that the contract period is. The allocation of this risk will also have repercussions for the outcome of any renegotiations of the original contract. It is, finally, also important to acknowledge the role of insurance companies in order to spread the risk for unexpected cost increases across society in an efficient way.

Some specific subjects included in this topic could be:

- New approaches for conducting value for money assessment.
- Evaluation of risk with respect to traffic vs. availability payment.
- Ways to deal with unpredictable risks: the role of insurance companies.
- The effect of risk perception of the different stakeholders in value for money through PPPs.

5. Performance indicators and user quality measurement

One of the most important characteristics of PPPs compared to other contracting approaches is that payments to contractors are usually made on the basis of the service ultimately provided rather than on physical measurement of work units during the implementation of the contracts. The objective of this approach is to incentivize the contractor to provide the most adequate service compatible with the resources available. However, doing that requires setting up suitable means to measure quality. A way of doing that is by using performance indicators for assessing the welfare stemming from infrastructure management. Even though performance management (condition ratings and levels of service as examples) has been at the core of infrastructure management for decades, performance based management in PPPs has been introduced relatively recently.

Following the approach previously described, many countries have been developing performance-based PPP contracts whereby contractors are paid on the basis of a set of performance indicators such as lane availability, congestion measurement, state of the infrastructure, safety outcomes, users' quality perception and so on. These indicators in PPP contracts are linked to variable incentives towards rewarding the contractor for a better level of service. Even though these performance indicators to measure quality are fairly common nowadays, there are still many fields that remain unexplored such as the definition of the most adequate number of indicators, the characteristics of these indicators to promote sustainable mobility, the most adequate way of setting up incentives, and the specific indicators to be used for every kind of transport PPP. The results from this research can contribute to improve and harmonize PPPs across Europe.

Some specific subjects included in this topic could be:

- Quality measurement through performance indicators.
- Involvement the user point of view in PPPs.
- Definition of a cross country database of PPP projects in Europe.
- Cross-fertilization of modal experiences in PPPs.

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