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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

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Item 10(d) of the provisional agenda

**TRANSPORT TRENDS AND ECONOMICS <sup>\*/</sup>**

Studies on transport economics and track costs undertaken by other organizations

Addendum 2

Overview of Research Projects

Submitted by the European Commission <sup>\*\*/</sup>

**6th Research Framework Programme: on-going projects**

**TRANSFORUM – Scientific forum on transport forecast validation and policy assessment**

This action aims to promote and support the networking and co-ordination of policy-makers, analysts and developers of policy impact assessment tools to assess the state-of-the-art in transport policy evaluation methods and their ‘fitness for purpose’ in the changing policy environment. The project thus assesses the scientific consistency and transparency of transport policy support and assessment tools (developed in earlier and ongoing projects), and their ability to match the needs and expectations of policy-makers, stakeholders and other end-users.

Final Report due by February 2007

Project website: <http://www.transforum-eu.net/>

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<sup>\*/</sup> The UNECE Transport Division submits the present document after the official deadline date.

<sup>\*\*/</sup> The information in this document is reproduced in the form in which it was received by the Secretariat.

### **GRACE – Generalisation of Research on Accounts and Cost Estimation**

The aim of GRACE is to provide new evidence on the costs of transport infrastructure use for all modes of transport, and on the consequences of charging these costs to users. This involves studies to measure the marginal cost of wear and tear, congestion, accidents and environmental impacts. For road and rail this will emphasise filling gaps in existing knowledge on costs; for air and water, there is much less work on which to build. Understanding of how these costs vary with circumstances will be improved, and the role of transport accounts in helping to measure and monitor them further explored. Modelling of the consequences of charging users these costs will concentrate on regional and equity issues as well as economic efficiency.

Final Report due by Spring 2008

Project website: <http://www.grace-eu.org/>

### **IMPRINT-NET: Implementing Pricing Reform in Transport – Effective Use of Research on Pricing in Europe**

This action aims to bring together policy makers, transport operators, researchers and other stakeholders to exchange views on the implementation of new pricing regimes, cost calculation methods, the derivation of tariffs to be levied and on successful approaches to overcome barriers and to affect attitudes and perceptions. Links between pricing RTD and the policy community are to be improved by transferring research findings to policy makers and stakeholders involved in the formulation and implementation of transport pricing reforms and by stimulating the debate among stakeholders in order to build consensus on the principles and the practice of transport pricing, thus facilitating and accelerating the implementation of pricing reforms and contributing to the implementation of the EU transport policy.

Particular focus is on the air and waterborne modes, for which the state of knowledge is less advanced, on links between infrastructure charging and investment needs and on pricing reforms in the "new" Member States. IMPRINT-NET has established six expert groups reflecting these priorities. Each EG meets four times. One larger conference is staged each year, with a broader audience of researchers and stakeholders.

Final Report due by Autumn 2008

Project website: <http://www.imprint-net.org/>

### **FUNDING – Funding infrastructures: guidelines for Europe**

In this project, the emphasis is placed on optimal charging and investment to fund new infrastructure. The principal aim of the FUNDING research project is to develop a scientifically sound approach to the funding of large transport infrastructure investments in the EU. Two different avenues are explored for the funding of these investments. The first is the creation of an EU transport infrastructure fund financed by mark-ups on transport activities. The second is the use of mark-ups on the users' costs charged by the infrastructure suppliers that make the investment.

The economics of infrastructure funds and the mark up method are first explored conceptually. The conceptual phase leads to the formulation of a limited number of alternative scenarios for a European infrastructure fund and for the use of mark-ups. These scenarios are adjusted as a function of the financing gaps that are calculated for the horizon 2020 by mode and country given the accepted TEN investments. The financing gap is computed using the SCENES – REMOVE baseline 1995-2020.

Two models are used to test the performance of the alternative infrastructure fund and mark-up scenarios: a multi-modal spatial general equilibrium model of the EU; and a multi-modal pricing and investment assessment model (MOLINO II), which is applied to five important “TEN” infrastructure projects. This case study approach will enable the effect of infrastructure fund scenarios on each of the investment projects to be examined in terms of financial structure, advancing or delaying the investment decisions, the pricing decisions and on welfare.

Final report due by Spring 2008

Project website: <http://www.econ.kuleuven.be/funding/>

### **DIFFERENT – User Reaction and Efficient Differentiation of Charges and Tolls**

Levels and structures of transport infrastructure charges in the EU vary strongly across transport modes and countries. Some degree of convergence exists but, in the presence of unsolved practical and theoretical difficulties, any such convergence is slow. Moreover, the charging regimes are rarely based on efficiency principles. In this situation, differentiation of existing charges appears to be a sensible first step. DIFFERENT proposes to investigate the possibilities of success for such an approach from a theoretical and empirical perspective.

The theoretical analysis will reveal how much differentiation successful pricing schemes should exhibit, psychology will be added to the research, in particular with respect to passenger transport, in order to complement the economist's perspective on user reactions to differentiated charging. The empirical analysis will focus on estimating elasticities and on case studies for freight and passenger transport on road, rail, water and air in a wide spectrum of European countries. Particular attention will be paid to the effects of price differentiation on revenues, because in many countries there are plans to replace the existing system of tax based infrastructure financing with a system based on user charges.

Final Report due by April 2008

Project website: <http://www.different-project.eu/>

### **6th Research Framework Programme: projects due to start in 2007**

#### **ENACT – Design Appropriate Contractual Relationships**

The increasing involvement of the private sector – mostly in Public-Private Partnerships (PPP) – in the provision of assets and/or services previously provided directly by the states raises significant questions about the application of socially optimal pricing schemes such as Social Marginal Cost (SMC) pricing. Private engagement entails allowing adequate rates of return in a purely financial perspective, which is too often incompatible with SMC pricing principles. The aim of the ENACT project is two-fold: (i) to assess the extent to which the introduction of SMC

pricing obligations may hinder or not the further development of PPP schemes in the transport sector and, (ii) to devise ways to incorporate such obligations in PPP schemes while, at the same time, taking advantage of the positive aspects that such partnerships can have.

In a first step, the ENACT project will leverage on existing research on the issues of SMC pricing and Second-Best alternatives (optimal mark-ups for cost recovery). The second step will consist of analysing the PPP phenomenon under the light of Incentive and Contract Theory, and the impacts that SMC pricing might have in terms of the informational and incentive structures of PPP contracts. The third step will be to focus on financial markets, and on the impacts that SMC calculation and pricing have on the perception of risk and the demanded rates of return. From this theoretical framework, case studies and simulations will be performed.

The results of the project will serve as the basis of a set of Guidelines to establish a Common European Policy/Regulatory Framework for socially optimal SMC pricing obligations in Public-Private Partnerships in the provision of transport infrastructure and/or services.

Final report due by 2009

Project website: not yet available

### **CATRIN – Cost Allocation of Transport Infrastructure Cost**

CATRIN is both an intermodal and an interdisciplinary project. It tries to clarify the current position on the allocation of infrastructure costs in all modes of transport. CATRIN will blend the economic principles of pricing with engineering knowledge. Based on engineering studies, the possibility of defining more differentiated pricing rules for vehicle/locomotive categories will be analysed.

CATRIN emphasizes the needs of new Member States and acknowledges that different organisational forms require different recommendations, that recommendations need to be given in short and long-term perspective and that they have to be thoroughly discussed with infrastructure managers.

CATRIN will establish the micro-aspects of cost recovery above marginal costs, including the results of applying a club approach and the implication of who bears the costs for cost recovery under alternative allocation rules, using game theoretic analytical tools. In a modal focus, with real world cases, CATRIN will develop proxies to marginal costs and test some of the allocation approaches. The possibilities for a European road damage test will be outlined which should give new evidences on the fourth-power-rule. Furthermore, CATRIN will develop financing alternatives for icebreaking activities and will explore cost allocation issues in the aviation sector.

Final report due by 2009

Project website: not yet available

## **Studies commissioned by DG TREN of the European Commission**

### **Impact assessment on the internalisation of the external costs of transport**

The study is intended to produce an overview of the state-of-the-art in assessing the amount and value of all external costs of transport. The result should form the basis for future calculations of infrastructure charges. It should enable the Commission to provide a clear answer to the policy questions surrounding the internalisation of external costs, particularly in the context of the revision of the road charging directive to incorporate external costs.

The study will include support for and use of the TRANS-TOOL and associated models which will need to provide extensive detail on the nature and levels of charges across all modes of transport in all Member States. Modelling will be used to incorporate values of external costs in the analysis of the policy as well as for the simulation of the application of a policy of internalising external costs in transport. The study is also expected to assess the economic, social and environmental impact of the internalisation of external costs for all modes of transport, together with a draft strategy for the implementation of this approach for all modes of transport. Apart from assessing the effects of the internalisation of external costs, the study should also give a detailed overview of both theoretical approaches and current practices in the calculation of road infrastructure costs.

Final Report due by December 2007

### **RAILCALC – Calculation of charges for the use of rail infrastructure**

This study is expected to develop a best practice guide on (1) cost categories, (2) cost centres and (3) both marginal cost and full cost service calculation methods. This guide should help ensuring that expenditures can be allocated to marketable services of infrastructure managers and that charges are cost-related. The study is expected to come up with recommendations which should allow regulatory bodies to verify compliance with competition rules and with the rules of Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure.

Final Report due by March 2008

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