INTERNATIONAL TRANSPORT FORUM
ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

JOINT TRANSPORT RESEARCH CENTRE

Round Table, 25-26 October 2007, Boston University, Boston

MACRO-, MESO- AND MICRO-INFRASTRUCTURE PLANNING AND ASSESSMENT TOOLS

Outline

Economic appraisal aims to improve the quality of decisions on investments in transportation infrastructure. Traditional cost-benefit analysis (CBA) provides a relatively simple and familiar approach to project appraisal, but it is valid only when the economy is free of market failures, which – of course – it is not. Recent research works towards "economics for an imperfect world"[1], and shows how CBA may lead to misleading conclusions when market imperfections are ignored.

The first objective of the roundtable is to identify the relevant "wider economic benefits" and discuss methods of assessing them. Different strands of research focus on different market imperfections. General equilibrium analysis, for example, emphasizes the importance of the distortions created by government interventions, while the new economic geography focuses on the role of agglomeration economies, and regional impact models consider the spatial distribution of costs and benefits.

The tools proposed for dealing with the imperfect world are imperfect, so it is useful to discuss their practicality when it comes to policy decisions on how much to spend on transportation infrastructure and how to allocate the budget to specific projects. This is the second objective of the roundtable. A possible question is whether the conceptual and empirical basis of the more advanced approaches is sufficiently strong to justify replacing CBA. Or, alternatively, can simple fixes to CBA be proposed to remedy its main deficiencies?

Before the event, participants will receive papers exploring frontiers in the assessment of the economic impacts of infrastructure projects; outlines of the papers can be found in the draft programme below. At the event, rapporteurs will make presentations that kick off a series of discussions over one and a half days on the main challenges for improving the economic support of decisions on transport infrastructure.

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[1] After the title of a collection of essays in honor of Nobel-prize winning economist Joseph Stiglitz.

<div align="center">**Draft programme outline**</div>

Chair
Professor T.R. Lakshmanan, Center for Transport Studies, Boston University

Recent evolution of research into the wider economic benefits of transport infrastructure investments
Rapporteur: Professor Roger Vickerman, University of Kent

> This paper reviews the various approaches which have been made to assessing the role and impact of transport infrastructure in economic growth and development, from aggregate macro-econometric models to detailed case studies of behavioural change resulting from new infrastructure. The relationship between different levels of analysis is explored in more detail in order to identify a way towards a more synthetic approach which can capture best practice. A major concern is the need for consistency in the appraisal of individual projects and the evaluation of overall policy towards networks.

Supply and demand side meso effects of infrastructure investments
Rapporteurs: Professor T.R. Lakshmanan, Professor William P. Andersson and Assistant Professor Ian Sue-Wing, Boston University

> Investments in transportation infrastructure often intend to, and do, help alleviate congestion. Partial equilibrium models do not capture all economic effects of such reductions in congestion. The paper will assess attempts to include congestion effects in a general equilibrium framework, emphasizing the importance of including time costs and the microfundamentals of congestion in the analytical framework.

Consequences of Transport Infrastructure Inside and Across Urban Regions: Models and Assessment Methods
Rapporteur: Professor Börje Johansson, Jönköping International Business School

> The paper starts from stylized facts on the increasing weight of metropolitan areas in the economy and the growing importance of international trade flows. It goes on to introduce analytical tools, inspired by the new economic geography, that capture the interaction between changes in the spatial structure of the economy and transport network infrastructure. It is emphasized that the design of transport systems needs to take agglomeration economies into account.

Agglomeration benefits of transport investment
Rapporteur: Dr. Daniel Graham, University of London, Centre for Transport Studies

> This paper is concerned with the links between agglomeration, productivity and transport investment. It argues that because transport investments can change the economic densities available to firms, for instance through a reduction in travel times or in the cost of travel, they can induce positive gains from agglomeration economies. The paper presents empirical results from an econometric analysis of the relationship between the density of economic activity and productivity for different sectors of the UK economy. The results show that agglomeration economies do exist and that they can be substantial, particularly for services. Furthermore, the effect of agglomeration externalities is not trivial when considered in the context of transport appraisal. Initial calculations typically indicate additions to conventional user benefits of 10%-20% arising from increasing returns to economic mass.

Wider economic benefits of investments in transport infrastructure
Rapporteur: Professor Jeffrey P. Cohen, University of Hartford

The report begins by motivating the need for including "wider economic effects" when conducting transport infrastructure appraisal, and continues with a discussion of various techniques to do so, and a presentation of applications on highways, airports, ports, rail, and intermodal infrastructure. The substantial differences between approaches focusing on "narrow" and "wider" impacts will be evaluated.

Conclusions for policy makers
Rapporteur: Glen Weisbrod, Economic Development Research Group

Glen Weisbrod will launch a final round of discussions on how the results of research reviewed should be interpreted by policy-makers and what, if any, modifications to CBA might be indicated.