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**TRANSPORT TRENDS AND ECONOMICS**

**Studies on transport economics and track costs undertaken by other organizations**

**Transmitted by the Organisation for Economic Cooperation and Development (OECD)**

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**ROAD TRANSPORT AND INTERMODAL LINKAGES RESEARCH PROGRAMME <sup>1/</sup>**

***RECENT WORK ON TRANSPORT ECONOMICS AND COST OF INFRASTRUCTURE***

**INTRODUCTION**

This report presents the work undertaken by the OECD Road Transport and Intermodal Linkages Research Programme in the field of transport economics and infrastructure. It also includes projects on road safety. The information is presented in the following order:

1. Reports published in 2002
2. Current research activities
3. Symposium and seminars to be held in 2003

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<sup>1/</sup> Further information on the RTR Programme and its research activities can be obtained by contacting the OECD Secretariat ([john.white@oecd.org](mailto:john.white@oecd.org)).

## **1. REPORTS PUBLISHED IN 2002**

### **(a) Impact of Transport Infrastructure Investment on Regional Development**

#### **Abstract**

Faced with increased constraints in financing transport infrastructure, Governments need evaluation methods for project appraisals which enable their resources to be allocated in the most efficient way, i.e. with maximum net return to society as a whole.

The application of cost benefit analysis (CBA) in OECD Member countries for this purpose has tended to concentrate on the direct user benefits of transport. However, it has been suggested that transport infrastructure investment has wider impacts on regional development, which range beyond direct user benefits, and these should also be taken into account in order to ensure efficient allocation of resources.

The report summarises comprehensive study on current evaluation studies in OECD Member countries with an aim to find empirical evidence on wider impacts of transport infrastructure investment on regional development and to develop guidance for governments and transport administrations on how to identify such impacts and include them in appraisal methodologies.

### **(b) Benchmarking intermodal freight transport**

#### **Abstract**

What is efficient intermodal freight transport? How are "best practices" to be found? What measures are being developed in OECD countries for assessing the relative efficiency of modes and modal combinations? What opportunities exist to improve complex intermodal transport chains? How are such opportunities identified and assessed?

Today's highly competitive global market calls for intermodal transport systems that meet industry's expectations in efficiency and reliability as well as government's sustainability expectations. While benchmarking is a tool for achieving such objectives, how are these benchmarking exercises best implemented? This report analyses illustrative benchmarking exercises to provide insights into these important questions.

### **(c) Road travel demand: meeting the challenge**

#### **Abstract**

Travel demand strategies, measures, and practices are key tools in helping OECD Member countries to balance growing demand for travel with addressing environmental concerns and the need to support sustainable transport systems.

This report updates the 1994 OECD report Congestion Control and Demand Management, and highlights key policies, effective measures and best practices that have been developed and implemented over the ensuing years to influence travel demand. Based on the experiences of OECD Member countries, it recommends strategies to better manage future travel demand.

**(d) Transport logistics: Shared solutions to common challenges**

**Abstract**

With the increasing globalisation of economic activity and rapid development of Information and Communication Technology, businesses are seeking to develop and organise strategic, efficient and world-wide networks. These networks, which are often referred to as global logistics focus on integrating product sourcing, production and distribution.

In order to promote such global logistic networks, which are also compatible with sustainability objectives, governments need to develop and implement cohesive transport policies both individually and collectively. Hence, collaborative studies are needed to exchange approaches and experiences across regions. Three task forces, which have produced reports representing the Asian-Pacific, European and North American regions have sought to identify problems and suggest solutions in their respective regions.

This report aims to identify and incorporate issues common to all three regions and develop policy options to facilitate the development of global logistics systems on a co-operative basis.

**(e) Strategies to reduce greenhouse gas emissions from road transport: analytical methods**

**Abstract**

Approximately 27% of total OECD CO<sub>2</sub> emissions come from transport. Within this, road-based transport accounts for approximately 80%. The OECD Road Transport and Intermodal Linkages Research Programme established a Working Group to undertake a comprehensive study on CO<sub>2</sub> emissions from road transport, with the aim of providing a useful framework for assessing the strategies of the road transport sector in reducing emissions on a global scale.

The Kyoto Protocol seeks an average 5.2% reduction in economy-wide greenhouse gases emissions compared to 1990 levels in industrialised countries and countries in transition (Annex I parties to the UN Framework Convention on Climate Change) by 2008-12. Given recent developments in transport growth, it would be very challenging for the road transport sector in OECD countries to achieve substantial reductions in CO<sub>2</sub> emissions over the same period.

However, measures exist that can contribute to alleviate the road transport share of greenhouse gases. The most effective approach to reducing GHG emissions by private cars and road transport should involve a package or combination of measures, such as: voluntary agreement between vehicle manufacturers and government to produce low-fuel consumption vehicles; graduated vehicle taxes; fuel taxes and excise duties; consumer information; and promotion of greater fuel efficiency in the different sectors involved.

**(f) Safety on roads: what's the vision?**

**Abstract**

Approximately 125 000 people die every year on the roads of OECD countries. A wide variety of solutions have been put in place in OECD countries and further measures are being developed for implementation. However, no country has implemented all proven measures to their full extent.

Fatalities across OECD countries could be halved if all governments were fully committed to improving road safety by implementing and enforcing best practice measures.

This report identifies and assesses “best practices” among road safety programmes in OECD countries. An emphasis is placed on those programmes that have been evaluated. In addition, the underlying criteria that influence the success or failure of these “best practices” are identified to facilitate the development of effective road safety policies in Member countries.

**2. CURRENT RESEARCH ACTIVITIES**

**(a) Economic evaluation of long life pavements**

The expected outcome of this project is the development of new technico-economic options of road infrastructure asset management in response to the rapidly changing economic conditions under which public road infrastructure is funded, built and operated.

**Project objectives**

- Identify the policy direction of road administrations in the management and financing of roads infrastructure.
- Review the evaluation framework to determine the economic viability of large-scale use of such pavements on heavily trafficked roads.
- Summarise and consolidate existing knowledge about alternative binders for pavements in the road infrastructure.
- Establish the functional and environmental properties of such binders in pavements for large-scale applications.
- Plan and prepare for the execution of suitable demonstration projects.

An interim report will be made available in mid-2003.

**(b) Performance-based standards for road transport**

The expected outcome of this project is the development of more sustainable transport systems through improved road vehicle regulations controlling vehicle safety and infrastructure impacts, and better environment outcomes. It also aims at more flexible road transport regulations that provide for increased innovation and more rapid adoption of new technologies.

This proposal represents a substantive project over a three-year period. It is undertaken under the guidance of an expert working group. It will include the following tasks:

- Survey existing practice to set regulations for mass, dimension and configurations and for allowing exemptions from these regulations.
- Convene an expert working group to consider which performance measures are fundamental to establishing best practice regulations for heavy vehicle road use. The expert working group would ensure that there is no duplication in the measures selected, that the selected measures provide for high quality regulations etc., and that performance criteria for each of the measures selected would jointly provide sufficient control on road safety and infrastructure impacts.
- Document methods and procedures developed or used at present to apply performance measures in individual countries.
- Review and compare existing procedures and methods of applying the selected measures.
- Co-operate internationally towards developing, through the deliberations of an expert working group, methods and procedures for applying the measures that can be internationally recognised and adopted.
- Survey Member countries to establish variations in safety and infrastructure outcomes associated with variations in the performance of heavy vehicles against the selected measures.
- Establish, on the basis of sound scientific research and risk management approaches, suggested performance criteria for each measure and how these criteria should vary with varying infrastructure and traffic conditions applying in Member countries.
- Compare and assess approaches used in various countries to certify that vehicles, components or their operation meet regulatory standards.
- Identify possible approaches to certifying internationally that vehicles, components or their operation meet the appropriate performance criteria.
- Consider the need for international certification procedures for assessors accredited to undertake assessments of whether vehicles/operations meet performance criteria.
- Identify opportunities for innovation that are presented by adopting more flexible performance-based regulations for heavy vehicle use.
- Prepare a report providing guidance for Member countries to use in improving the quality of regulations on heavy vehicle us.

An interim report will be made available in mid-2003.

**(c) Urban freight logistics**

The expected outcome of the project is an increased efficiency of urban freight distribution as a link in the intermodal chain while reducing environmental impacts.

The objectives are to:

- Determine appropriate urban policies for freight transport, focusing on innovative solutions to improve connectivity and efficiency and minimise pollution, noise, vibration and congestion caused by freight transport.
- Identify the impacts of new technologies, private sector distribution policies and urban planning on the organisation of city logistics, including the location and form of distribution centres and connectivity.

- Establish best practices through a review of innovative approaches in OECD cities.

The final report will be published in mid-2003.

**(d) Low-emission vehicles: implementation issues**

The expected outcome of the project is a wider understanding of the issues and prospects for implementation of low-emission vehicles in the medium-term (by 2020), recognising the importance of more efficient use of energy sources and a reduction of emissions from road transport (CO, NO<sub>x</sub>, HC, PM and also CO<sub>2</sub>). The objective of the working group is to develop strategies to facilitate the implementation of low-emission vehicles, including their global performance in terms of safety and the environment

The final report will be published in mid-2003

**(e) Using technology to improve road safety**

The objective of the project is to identify new safety technologies that can reduce or prevent risk-taking by drivers (e.g. automatic safety belts, alcohol locks, speed controls), and the role that technology may play in facilitating the introduction of other road safety measures.

The report to be published in 2003 will summarise current knowledge of new technologies that target road safety and those that impact road safety but are designed for other purposes. It will evaluate the potential of these technologies in terms of saving lives and makes assessments where possible of the overall economic benefits. The report will also highlight some concerns with unfettered applications of such technologies and make recommendations for future actions.

**(f) Reducing Children's Transport-Related Injuries and Fatalities**

Collectively, OECD Member countries lose 5,000 children to road-related crashes annually. This working group is updating the 1983 OECD report to share best practices and recommend improvements in children's safe transport. The final report will be published in mid-2003.

**3. SYMPOSIUM AND SEMINAR TO BE HELD IN 2003**

**(a) International Pricing Symposium, Florida, November 2003**

The U.S. Federal Highway Administration, the Florida Department of Transportation, the Organisation for Economic Co-operation and Development, and the Transportation Research Board are collaborating to plan and conduct an international symposium on transport pricing.

The proposed Symposium will provide further understanding of real-world applications of transport pricing strategies in different governmental and socio-economic contexts, with case studies from the U.S., Europe, and Asia forming the basis of the symposium.

An international group of participants will discuss the rationale and motivations for implementing pricing; the political and public aspects of garnering support of pricing projects, marketing strategies; the use of pricing revenues; and actual outcomes of projects.

A principal goal of the symposium is to provide a synthesis of current practice to assist future implementers of pricing projects. The program will present a variety of models and promising practice from around the world. Advances in theory may be included, but are not the primary orientation of the symposium.

**(b) Seminar on Human Factors and Technology, Massachusetts Institute of Technology (M.I.T.), United States, 2003**

Technology offers a significant range of opportunities to extend and ease the use of the transportation system for older people. However, like most “solutions,” these same technologies may pose new problems: increased driver workload, high costs to already financially troubled public agencies and problematic implementation in neighborhoods and regions. Little information is available today. The Seminar will constitute a unique opportunity for researchers worldwide to discuss the following issues:

- the demand and need for transportation by older adults;
  - the scope of transportation challenges to be addressed, e.g., automobile, public transportation, pedestrian or just one of these modes;
  - the key technological opportunities that are or are potential solutions in the near future;
  - new problems that may be associated with these “solutions,” e.g., cost, usability, workload, availability, difficulty of implementing as a public or market solution, etc.; and,
  - best practices and innovations across OECD member nations in specific areas, e.g., innovative legislation regulating in-vehicle technologies, use of information systems to improve signage at transit stops, etc.
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