EUNET-SASI

Socio-Economic and Spatial Impacts of Transport

Funding: European (4th RTD Framework Programme)
Duration: Jun 1996 - Jun 1999
Status: Complete with results

Background & policy context:

The contribution of transport infrastructure to regional development is one of the main arguments for the development of the Trans-European Transport Network (TEN-T). In theory, better access to labour, raw materials and markets will make well-connected regions more competitive. However, it has been difficult to verify this effect empirically. There is uncertainty over the magnitude of any benefits, and even whether new infrastructure could make regional disparities worse by exposing peripheral regions to strong competitors located in the centre of Europe. Moreover, the significance of infrastructure is changing as a result of e.g. the shift to high-tech industries and services, the tendency to move freight over greater distances, and the development of telecommunications services.

Objectives:

EUNET/SASI involved two sub-projects with the following main aims:

- EUNET - to develop a comprehensive methodology and model for assessing the impacts of transport initiatives (including infrastructure investments, regulatory and fiscal policies).
- SASI - to develop a specialised methodology and model for forecasting the socio-economic and spatial impacts of large transport investments in Europe, particularly to support the assessment of options for the TEN-T.

By comparison, EUNET took a regional/corridor view and focused on the demonstration of methodology, while SASI took a more global view of impacts across Europe.

Related Projects:

- ASTRA - Assessment of transport strategies.
- ECOPAC - Econometrics of impacts.
- SCENES - Modelling and methodology for analysing the interrelationship between external developments and European transport.
- STREAMS - Strategic transport research for European Member States.
- TRENEN - Models for transport, environment and energy.

Parent Programmes:

FP4-TRANSPORT - Specific research, technological development and demonstration programme in the field of transport, 1994-1998

Institute type: Public institution
Institute name: European Commission; Directorate-General for Energy and Transport (DG TREN; formerly DG VII)
Funding type: European Commission; Directorate-General for Energy and Transport (DG TREN; formerly DG VII)

Partners:

NA

Marcial Echenique & Partners

Organisation: Ltd
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A broad-based modelling system was developed in the form of prototype software to support policy decisions. This included:

- methods for valuing socio-economic effects;
- a tool for estimating spatially-resolved indicators of regional accessibility and social cohesion, including effects on national output and employment;
- a new approach to regional economic modelling, where the sources of potential travel growth are identified separately as a function of specific social and economic activities;
- a database for estimating the costs of vehicle and infrastructure operation, by country, through to 2020;
- an assessment framework combining both cost-benefit and multi-criteria analysis methods.

The model was demonstrated for the Trans-Pennine corridor in the UK and for long-distance freight movements in Finland. In addition, the application of the methodology in areas with limited data availability was assessed in a desktop study for an area of Greece.

EUNET also provided an overview of current practice across Member States in appraising major transport projects and deriving monetary values for impacts.

SASI

In this sub-project, software was devised for predicting the impacts of transport infrastructure investments and transport system improvements on socio-economic activities and development, including the spatial distribution of impacts. The model covers the whole EU at the NUTS-2 level of geographic disaggregation (dividing the Member States into 201 regions), and provides forecasts to the year 2016. Innovative attributes include:

- the prediction of regional unemployment;
- the estimation of the spatial redistribution effects of the TEN-T;
- the calculation of accessibility taking account of proximity to nodes of the transport network;
- the calculation of indicators of cohesion for the European Union;
- dynamic modelling of the development of the transport network and socio-economic impacts over time.

The model was used to assess some scenarios for extension of the TEN-T. The development trajectories of the European regions were similar in all scenarios, showing that macro-economic trends (such as ageing of the population) have a much stronger impact on cohesion than different transport infrastructure strategies. In all scenarios, most regions will improve their accessibility and economic performance in absolute terms, but with some changes in their relative position. The max

**Policy implications**

EUNET/SASI has provided new methods for assessing the complex relationship between transport infrastructure and regional development and the effects of policy initiatives such as infrastructure investment.

The project recommended that transport statistical data should be collected and published in a more standardised way, to make their use in modelling and policy support more cost-effective.

Documents:

- [eunet.pdf](final-report)

**STRIA Roadmaps:** Infrastructure

**Transport policies:** Societal/Economic issues