Inclusion of travel expenses in the modelling of mobility behaviour (SVI2005/004)

Einbezug von Reisekosten bei der Modellierung des Mobilitätsverhaltens

**Funding:** National (Switzerland)
**Duration:** Oct 2005 - Sep 2008
**Status:** Complete with results

**Objectives:**
One part of the modelling issues concerning the modelling fundamentals and the model validation in the research project mobility pricing is the determination of transport behaviour elasticities with regard to road tolls, respectively the generalised transport costs.

The focus of the project will be laid on the essential behaviour changes in mode, route and departure time choices. The equipment with mobility tools will be considered for strategic decisions as well as the overall demand changes.

**Parent Programmes:**
- Mobility Pricing

**Institute type:** Public institution
**Institute name:** Swiss Federal Roads Office (FEDRO / ASTRA / OFROU)
**Funding type:** Public (national/regional/local)

**Partners:**
Switzerland:

Swiss Federal Roads Office
IVT Institut für Verkehrsplanung und Transportsysteme - ETH Zürich

**Organisation:** Zürich
**ETH**
**Address:** Hönggerberg
**Zipcode:** 8093
**City:** Zürich
**Contact country:** Switzerland
**Telephone:** (+41) 62 212 03 19
**Fax Number:** (+41) 62 212 03 11

**Key Results:**
The first main part of the project considered the impact of mobility pricing on tactical decisions (i.e. behavior changes with respect to mode choice, route choice and the choice of the departure time).

The parameters estimated from Stated Preference data (SP) were verified using models based on observed behavior. In addition, the influence of mobility pricing on route choice, mode choice and departure time choice was tested in a simplified example.

Another main element of the project considered mobility pricing’s impact on strategic decisions (i.e.
influence on automobile ownership, public transport subscriptions and residential location choice).

The results of this project describe the behavior of road users to the introduction of mobility pricing. Using the models developed as part of this project, the transportation impacts and behavior changes brought about through mobility pricing measures can be quantified. The information derived from these models can be used to help determine whether it is possible to achieve specified transport goals through the implementation of particular mobility pricing measures.

The research results compare well with research on the introduction of road pricing measures in other countries. The demand elasticity derived from model parameters and the demand changes computed by example applications of these parameters move within a similar framework as those reported in the literature analysis of foreign experience.

The willingness to pay determined in this study is slightly higher than that found in other countries, however this can be explained by differences in the socio-demographic characteristics and income structure as well as current transport expenditure levels.

Documents:
MP B1 (Final report)

STRIA Roadmaps: Smart mobility and services
Transport mode: Multimodal transport
Transport sectors: Passenger transport
Societal/Economic issues,
Transport policies: Decarbonisation
Geo-spatial type: Other