

TREMOVE modelling demand issues 1

- Elasticities of Substitution:
 - Help to structure and simplify the price elasticities needed
 - Example: 8 transport alternatives (2.2.2)
 - EOS: 7 parameters (no constraints to be fulfilled)
 - No EOS: 28+8 parameters + constraints to be fulfilled
- Why not use a simpler demand tree?
 - Detail is dictated by demand of users
 - Freight: scenarios in function of goods

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TREMOVE modelling demand issues 2

- Include motorisation?
 - With motorisation explicitly:
 - Veh km car = F (motorisation, fuel, speed, income, other)
 - Motorisation = G (veh km wanted, fuel, income, other)
 - Without motorisation explicitly (TREMOVE):
 - Veh km car = T (fuel speed, other)
 - Main advantage of motorisation explicit:
 - Distinguish short (given car stock) and medium to long term effects
 - My experiment: it does not really give different results for medium term (PROOST, S. and VAN DENDER, K. (1998), Variabilization of car taxes and externalities, in BUTTON, K. and VERHOEF, E., *Road pricing, traffic congestion and the new environment issues of efficiency and social feasibility*, Elgar, Cheltenham, p. 136-149)

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TREMOVE modelling demand issues 3

- Revenu recycling
 - Outside the transport sector:
 - Income effect (Income Elasticity of transport = 1)
 - Efficiency effect of use of taxes: exogenously specified via Marginal Cost of Public Funds
 - Inside the transport sector:
 - Subsidies, decrease of other taxes etc...

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TREMOVE modelling demand issues 4

- Why not a simpler model?
 - “aggregate” Simultaneous equation model
 - Model with say 5 tot 10 equations per country
 - Advantage: statistically a better fit with reality (“more scientific”)
 - Disadvantage: policy analysis more difficult (urban, non urban, type of cars etc.
 - Possible way out: use it for scenario building?
 - “disaggregate” simultaneous model
 - Calibrated to survey (panel?)data of households (2000 per region) and the whole sample is used to simulate policies
 - Advantage: statistically better, and at least as good for policy analysis
 - Disadvantage: you need a good sample for the 3 regions in all EU countries (ok for NL, UK,)

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