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Assessment of Pricing Effects

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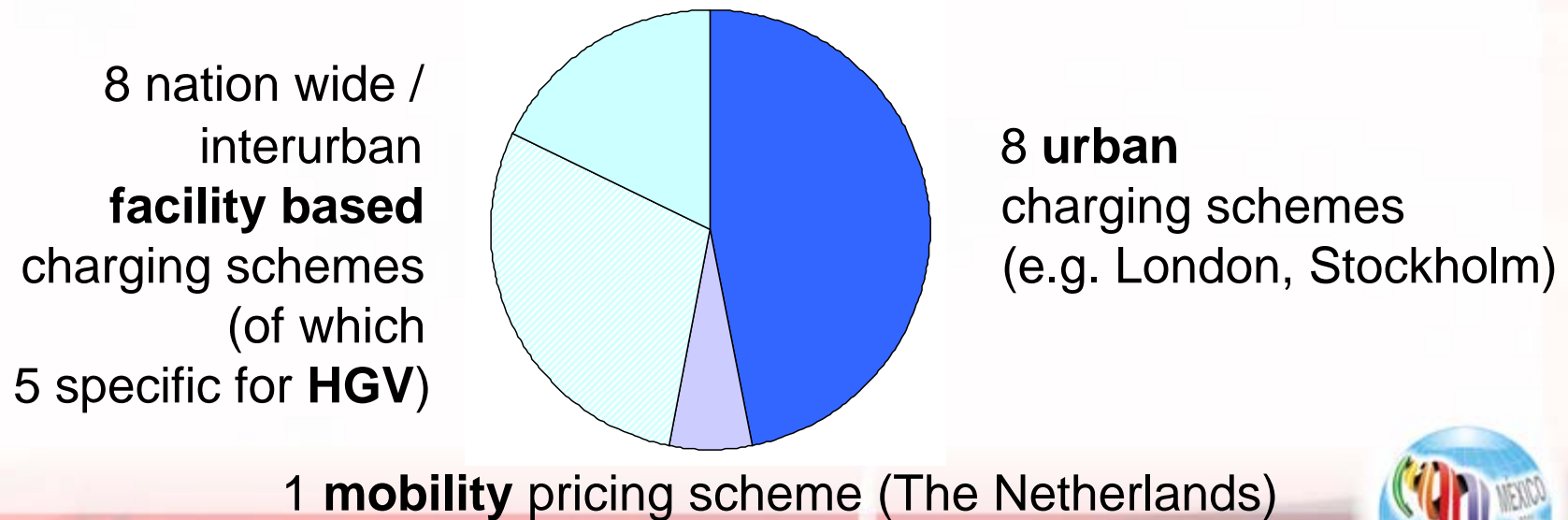
ASSESSMENT OF PRICING EFFECTS

Source of information

The main information on impacts came from.....

15 case studies reported by the members of committee A3 that are described in the report more in detail.

The type of these case studies can roughly be splitted in



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Impacts commonly considered

Impacts commonly analysed throughout evaluation

- Impacts on mobility characteristics
- Environmental impacts
- Impacts on accidents
- Impacts on the economy
- Impacts on land use and accessibility
- Equity
- Attitudes to road pricing



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Impacts on mobility characteristics

The evaluation of pricing schemes in general includes an **analysis of mobility characteristics**

- **Travel demand** (changes or new one) is an important target point. Urban schemes may lead to a reduction of up to 20%
- **Traffic diversion** can be an issue in interurban tolling, rarely observed at HGV charging schemes
- **Change of transport mode** is a key objective in urban pricing (transfer to public transport or cycling). No significant change (to rail) due to HGV tolls
- **Change of travel time** is an issue primarily for urban pricing but also elsewhere to manage congestion



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Environmental impacts

Environmental impacts are

- Typically a direct result of travel impacts
- Very often considered in evaluation of pricing schemes
- Most commonly concern air quality, noise and also atmospheric emissions
- Noise is not so much of importance for pricing schemes-remarkable changes would require half of the traffic
- Air pollutants are important issue esp. in urban pricing
- Interurban schemes with different rates for HGV according to Euro Emission class deliver significant environmental performance due to fleet renewal



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Impacts on accidents

Impacts on traffic safety

- Urban pricing seems to have positive but limited effect on traffic safety
- Difficult to assess without long period analysis
- Most cases estimate less car accidents / personal injury but sometimes an increase in cyclist casualties
- No clear lowering of road accidents with interurban HGV tolling; countries with such tolling schemes do not report significant changes
- Impacts on safety are not an issue for facility pricing



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Impacts on the economy

Impacts on the economy

- Usually assessed by means of sales and consumer survey
- Should be evaluated on a longtime scale - often not the case
- Existing urban schemes do not show significant changes due to congestion pricing
- Economic impacts of HGV tolls are also of minor scale
- Increase of transport costs expected by transport sector before implementation, but no traceable impact observed
- Finally consumer prices could be affected less than one %
- Transport sector reacts by means of better logistic, reduction of empty trips, more efficient use of vehicles, etc.



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Impacts on land use and accessibility

- Urban pricing might have some **impact on use** of location
- Rarely considered because difficult to assess and take place in long term only
- Risk of “boundary effects” greater in single cordon models
- Congestion schemes might also strengthen the agglomeration process

- Impacts on **accessibility** are rarely studied
- Basically considered in some nation wide pricing studies in countries with sensibility to territorial issues



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Equity

Equity issues

- Arise in planning and implementation almost across all pricing categories ...
- ... but have rarely led to project termination
- Experience shows exaggeration of perception of unfairness
- Equity concerns often addressed via exemptions/discounts
- It is important how to use revenue from pricing schemes
- In vignette schemes frequent users pay less than occasional
- In HGV pricing schemes subsidies for new truck equipment can diminish burdens of high emission based toll rates



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Attitudes to road pricing

- Public opinion is a critical determinant for implementation
- Several trials/projects failed in different stages
- Public acceptance is no severe problem for HGV tolling
- New or upgrading road infrastructure with toll revenue seems to face only less resistance
- A clear determination of revenue towards improved transport and better infrastructure can raise the compliance
- In certain cases a limited trial can lead to noticeably more positive results of public acceptance (Stockholm)



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Conclusions (1)

Facility based interurban pricing

- Its main advantage is revenue generation
- Tolls on HGV may favour the modernisation of the vehicle fleet (higher environmental standards)
- No observation of significant shift from road transport to alternative modes
- Toll tariff adjustments (in certain cases HOT lanes) can lead to better management of temporarily congestion
- The social acceptability is in general not a critical issue due to the existence of alternatives free of charge



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Conclusions (2)

(Urban) Cordon pricing and area pricing

- Show significant reductions of traffic demand (up to 20%)
- Positive effects on air pollution, negligibly on noise
- Partly contradictory effects on traffic safety due to higher speed because of less congestion
- Negative impacts on the economy often expected in advance have not been proven in most cases
- Acceptability is a critical determinant for implementation
- The use of revenue is a crucial parameter (improve alternative public transport)



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Conclusions (3)

Mobility pricing

- Rates based on the distance travelled and differentiated by the time of day and the vehicle's type and environmental standard
- Is expected to have significant positive impacts on traffic demand (reductions up to 15%), air pollution and injuries
- The social acceptability remains as the most critical issue
- No scheme implemented yet although conceptually designed with guaranty of tax neutrality in few countries

