Decision making processes and their interaction with transport energy consumption: A comparison between Europe and South-East-Asia

eceee 2007 Summer Study
La Colle sur Loup, France
4–9 June 2007
Background
Decision making processes in Europe

- Vision led approach
- Plan led approach
- Consensus led approach

Source: May et. al. 2003
Transferability to South East Asia

- Public transport in South East Asia and Europe

Asia

Songtaew
Tuk-tuk
Samlor

Europe

© S. Jaensirisak
Bus
Tramway
Metro
Transferability to South East Asia

Vehicle ownership (per 1,000 inhabitants)


## Transferability to South East Asia

<table>
<thead>
<tr>
<th>Key elements</th>
<th>Level of consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reducing need to travel</td>
<td>High: √, Medium: X, Low: X</td>
</tr>
<tr>
<td>Reducing car use</td>
<td>High: X, Medium: √, Low:</td>
</tr>
<tr>
<td>Improving public transport</td>
<td>High: √, Medium: X, Low:</td>
</tr>
<tr>
<td>Improving road network</td>
<td>High: √, Medium: X, Low:</td>
</tr>
</tbody>
</table>

**Legend:**
- √: South East Asian cities (results of SPARKLE seminars and workshops)
- X: European cities from the PROSPECTS (Matthews and May, 2001; Minken et al., 2003)
Case study Vietnamese WTO accession

- Peak hour in Ho Chi Minh City

- Variables and parameters:
  - Vehicle stock T=0
  - Vehicle inflow
  - Vehicle outflow
  - Potential vehicles T
  - Lifespan
  - Purchase price
  - Energy mode
  - Energy T=0
  - Energy relative
  - Distance
  - Volume/Capacity T=0
  - <Built capacity>
  - V free
  - Alpha
  - Beta
  - V congested
  - <Vehicle stock T=0>
  - <V congested>
  - <Vehicle stock>
  - Capacity in
  - New capacity decision
  - Construction time
  - Threshold construction
  - Built capacity
  - <Vehicle stock>
  - Time
  - Parameter
Case study Vietnamese WTO accession

Vehicle stock[moto]: Current
Vehicle stock[car]: Current
Petrol consumption
Speed
Conclusions

• The basic principles of the “ideal” decision making process developed in Europe are transferable to South East Asia.
• The most significant difference is that South East Asian decision makers put less emphasis on environmental issues and more emphasis on car traffic than their European equivalents.
• Decision making processes significantly influence energy consumption.
• The case study has shown that the WTO accession of Vietnam will drastically increase transport energy consumption.
• The simulation predicts that fuel consumption will increase by some 170% in the next 25 years.
Thank you for your attention!

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