

Mobility and Oil A dangerous dependence?

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- Established by Transport Ministers as a platform to work on transport issues of global significance
- A successor institution to the European Conference of Ministers of Transport (ECMT)
 - Part of the OECD family















Structure

- Mobility Trends
- Determinants of Mobility
- Likely Developments
- Some Policy Issues





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Mobility Trends

- Mobility has grown steadily for last 40 years
- For passengers, growth has been fastest in road transport (3-4% pa) and aviation (6% pa since 1980)





Passenger Transport Trends in Europe







World Airlines Annual Traffic (Number of passengers and million revenue passenger-km







Passenger km per unit GDP (excluding aviation)







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- For passengers, growth has been fastest in road transport (3-4% pa) and aviation (6% pa since 1980)
- For goods, growth has been driven by rapid expansion in world trade





World Container Traffic (TEU's)







Source: Data from Containerisation International, various issues. Cartography, Philippe Crist (OECD). Base Map © FNSP/IEP de Paris 2002.

Container Ports by TEU's Handled (2002)



Source: Data from CI-Online, Cartography, Philippe Crist (OECD)





Inland Freight Transport Trends in Europe







Rail and Road t-km per unit of GDP







Mobility Trends

- Mobility has grown steadily for last 40 years
- For passengers, growth has been fastest in road transport (3-4% pa) and aviation (6% pa since 1980)
- For goods, growth has been driven by rapid expansion in world trade
- Almost fully dependent on oil





Mobility Trends

In cities

- Number of trips per day more or less constant
- Trips longer as cities spread
- Trips more complex favoring car use
- Great variations
 e.g. in city structure, in public transport, in car ownership,...





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Determinants of Mobility

Mobility influenced by

- Land use (location of housing, shops, schools, work places,...)
- Income
 - Highly elastic with respect to income 10% increase in income => 10% increase in mobility





Determinants of Mobility

Mobility influenced by

- Prices (public transport, cars, fuel, ...)
 For fuel,
 - 10% increase in price=> 1-2% reduction in quantity bought (short term)
 => 5-6% reduction in quantity bought (long term)
 - Fuel price increases generally translate more into fuel efficiency rather than reductions in kms driven
 - Modes are different in fuel use



Fuel Freight Efficiency





Passenger Freight Efficiency



G. CO₂ equivalent per Pkm.





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Likely Developments

 Mobility 'wants' to increase and has enormous potential to do so





World Motorization: WBCSD Projections





Air Passenger Traffic Development







Source: Corbett, 2007





World Tank to Wheel CO₂ Emissions, BAU, 2000 – 2050, Mt of CO₂-equivalent





New Developments

Decrease in Transport CO2 Emissions: 2002-2005

Indexed to 1990, IEA data, France, Germany and Japan







Likely Developments

- Mobility 'wants' to increase and has enormous potential to do so
- Constraints: income, infrastructure, prices, fuel availability
- Impacts of crisis on mobility
 - Freight; strong declines now
 - People; lower income => less mobility cheaper fuel => a little more





Policy Challenges

Numerous challenges

- Investment needed in many places
- Safety (1.2 million road deaths)
- Improve efficiency (many markets not open)
- Reduce air pollution
- Reduce climate change impacts









Climate Change

- Do cost effective things now
- Research on alternatives
- Experiment locally, nationally and internationally





Thank you for your attention

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