International Transport Forum

The ITF vision of the "Truck of the Future"

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Global Commercial Vehicle Industry Meeting
Brussels, 6 December 2012

OECD

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International Transport Forum at the OECD

- An **inter-governmental organisation** with 54 member countries, focussing on transport policy

- A **think tank** for global transport policy issues

- An **annual summit** of Ministers

Recent evolution of freight transport by land

- Freight transport flows suffered big reduction with the 2008 crisis, but started growing again, albeit with some volatility
  - In US and Russia transport volumes on road and on rail already above pre-crisis levels

- Market share of road transport holding steady or even slighty improving across the EU

Figure 5. **National and international road freight in the EU**
(Million tonne-km, trend, seasonally adjusted)

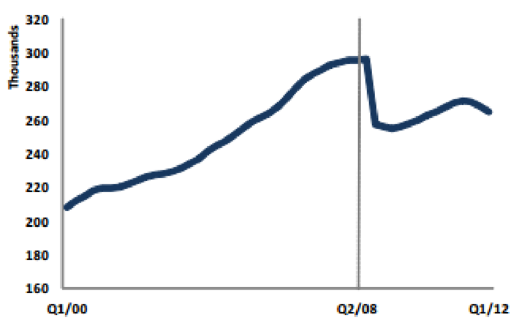
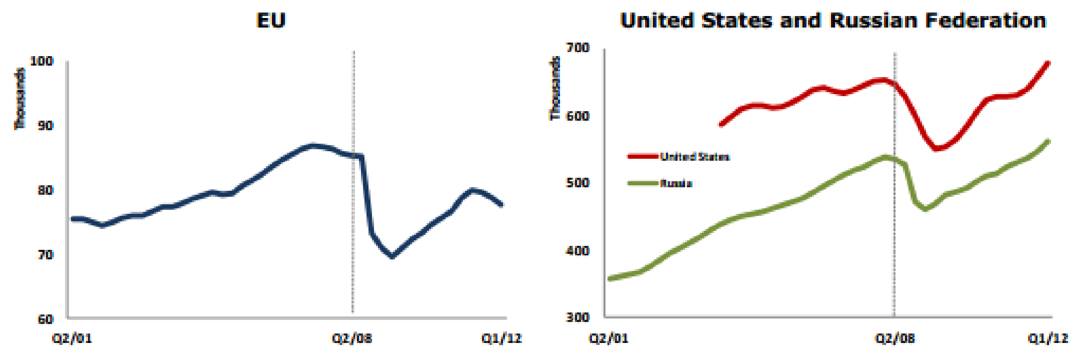


Figure 6. **National and international rail**
(Million tonne-km, trend, seasonally adjusted)

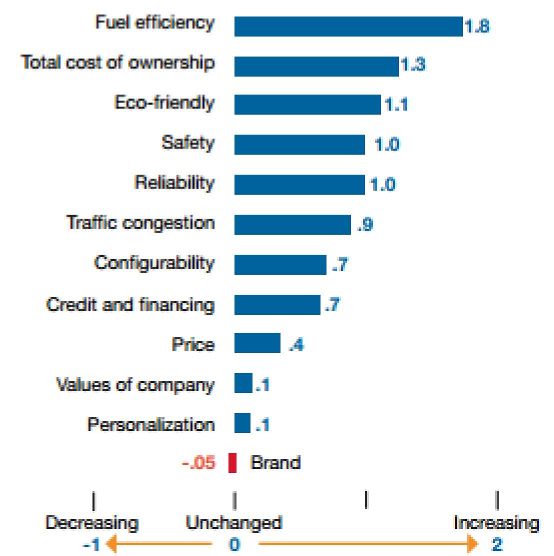


Source: ITF Statistics Brief, October 2012

Trucks with evolution on multiple fronts

- Trucks have been undergoing steady evolution in the last decades
  - Much lower consumption and emissions (at least 30% between 1980 and 2005, an additional 30% to 50% possible with currently available technologies)
  - Strong incorporation of ICT based systems for production control (driver assistance and monitoring of vehicle organs and systems) as well as for commercial management (dynamic order processing)
  - Introduction of higher capacity vehicles (modular systems)

Market and regulatory requirements



Source: 2009 IBM Truck 2020 Global Study.

- Economic and environmental efficiency gaining importance as purchasing criteria
  - With globalisation, pressure for increasing regulatory harmonisation across continental markets , lowering development costs

- OEMs from emerging countries are developing their own capacity, often through joint ventures with leading OEMs, and growing rapidlly
  - Some entry at the less sophisticated segments of markets in developed countries must be expected

The ITF report "Moving Freight with Better Trucks" (1)

- Performance based (not technical) standards, defining targets rather than solutions, represent good path for promoting innovation while respecting public interest objectives

- European modular system trucks and high capacity vehicles in general can make a contribution to reducing emissions and congestion (on port access roads and other freight bottlenecks on the network).
  - There will be a rebound effect but this will not erode all the benefits (perhaps 10%-20%)

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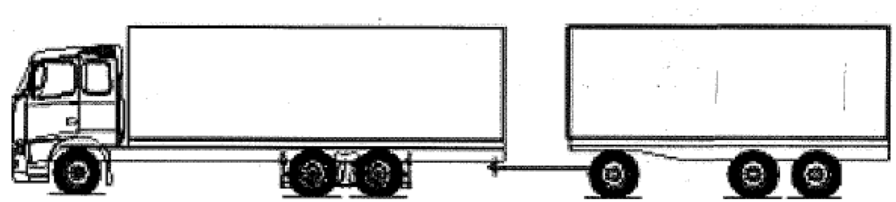
Higher productivity

- European **truck – trailer, max 18,75 m 40**



- **EMS, max 25.25 m 60 t**
  - Sweden, Finland
  - Netherlands, Denmark trials

The ITF report "Moving Freight with Better Trucks" (2)

- EMS trucks expected to be used mainly on trunk haul routes not so much on peripheral network.
  - Key issue is restricting access to roads with suitable geometry rather than CO2 or safety (braking performance equivalent, lane departure warning systems can be obligatory etc.)

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Conflicting views on higher productivity HGVs

Good or bad for social economy?

Two LHVs can replace three conventional HGVs

- Competition with rail will vary markedly between markets. On mainland Europe relatively small impact expected.
  - In UK short distances mean deep sea rail container market could be eliminated.
  - In Sweden rail timber haulage increased as EMS truck boosted productivity of feeder transport.

Other evolutions expected in short-mid term

- Leading OEMs working hard on innovative concepts in all fronts of vehicle design
- On emissions and on safety
  - Continuing evolution of emission standards in developed markets
  - Aerodynamics and in-vehicle safety equipment
  - Full electric and hybrid traction in urban distribution vehicles
  - Semi-automatic driving (platoons in motorways)
- Productivity gains by reduction of “down” times
  - Greater automation in load/unload operations in the context of “internet of things”
- Some innovations are expensive and of different importance according to market segment

  → differentiated introduction moments by segment, (slow) movement towards modular vehicle design (“plug-and-play”)

Conclusions

- Large range of models of road goods vehicles, adapted to load, distance and working environment

- Modular vehicles of higher capacity, able to provide efficiency gains and quick and easy transformation into units of a more traditional size
  - "Same components "morph" into different vehicle configurations according to operating environment

- Additional technology innovations already (or soon) available, with gains in consumption, emissions, safety, and loading productivity
  - Date of market penetration variable with segment (capacity to amortize investment)

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Thank you

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