E-Commerce and Transport

- trends, facts and uncertainties

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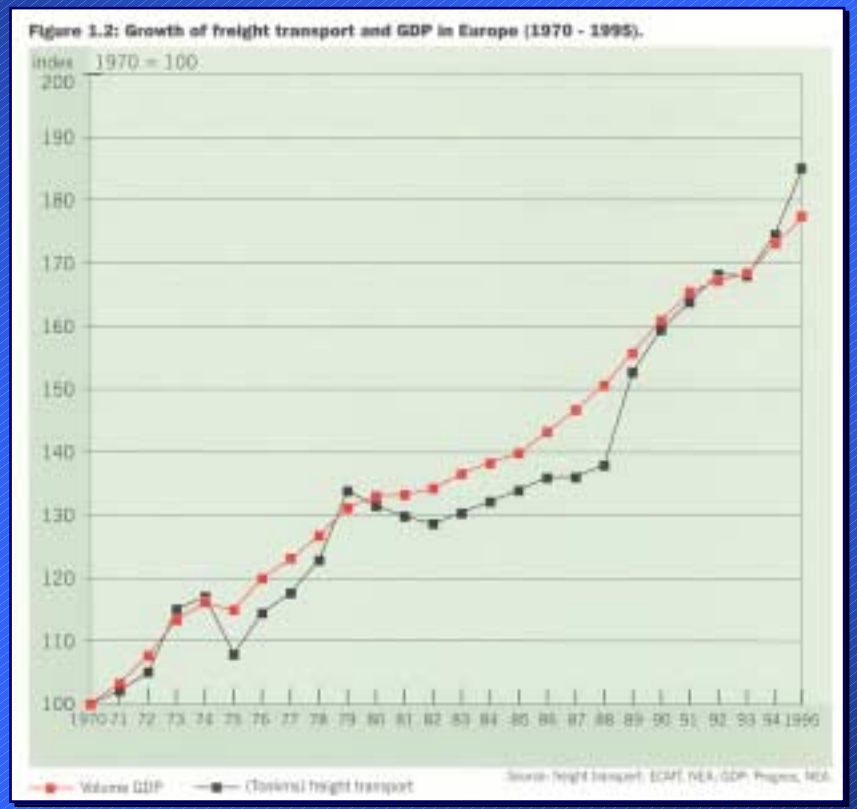
Figure 1.2: Growth of freight transport and GDP in Europe (1970 - 1995).
index 1970 = 100
200
190
180
170
160
150
140
130
120
110
100
1970 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 1995
Volume GDP
(Tonkms) freight transport

Freight Logistics and Transport Systems in Europe

- a study undertaken

by Euro-CASE 1999-2000

The European Council for Applied Sciences and Engineering (Euro-CASE)

- a non-profit organisation of Academies from 17 countries in EU, EFTA and CEEC
- providing impartial, independent and balanced advice on issues with a European dimension
- act as a permanent forum for exchange and consultation between European institutions, industry and research

Objectives of study

- improve understanding of the opportunities for improving freight logistics and transport in Europe
- identify obstacles to change
- recommend to the EC and national governments measures that lie within the competence which would enhance the competitiveness of European industry and services in an environmentally sustainable way

Three factors to keep in mind

- the study concentrated on 3 sectors
  - retailing
  - pharmaceuticals and
  - automotive

  accounting for around 20-25% of European GDP
- the study only partially dealt with e-commerce, but did indicate some trends, some case facts as well as uncertainties
- other factors than e-commerce may have a greater influence on transport development than e-commerce

Two major trends in European supply chain

- from ”push” to ”pull” economies i.e. increased customer orientation
- concentration of manufacturers plants and fewer, but larger downstream warehousing

E-commerce is developing

- between manufactures and retailers
  - saving transaction costs
  - improving consumer response procedures
- through direct sales to consumers via
  - TV shopping
  - internet

Direct sales to consumers via internet is expected to grow

- from approximately 1% of sales in 1998
- to 5-10% of sales in 2003

Prerequisite for home deliveries

- items to go through letterbox
  (e.g. cosmetics and books)
- value of items > € 55 to be economically viable
- destination within 48 hours delivery service

Convergence trends between different forms of retailing

- hypermarkets begin to offer home deliveries based on electronic ordering
- internet suppliers set up display centres for their goods

→ effect on transport uncertain

Effects of e-commerce on location

- warehousing location becomes less important
- replenishment centres can be located anywhere with good access to transport facilities
  - → significant growth of road traffic

Example:

A European centre for home deliveries of electronic equipment located in N. Wales

Effects of e-commerce on logistics and transport

- e-commerce promotes greater use of outsourcing of logistical activities
- transport related to e-commerce almost exclusively takes place by road

Influence of e-commerce on transport

- eliminates some journeys by allowing certain products to be downloaded electronically
- replaces some passenger trips (for shopping) with freight trips
- promotes rationalisation of home deliveries as common-carrier parcel firms undertake multiple drops and service several companies
- may lead to use of local collection/delivery points such as post offices, petrol stations or shopping centres, avoiding door-to-door deliveries

Some barriers to e-trade

- no agreement on EDI standards
- security and uncertainty of electronic payments, especially international
- restrictions on driving hours in most countries

Main conclusion

E-commerce may cause a revolution in retailing logistics, but its impact is uncertain.

It is a widespread belief, however, that e-commerce will increase the total number of vehicle movements (veh. x km.).

Recommendation to the Commission

- promote research into logistics and transport requirements of e-commerce
- monitor rapidly changing situation to produce fast and effective policy response