
City on the Move Institute, Tongji University
Shanghai, October 31st, 2008

Freight transport data

Theoretical and practical issues

Michel Savy (savy@univ-paris12.fr)

- professor, University of Paris 12 and École nationale des ponts et chaussées
- director, Observatory of Transport Strategies and Policies in Europe
- co-director, Sino-French Centre for Urban, Regional & Planning Studies

Introduction

- **Data, qualitative as well as quantitative, are essential for any analysis. A searcher has therefore to know about available data, but also about their sources, the method according to which they are produced, the limits of their relevance and accuracy.**
- **Some sources and data are direct, explicitly devoted to transport issues. Others are indirect (e.g. customs). Blending data can be a problem. One can also think about conceiving new methods, producing new data and knowledge.**
- **Outline of the presentation**
 - **characteristics of freight and measure problems**
 - **data production**
 - **types of existing data (physical, economic...)**
 - **perspectives**

Characteristics of freight and measure problems

- **Freight is, as such, a difficult to measure activity**
 - **a division has often to be made between passenger and freight transport**
 - **freight is not only produced by transport firms. Own account (in-house transport among shippers) is important, and freight does not coincide with the transport "industry" (sector) of national accounts**
 - **the limits of freight are blurred, in relationship with post-office and logistics**
 - **transport is a process, not a product**
 - **external effects, positive and negative, are intense, and pose additional data problems**

Data production

- A public service
 - ❑ "cognitive" function of the State
 - ❑ some compulsory and confidential economic enquiries
 - ❑ freely accessible or at marginal processing cost, more and more through internet
e.g. for France: <http://www.statistiques.equipement.gouv.fr>
for EU: <http://epp.eurostat.ec.europa.eu>
 - ❑ but also some private sources: professional organisations, consultants, etc.
 - ❑ information from firms' websites: requires a critical appraisal!
- International comparisons
 - ❑ effort to harmonize methodologies, nomenclatures
 - ❑ towards a coherent European statistics? UNO?

Types of existing data

- **Freight can be observed from several, complementary viewpoints**
 - **some data are measured in physical units (ton, ton-kilometre, etc.)**
 - **others in economic units (\$, €, RMB...)**
 - **usage value vs. exchange value? complementary. Sometimes, a controversy about modal split!**
 - **physical data are useful to describe a process, and to approach material and social issues linked with transport**
 - **monetary data measure production, profitability, etc. and are necessary for management and economic analysis**

Physical data

- **Flows of products (nature of goods, t, t.km, packaging [NB: pallets])**
 - domestic = national + part of import + part of export. No transit
 - all inland modes. Air is marginal (not in value of goods!), maritime is badly known (harbour traffic)
 - own account and third account
 - French heavy vehicles only
 - t.km / t = distance
 - origin / destination: transport and geography, but no itinerary
 - only links, no chains (no knowledge of intermodal transport); no volumes ; no value of goods; no value of transport
- **A problem with railways: detailed data become confidential with open competition**
- **Rolling stock (light and heavy vehicles, wagons, barges, etc.): number, age, characteristics, loading rate, millage**
- **Traffic (particularly road traffic) on several sections (% of HDV and passenger cars)**
- **Infrastructure (length, nature, location)**
- **and also: energy consumption, accidents, pollution, GHE, working conditions, etc.**

Economic data

- **Transport firms**
 - own account is not registered as such
 - economic data for transport, but feeding comprehensive national accounts
 - national firms only (inside the European single market!)
 - main activity (several sub-sectors), turnover, consumption, added value, investment, amortisation of capital, profit, etc.
 - firms, neither individual plants nor groups (concentration of capital)
- **Price indexes on some markets only (parcel and courier service)**
- **Firms can be identified according to their size (in terms of staff)**
 - approach of the structure of transport industry
 - division of labour and cooperation (subcontracting) within transport industry (local and long distance haulage companies, freight forwarders and carriers, etc.)
- **Employment data: staff, qualifications, wages, from transport enquiries and other sources (general accounts) , also necessary to measure own-account transport staff**
- **A problem: how to locate these agents? Headquarters? Branch?**

Other data

■ Special enquiries

- ❑ urban logistics (a specific topics: light duty vehicles [vans])
- ❑ mountain crossing corridors
- ❑ transit
- ❑ light vehicles

■ An original research: the enquiry among shippers (ECHO). Deliberately different methodology

- ❑ shippers instead of vehicle owners
- ❑ number of consignments and not weight
- ❑ individual tracing, chains and not links, intermodal
- ❑ value, volume of shipment
- ❑ logistics practices: frequency of expedition, railways siding,

■ Logistics

- ❑ a new emerging industry, badly known, assembling transport, warehousing, handling, packaging, etc. plus specialised real estate and sites ("platforms")
- ❑ does not coincide with existing taxonomies, administrative and professional divisions
- ❑ a research effort to explore this field

Conclusion

- Freight transport is a key factor of economic activity and development
- It is both a business and a social activity, with strong and diversified intervention of public powers (a minister of transport in every government)
- Information is essential both for private management and public policy
- Being a process, with powerful external effects, transport requires rich, reliable information
 - for private management as well as macroeconomic planning
 - for long range decisions: appraisal of infrastructure projects (debates about adequate methods), taking old and new concerns into account (sustainability)
- A work in progress...

References

- *EU Energy and transport in figures*, statistical pocketbook, European Commission, 2005.
- *Trends in the Transport Sector, 1970-2005*, ECMT, 2007.
- Savy, M., "Transport Management as a Key Logistics Issue", in Perret, F.-L. et al., *Essentials of Logistics and Management*, EPFL Press, Lausanne, 2nd edition, 2007.
- *Bulletin Transport / Europe*, freely downloadable in English and French from www.cnt.fr
- Savy, M., *Le transport de marchandises*, Paris, Éditions d'Organisation, 2006.