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TURNOVER AND OUTPUT MEASUREMENT FOR FREIGHT TRANSPORT BY ROAD IN GERMANY

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Definition of the Service

- Freight Transport By Road

  - All kinds of transporting cargo on the road
  - Including renting of trucks with driver, furniture removal and animal-drawn transports

Unit of Measure to Be Collected

Output

- Tonnes – volume of freight transported

- Tonnes-kilometres (tkm) – transportation performance.

  1 tkm = performance of transporting 1 t of cargo for a distance of 1 km

- Task of Transport Statistics

Turnover

- Euro

- Task of Service Statistics

Market Conditions

Size of Industry:

Sectors (NACE/WZ)	No. of companies	No. of employees	total turnover (1000 EUR)
60.24	34,038	275,207	23,380,576
63.40.1	8,851	203,422	35,993,122
Sum	42,889	478,629	59,373,698

Source: FSO service statistics, 2003

60.24: Freight Transport By Road (especially smaller companies, pure hauliers)

63.40.1: Freight Forwarding (especially larger companies, diversifying in other parts of the logistics sector like sea and air freight, customs clearance, contract logistics)

➡ **Differentiation between both sectors is a hard task**

Market Conditions

Further Conditions and Constraints

- 1994-1998: Liberalisation of the market, tariffs were abandoned; today, the market is deregulated

- Strong competition from foreign hauliers, especially after the expansion of the EU in 2004 => however, transportation performance by German hauliers continues to grow

- Trend of outsourcing transportation activities => *Werkverkehr* (transport on own account by industrial companies) becomes less important

Market Conditions and Constraints

Special conditions:

- Subcontracting is very common due to the nature of the business
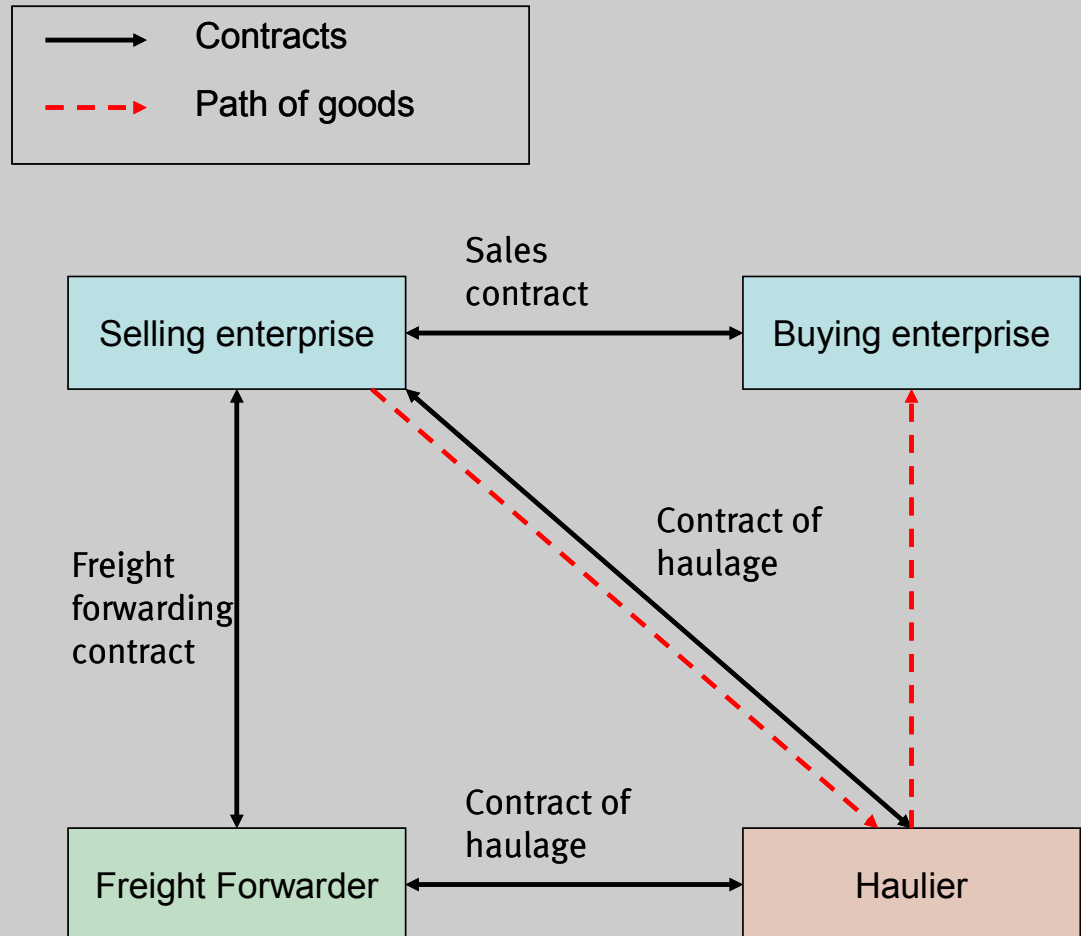
Classification Structure – Output

Main analysing variables:

- Weight of the transported cargo in tons (t)

- Transportation performance: tonnes-kilometres (tkm) effected during the journey

Main classification variables:

- Type of transport

  - Transport for third parties ("hire or reward")
  - Transport on own account (*Werkverkehr*)

Classification Structure – Output

Main classification variables (2):

- **Main traffic relations**
    - National transports
    - International transports outwards
    - International transports inwards
    - Transit

- Type of goods transported : **NST/R (1967):** *Standard Goods Classification for Transport Statistics*. Structure:
    - Level 1: 10 chapters marked by one-digit numerical codes (0 to 9)
    - Level 2: 52 groups identified by two-digit numerical codes
    - Level 3: 175 headings identified by three-digit numerical codes

Classification Structure - Output

■ **NST/R (1967):** *Standard Goods Classification for Transport Statistics* (2)

■ The ten chapters:

0	Agricultural products and live animals
1	Foodstuffs and animal fodder
2	Solid mineral fuels
3	Petroleum products
4	Ores and metal waste
5	Metal products
6	Crude and manufactured minerals, building materials
7	Fertilizers
8	Chemicals
9	Machinery, transport equipment, manufactured articles and miscellaneous article

Classification Structure - Output

- **NST/R (1967):** *Standard Goods Classification for Transport Statistics* (3)

  - If more than one type of good is transported on a journey, only the most important has to be reported.

  - In 2008, NST/R will be replaced by the new goods classification NST 2000, based on CPA. Structure: 20 first-level groups.

- Type of freight (mode of appearance)

  - How the goods are packaged

  - Determines the type of vehicle used

  - Six types are distinguished

Classification Structure – Turnover

- All turnover measured of enterprises with their main activity in freight transport by road

- Can include turnover resulting of other business as well

- The aim of service statistics is not to measure the turnover gained by freight transport but the development and structure of the enterprises offering mainly this service

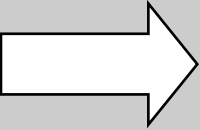# Evaluation Classification Structure

1. Output

- Transport statistics required for supporting transport policy on European, national, regional and even local level

- Main user group: governmental and research institutions for planning and forecasting purposes as well as political decisions

- Transport always related to production and trade => knowledge about transported cargo necessary

- NST-R/NST-2000 provides the necessary details

- For enterprises, more information is given on the mode of appearance

Evaluation Classification Structure

2. Turnover

- A lot of road freight transportation in Germany is done by freight forwarders with own truck fleet that dominate the market and set the prices

- A significant share of the German road freight transportation market is kept by foreign companies whose turnover is not measured in Germany

- No splitting of turnover of international transports

➡️ **Concept measures the turnover of German companies with FT as their main activity. Not suitable to estimate the size of the German FT market**

National Accounts Concepts

- For a long time, VAT statistics were chosen to get the **turnover** for 60.24

- In 2000, Service Statistics were introduced as another possible source

- However, quality of that new data is still not sufficient

- Therefore, VAT statistics remain the main source; every year, it is decided again upon which data to use

- **Output** figures (tkm) are used to estimate quarterly figures by extrapolation.

Turnover/output data methods

1. Output

- Respondents: owners of tractive vehicles registered in Germany with a weight over 3,5 t

- Stratified sample based on the register of tractive vehicles maintained by the Federal Motoring Office (*Kraftfahrt-Bundesamt* – KBA); sample size: 0.5% of all vehicles registered

Turnover/output data methods
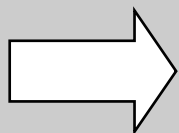
1. Output (2)

■ Road transportation statistics based on nationality concept (not territoriality concept as found for other modes of transport)

Nationality concept	Territoriality concept
All transports of vehicles registered in a certain country, without regard to destination and relation	All transports within a certain country, without regard to the origin of the vehicle

⟹ **However, territorial data available after consolidation of all European data by Eurostat**

Turnover/output data methods

1. Output (3)

- Reporting period: half-week (104 reporting periods each year)

- Respondents have to give information about all journeys during the reporting period for which they have been selected

- Information about the vehicle is taken from the vehicle register

- Information about the journey and the transported goods is questioned by questionnaire

- Centralised statistics conducted by KBA and BAG (Federal Office for Freight Transport)

Turnover/output data methods

2. Turnover

- Two statistics: absolute values (published annually) and relative change (published quarterly).

- Respondents: Companies from sector 60.24 according to the business register

- Sample stratified according to region and VAT turnover information; size: 15% (annually) and 10.1% (quarterly, they account for more than 42% of the sector's total turnover)

Turnover/output data methods

2. Turnover (2)

- Publication: annual data as raised figures (absolute values); quarterly data as percentage change; index numbers (basis 2000=100) available as seasonally and working-day adjusted figures are

- It is tested whether VAT data can be used to calculate the quarterly figures

Comparability with SPPI practices

- Turnover: no breakdown of the data according to market segments =› gives only an impression of the size of the market

- Output: most important source for the weighting pattern

  - tkm of the transport statistics combined with freight rates from the BAG = turnover
  - Data was regrouped to fit into the SPPI classification

Development of an Index of Service Production

- ISPs exist for the industrial sector and are regularly calculated, but not for the service sector

- Two possible approaches for freight transport by road:

    - Turnover deflated by SPPI
    - Volume indicator based on tkm

- However, quality of input data has to be improved to compile sufficient ISPs:

    - Data quality for turnover not yet satisfying
    - ISP based on tkm neglects other services of 60.24 companies and includes freight transport by road services from other sectors

Summary

- Turnover and output statistics are available

- Coherency between service statistics, transport statistics and SPPI has to be improved due to different aims of the statistics:

  - Service statistics: main activity concept (NACE)
  - Transport statistics: covering of all freight transport by road
  - SPPI: get the price development of the FT market

- An ISP based on turnover figures and SPPI might be a way to get output figures describing the development of the NACE sector 60.24 better than transport statistics do