2009 MEETING OF VOORBURG GROUP

MINIPRESENTATION

SERVICE PRODUCER PRICE INDEX FOR RAIL TRANSPORTATION IN GERMANY
Preface

Railway transportation – one sector, three different sub-sectors

- Split-up necessary – three categories

<table>
<thead>
<tr>
<th>Sub-Sector</th>
<th>Long distance passenger rail transport</th>
<th>Short distance passenger rail transport</th>
<th>Freight rail transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsidies</td>
<td>- No</td>
<td>- Yes</td>
<td>- SPPI available</td>
</tr>
<tr>
<td>License</td>
<td>- Passenger transport</td>
<td>- Passenger transport</td>
<td>- Freight transport</td>
</tr>
</tbody>
</table>

FSO Germany – Bernhard Goldhammer - Division Prices – 2009 MEETING OF VOORBURG GROUP, OSLO
Long distance rail passenger transport (1)

Pricing unit of measurement

- Tickets and other offers of Deutsche Bahn Fernverkehr (almost monopolist)

- Most important travel relations (IC and ICE trains, 44 each)
- Season tickets
- Night trains (2 relations)
- Special offers („Deutschland Spezial“)
- BahnCard 25/50

- CPI data, only B2C

- B2B/B2G, additional data for SPPI
- Special tariff agreements for large customers („Großkundenabonnement“)
- BahnCard 100
- Contracts with the army
- Contracts with touristic companies
Long distance rail passenger transport (2)

Market conditions and constraints – size of industry

- Despite liberalisation (1994): Market share *DB Fernverkehr*: >99%
- Hence, indicators tell more about DB strategy than the market

- Figures of *DB Fernverkehr*
- Decline in 2003: new pricing system, not accepted by customers
- Abandoning of IR trains (low margins), mainly replaced by short distance trains with subsidies
Long distance rail passenger transport (3)

Special market conditions, record keeping

- Government-owned monopoly: publication of an SPPI doubtful. Publication of CPI sufficient for most needs.

- Data sources:
  - CPI data (regular tariff information)
  - Additional survey for new weighting pattern necessary
  - Contracts with touristic companies and the army: record keeping practices still unknown
Long distance rail passenger transport (4)

Classification proposal

- Standard classifications have no further breakdown (e.g. ISIC 4911) or no usable breakdown (e.g. CPA 49.10).

- Proposed classification alongside selected tariffs.

- Regular tariffs for long distance travel
- Reduced tariffs for long distance travel for large customers
- Season tickets
- BahnCard

- ICE (44 relations)
- IC (44 relations)

- Special Offers
- Night trains
- Group tours
- Army contracts
- Touristic contracts

- 25
- 50
- 100 (annual network ticket)
Long distance rail passenger transport (5)

Pricing methods (used by CPI or proposed for SPPI)

- Regular tariffs for long distance travel
- Reduced tariffs for long distance travel for large customers
- Season tickets
- BahnCard

Direct pricing of repeated services

- ICE (44 relations)
- IC (44 relations)

Special Offers

- Group tours
- Army contracts
- Touristic contracts

Night trains

- 2 relations

Model pricing

Contract pricing

- 25
- 50
- 100 (annual network ticket)
Quality adjustment, comparability with turnover measures

- CPI uses QA methods...
  - when travel time changes significantly (e.g. opening of new high speed lines)
  - when trains with higher quality standards are introduced (replacement of IC trains by ICE‘s)
- Comparability with turnover/output: Perfect match – only one enterprise to be regarded in both statistics
Short distance rail passenger transport (1)

Pricing unit of measurement

Kaumanns (2005): „...it is almost not detectable, with which product turnover on which market ... is generated at all.“

Most important influence on sources of turnover: type of contract.

<table>
<thead>
<tr>
<th>Type of contract</th>
<th>Most important sources of turnover</th>
<th>Pricing unit of measurement</th>
<th>CPI data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concession</td>
<td>Ticket fares</td>
<td>Ticket</td>
<td>Yes</td>
</tr>
<tr>
<td>Net contract</td>
<td>Ticket fares</td>
<td>Ticket</td>
<td>Yes</td>
</tr>
<tr>
<td>Gross contract</td>
<td>Orderer‘s fee</td>
<td>Train-km</td>
<td>No</td>
</tr>
</tbody>
</table>
Short distance rail passenger transport (2)

Market conditions and constraints – size of industry

- Liberalisation in 1994: competition for the market, not on the market
- Market share of private companies (2008): 18.3% of train-km; 10% of pass-km; 72% of train-km newly assigned in competition
- Liberalisation successful: strong increase in pass-km and market share of private companies in 2004-2008
Short distance rail passenger transport (3)

Special market conditions, record keeping

- Existence of public transport networks complicates price observation
- Data sources:
  - CPI data (regular tariff information)
  - Public authorities („task bearers“) that order railway services and pay for it ⇒ probably better source than the railway companies themselves
Short distance rail passenger transport (4)

Classification proposal

- It is not clear in which ISIC/NACE class SDRPT is included (see discussion of Sven Kaumanns).

- Proposed classification alongside sources of income (excluding public transport networks)
Short distance rail passenger transport (5)

Pricing methods (used by CPI or proposed for SPPI)

- **Contract pricing** for public grants and compensation payments. Probable price determining characteristics are laid down in the contracts, e.g.
  - Train-km
  - Duration of the contract
  - Gross or net contract
  - Lines served
  - Equipment and ownership of rolling stock

- **Pricing of repeated services** for passenger fares (can be partially extracted from CPI data)
Quality adjustment, comparability with turnover measures

- Quality adjustment: large problem when contracts expire and are replaced by new contracts
  - Different railway company
  - Different lines
  - Different standards for rolling stock
  ⇒ Close collaboration with railway companies and public authorities necessary
- Comparability with turnover/output: Large problem – where in the classification is SDRPT included?
Rail freight transportation (1)

Pricing unit of measurement

The service Rail Freight Transportation can be further differentiated by asking „who is responsible for organisation and marketing?“ ⇒ Necessary to define the pricing unit of measurement

<table>
<thead>
<tr>
<th>Service categories</th>
<th>Products</th>
<th>Responsibilities</th>
<th>Pricing unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service as main haulage contractor</td>
<td>Block train traffic</td>
<td>Railway: org., mkt.</td>
<td>Single Transports and their conditions</td>
</tr>
<tr>
<td></td>
<td>Wagonload traffic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shunting services</td>
<td></td>
<td></td>
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</tbody>
</table>
Market conditions and constraints – size of industry

- Liberalisation in 1994: private companies entered the market
- Started with niche markets and co-operation with the former monopolist DB Schenker Rail
- Today: strong competition for block train traffic and traction services; provision almost only by private companies; wagonload traffic still a stronghold of DB
- Market share of private companies (2008): 21% of tonne-km. 59 of them compete with DB
Rail freight transportation (3)

Special market conditions, record keeping

■ To get a picture of the overall market, rail freight forwarders and railway companies have to be contacted

■ Record keeping:
  ■ Data needed: prices for actual services => can be extracted from normal financial accounting
  ■ Problems with varying services (e.g. servicing of junctions): price observation has to be linked to a single contract
Classification used

- CPC/CPA: breakdown by used rolling stock (tanker cars, refrigerator cars,...)
- NST 2007 (transport statistics): by transported good
- No classification reflects the production system => new classification developed

<table>
<thead>
<tr>
<th>Wagonload traffic</th>
<th>Block train traffic</th>
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<tbody>
<tr>
<td>Coal, Iron and Steel</td>
<td>26,3%</td>
</tr>
<tr>
<td>Automotive</td>
<td>11,1%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>14,6%</td>
</tr>
<tr>
<td>Building materials, waste disposal</td>
<td>7,1%</td>
</tr>
<tr>
<td>Agriculture, forestry, paper</td>
<td>7,5%</td>
</tr>
<tr>
<td>Other goods</td>
<td>2,2%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Traction services 26,4%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermodal transport 17,3%</td>
</tr>
<tr>
<td>Wagonload/block train traffic, servicing of junctions 9,1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Provision services 2,9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction train traffic 1,2%</td>
</tr>
<tr>
<td>Track construction logistics 1,4%</td>
</tr>
<tr>
<td>Shunting services 0,3%</td>
</tr>
</tbody>
</table>
Pricing methods

- **Contract pricing** for main haulage contractor services and traction services ⇒ real transaction prices. Most important characteristics for main haulage contractor services:
  - Wagonload/block train traffic
  - Market segment (coal/iron/steel, automotive, chemistry,...)
  - Goods transported
  - Relation including starting and destination stations...

- **Pricing of repeated services** for construction train and shunting services

- **Unit value** for track construction logistics: €/tkm for ballast and sleepers
Results

- Very high response rate (up to 97% without reminder)
- 836 price quotations (387 for main haulage contractor services, 165 for traction, 284 for provision)
- Steady increase in prices, especially in the 1st quarter
Rail freight transportation (7)

Quality adjustment, comparability with turnover measures

- Quality adjustment:
  - Changes in conditions
  - Framework contracts (esp. traction services) $\Rightarrow$ „real model“ employed
  - Contracts expire $\Rightarrow$ replacement with „similar“ contract $\Rightarrow$ assessment of price difference
    $\Rightarrow$ Close collaboration with railway companies necessary

- Comparability with turnover/output: So far, no turnover figure published for the sector. No perfect match because of sampling universe (turnover: business register; SPPI: list of licenses by FRA)
Conclusion and summary

- Rail transport = three different sub-markets with different legal background, markets, companies, and price determining characteristics
- Rail freight: just straight-forward application of SPPI methodology \(\Rightarrow\) introduced by FSO Germany in 2007/2008
- Long distance passenger rail service: expansion and alteration of existing CPI survey will do
- Short distance passenger rail service: problems with classification, turnover, public transport networks. SPPI significantly differs from CPI (high importance of governmental subsidies)

\[\Rightarrow\] SPPI for rail transport is not an easy task, but worth the effort. We love challenges – let’s get it on!
Questions ?!

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