

2010 MEETING OF VOORBURG GROUP

**Sector Paper on
Rail Passenger Transportation
Services**

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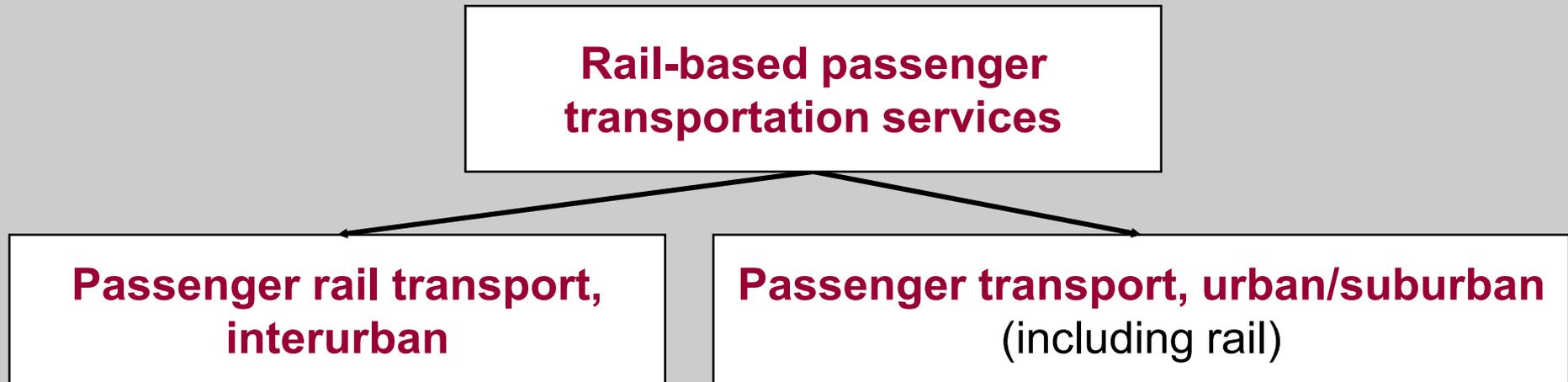
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Sources for the sector paper

- Papers and discussion results of 2009 session on rail transportation
- Survey of NSI's (17 answers)
- Paper from previous years:
 - Palmer (2003), UK: SPPI methodology, quality adjustment
 - Richardson (2005), UK: quality adjustment
 - Hamilton-Seymour (2005), New Zealand: SPPI methodology
 - Willet (2005), USA: SPPI methodology.

Classification (1)

General distinction (ISIC, NACE, NAICS; CPC, CPA, NAPCS)



- Main classification problem: where to draw the borderline?
- Approach Germany (2009): distinction by infrastructure
 - Infrastructure according to „regular“ railway regulations
 - Infrastructure according to tramway
- No problem if clear distinction (ANZSIC, JSIC, KSIC): „system“

Classification (2)

Focus of the paper

**Rail-based passenger
transportation services**

**Passenger rail transport,
interurban**

**Passenger transport, urban/suburban
(including rail)**

- „Regional transportation“ is in focus as well
- The German approach is followed
- With this interpretation, ISIC/CPC etc. align with JSIC/ANZSIC etc.
- Enforcement of coherence within national statistics!

Turnover statistics (1)

Types of turnover measurement

Structural Business Statistics

- Overview of industry and its companies
- More variables than just turnover
- Frequency: low (e.g. annually)
- Industry-based

Short Term Statistics

- Identification of economic development
- Often, turnover only published as index
- Frequency: high (e.g. monthly)
- Industry-based

Statistics on Service Product Turnover

- Detailed turnover breakdown by service products
- Input for SPPI (weighting scheme)
- Frequency: very low
- product-based: includes turnover of secondary activities from other sectors

Turnover statistics (2)

The core problem – how to define turnover in this sector

Paper by Sven Kaumanns, EUROSTAT, 2009

- Public involvement in passenger rail transport as it is a „service of general interest“
- The way public authorities ensure the offer of rail passenger transport determines the turnover
- Contents of turnover in general:
 - Service without public payments: ticket fees
 - Service with public payments: grants and, occasionally, ticket fees (depends on the contract)
- Other factors to be regarded: public vehicle pools, down payments, bonus/malus regulations, transport associations

=> Turnover rather relates to politics than to economical development

Turnover statistics (3)

Options for development

Category	Data Source	Level of Detail Collected	Frequency	Cost
Best	Survey/Census	Industry turnover <u>and</u> product turnover detail	Sub-annual collection (monthly or quarterly)	<ul style="list-style-type: none"> - Most expensive - Largest response burden
Good	Survey/Census and Administrative (tax data, industry association data etc.)	Industry detail <u>only</u>	Sub-annual	<ul style="list-style-type: none"> - Expensive - High response burden - Reconciling administrative data variables with survey variables
Minimum	Administrative (tax data, industry association data etc.)	Industry detail <u>only</u>	Annual	<ul style="list-style-type: none"> - Least expensive - Little or no respondent burden - Suitability for turnover measurement must be checked carefully

Turnover statistics (4)

More challenges

- Small number of companies
 - Problems with confidentiality
 - In some cases (CZ, NL, F), only high level aggregates are published
 - Advantages: few respondents to observe, easy identification of companies, no misclassification
- Entity surveyed
 - Japan: Survey of establishments (stations, offices, , track and maintenance sections etc.) instead of companies
 - Problems encountered with new ways of payment by the passengers: cards that are charged at the station but the money is spent elsewhere
 - Solution: Observation only of charge paid with these cards when entering the train

SPPI (1)

Survey results – State of development

- Only 4 out of 17 countries offer an SPPI for Rail Passenger Transport
- 1 is under development
- 2009: Just one paper on this issue (Germany) => just theoretic considerations, not description of an actual implemented SPPI
- Before 2009: 4 papers
 - UK 2003: SPPI methodology, Quality Adjustment
 - UK 2005: Quality Adjustment
 - New Zealand, USA 2005: SPPI methodology (for the whole rail transport sector)
- Treatment of public grants: Only Poland includes them so far
 - => If considered as turnover, observation necessary

SPPI (2)

Pricing methods – options for developing SPPI statistics: Passenger Fares

Category	Pricing method	Data type in the survey	Quality and Accuracy	Cost
Best	Passenger Fares: Direct use of prices of repeated services	Data is based on actual prices for services offered	<ul style="list-style-type: none"> • Good data quality if especially collected for SPPI. • Detailed service specifications allow time-consistent comparisons. 	Inexpensive method – often, internet survey possible. No response burden in this case.
Good	Passenger Fares: Use of CPI data (direct use of prices of repeated services)	Data is based on actual prices for services offered	<ul style="list-style-type: none"> • Data collected for CPI purpose: only satisfying data quality (may miss important services to business customers). • Detailed service specifications allow time-consistent comparisons. 	Least expensive method with no response burden (caused by the SPPI collection).

SPPI (4)

Pricing methods – options for developing SPPI statistics: Public grants

Best	Public grants: Contract Pricing	Data is based on real transaction prices	<ul style="list-style-type: none"> • Due to bonus/malus payments no need for quality adjustment during the duration of the contract. • Detailed service specifications allow time-consistent comparisons. 	Most expensive, with highest response burden. As many contract details need to be given, confidentiality is a crucial success factor!
Minimum	Public grants: Unit value price	Price per train-kilometre laid down in the contracts as a proxy for price.	<ul style="list-style-type: none"> • If unit value refers to a group of contracts, transactions in a group must be sufficiently homogeneous (i.e. quality of individual services is unchanged and their quantities in the transactions do not vary). Otherwise, changes can be highly volatile and non-comparable. • Quality adjustment complex when contracts change. 	Less expensive (except when quality adjustment is needed), and less response burden (only few contract details needed). Confidentiality is a crucial success factor anyway.

SPPI (5)

Other considerations (1): Quality Adjustment

- Situations requiring quality adjustment:
 - Changes in the quality of the train and on-board service
 - Changes in travel time, frequency, punctuality
- Treatment of changes in the train/service quality:
 - estimation of price change together with respondent
 - Use of price differences between train categories
- Treatment of changes regarding time-based quality:
 - UK (2005): application of time valuation
 - Value of time derived from Department for Transportation
 - Adjustment of delays, changes in travel time, cancellations and changes in frequency proposed

SPPI (6)

Other considerations (2): appropriate classifications for SPPI

- International classifications do not match national circumstances
- National solutions have to be found
- Examples:

- USA:

4821113	Rail transportation, passenger
482111306	Coach service class
482111307	All other service classes

- New Zealand: industry-based index
for rail transport industry

- Rail freight transport
- Rail passenger transport
- Storage services
- Plant and machinery hiring and leasing
- Engineering services

SPPI (7)

Other considerations (2): appropriate classifications for SPPI

- Examples (cont'd):
 - Germany:
different turnover sources

Long distance passenger rail transport (LDPRT)
Different types of tickets for regular LDPRT
Different relations
Special passes
Group tours
Night trains
Contracts with large customers (army, travel companies)

Short distance rail passenger transport
Gross contracts (only public grants)
Net contracts (public grants and passenger fares)
Compensation payments

- Korea, Japan: weighting based on I-O-tables (?)

SPPI (8)

Other considerations (3): More challenges

- Confidentiality and ability to publish
 - Only few companies involved
 - Politics involved as well (public authorities), confidential contracts
 - Implementing and publishing of SPPI needs backing of politics and respondents
- Use of CPI (or similar) data: things to consider
 - Exclusion of taxes
 - Need for different weighting scheme and (probably) additional data reflecting business customer behaviour
 - Inclusion of services not offered to private customers

⇒ Same challenges as for air transport

⇒ Still a decrease in workload

Summary and further suggestions

- Large public involvement: complications in definition of turnover and service
- Main problem: inclusion of public grants in turnover/price measurement
- Classification: Problem in drawing the line between interurban and urban/suburban rail transportation => assuring national coherence
- National markets with national particularities need national solutions
- Few respondents, involvement of politics => problems with confidentiality and publication
- Quality adjustment: valuation of time innovative approach; can probably be used for other sectors where time matters

Reference to Peter Roemer:
Discussion ?!



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