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1.0 Introduction

This paper summarizes international progress and challenges in the measurement of turnover, price change, as well as classification issues for the rail passenger transportation services industry. The main objective is to recommend best practices so that countries developing or revising their own programs will have a benchmark or point of reference.

The main sources of information used in this paper are presentations and summary notes from previous Voorburg Group (VG) meetings, along with the results of a survey of country progress and a specific survey on rail freight transportation services (see tables A.0 in the appendix).

The paper is organized as follows: Section (2.0) covers some of the primary issues related to classification; Section (3.0) describes turnover measurement issues and addresses the turnover collection practices of several countries; Section (4.0) presents the methodological price collection options chosen by several countries and concludes with a general discussion of price measurement issues and challenges.

2.0 Classification

The classification of rail passenger transport services is fairly standard internationally, by industry and by commodity. However, differences can be found among the national derivatives of ISIC and CPC, and problems with the allocation of certain rail services exist as well.

2.1 Industry Classification

The main industrial classifications used by Voorburg Group participants are relatively comparable in the passenger rail transport service, at least concerning the treatment of interurban passenger rail transport. Four common industry classifications are considered here: the *Australian and New Zealand Standard Industrial Classification* (ANZSIC 2006, Revision 1.0), the *International Standard Industrial Classification* (ISIC, Revision 4.0) the *Statistical Classification of Economic Activities in the European Community, Rev. 2* (NACE Rev. 2) and the *North American Industrial Classification System* (NAICS 2007). When comparing the four industry classifications the conclusion is that they broadly cover and define the same activities within interurban passenger rail transport services, but are problematic concerning urban, suburban and regional passenger rail transport services. Table A.2 in the Appendix provides a general overview along with industry classification details.

A main problem encountered with industrial classifications concerning passenger rail transport is drawing the borderline between interurban passenger rail transport (ISIC 4911, NACE 49.10, NAICS 482111) and urban/suburban passenger rail transport (ISIC 4921, NACE 49.31, NAICS 485111/485112) which is mentioned in the appendix table for information purposes. After examining possible criteria, Eurostat notes that "…there is no common definition to distinguish between interurban, suburban and urban public

rail passenger transport. And the different existing definitions seem to be difficult in use and do not offer real help as they often lead to different results or offer no clear results at all."[1] The main problem is where to count "regional transportation" which combines characteristics from both sectors. There has been no satisfying solution to that problem so far. This paper, however, tries to focus on interurban passenger rail transport.

An approach different from that of ISIC/NACE/ANZSIC is followed by the JSIC (Japanese Standard Industrial Classification) classification structure for railway transport which differs clearly from ISIC rev.4 classification structure. The main distinction is made between the rail systems i.e. there are different classes for railways, tramways, underground railways, monorails and so on. However, the JSIC does not provide a separate classification for freight versus passenger transport.[2] The following table 1 shows an overview of the differences between JSIC and ISIC.

Table 1: Comparison of JSIC and ISIC.

JSIC	ISIC rev.4
4200, 4209	7010 Activities of head office
4211	4911 Passenger rail transport, interurban
	4912 Freight rail transport
4212~4215	4921 Urban and suburban passenger land transport
4216~4219	4921 Urban and suburban passenger land transport
	4922 Other passenger land transport

Common exclusions to all the classifications systems are: establishments or units that are mainly engaged in: repairing railway stock or locomotives, operating passenger railway terminals or stations, operating railways as a tourist attraction (scenic railways), or operation of railroad infrastructure.

2.2 Product Classification

The main product classifications presented are the *Central Product Classification Version 2* (CPC Ver.2), *Classification of Products by Activity,* (CPA 2008), and the *North American Product Classification System* (NAPCS Ver.1). An overview table is provided in appendix table A.2. They show basically the same structure as the industry classifications. And the same problems occur: Drawing the borderline between interurban rail passenger service (CPC 6421, CPA 49.10.1, NAPCS 48211) and urban/suburban rail passenger services (CPC 6411, CPA 49.31, NAPCS 485, which is presented in the appendix for information purpose) is somehow arbitrary.

When comparing the level of detail and the description of service products the classification offer, NAPCS goes into more detail and approximates closer different service products than CPC and CPA. For example, beside *482111 Interurban passenger*

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[1] Kaumanns (2009), p. 2ff.
[2] See Nagafuji (2009).

transportation by rail, it offers information on *related products* (482119) like m*eals and beverages, prepared and served or dispensed for immediate consumption* (482119.2), *Maintenance and repair and related services for railway rolling stock* (482119.8), or *Parking services* (482119.14). For the purpose of price index development, NAPCS may be a good starting point for identification of service products.

2.3 Issues in Classification

The major challenge for classification of this sector is drawing the borderline between interurban passenger rail transport and urban/suburban passenger rail transport. There has been no common policy for this issue so far. Especially in countries with an important network of "regional" passenger services – neither really "interurban" nor "urban or suburban" -, this poses a problem. A possible approach to solve this situation was elaborated by Germany[3] by referring to the infrastructure used:

> "In Germany, two types of regulations exist on which the provision of rail-bound infrastructure is based:
> - EBO (*Eisenbahnbau- und Betriebsordnung*, railway construction and operation regulation) which is valid for "regular" railway infrastructure
> - BOStrab (*Straßenbahnbau- und Betriebsordnung*, tramway construction and operation regulation), which is valid for infrastructure of tramways, elevated railways, underground railways etc.
>
> The sector observed covers only such services that are (mainly) operated on infrastructure according to EBO."

This approach draws a clear line as "regional" train services are attached to the interurban passenger rail transport sector. However, for suburban trains, the problem remains: according to this definition, they would be put into the interurban passenger rail sector. In conclusion, classification people are advised to find a solution to that problem; until then, a close collaboration between all departments of NSI's – business register, structural statistics, transport statistics, price statistics – and stakeholders is necessary in order to prepare statistical figures that refer to the same sector. For the purpose of this paper, it was decided to focus on ISIC 4911 and adhere to the German definition discussed above.

3.0 Turnover Statistics – Recommended Development Options

So far, before 2009, the Voorburg Group had developed no papers on turnover measurement for passenger rail services. Hence, the papers by Eurostat[4] and Japan[5] presented at the 2009 meeting in Oslo were the first to cover this issue. Together with the results of the survey and the results of the discussion in Oslo, they form the input to this section of the paper.

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[3] Goldhammer (2009), p. 8.
[4] Kaumanns (2009).
[5] Nagafuji (2009).

We can distinguish three purposes of turnover measurement:
- structural business statistics (SBS): should provide a comprehensive overview of the industry and its companies. Turnover is just one variable to be measured besides others like number of employees, number of companies, investments etc. Absolute figures are published. Frequency: low, normally yearly. Publication date is often several months after the end of the reporting period. Industry-based statistics.
- short-term statistics (STS): should give an idea of the current direction of the economy. Often, only an index figure is given for turnover development. Details are not of high importance, but timeliness matters: publication data soon after the end of the reporting period. Frequency: high (monthly or quarterly). Industry-based statistics.
- Statistics on service product turnover: important data source for the weighting schemes of SPPI's. It details the service products and requires sector knowledge for the design and completion of the survey. Frequency: low, in some countries only every five years if at all. Ideally product-based statistics.

Of the countries responding to the survey, the number of those producing the turnover data mentioned above differs: 13 out of 17 provide SBS data, 12 STS data, and only four collect data on service product turnover which is published in just one case. But, as long as classifications in use offer no service product divisions below "passenger rail transport, interurban", the collection of service product turnover is of less interest, of course. The only case publishing service product turnover is <u>Canada</u> that provides a useful differentiation according to source of revenue (passenger transport/services to VIA[6]/government payments/other).

Looking at the methodology used in collecting turnover data, table 2 provides an overview of best, good and minimum development options recommended for countries either designing new or re-developing existing turnover programs. Almost all countries use survey/census as their main source of survey data; the use of administrative data is found less frequently. This is due to the fact that administrative data has not been designed to obtain statistical economic indicators. Hence, the same data headings may yield different data meanings. It has to be checked by the statistician whether an administrative data source yields suitable data for turnover measurement purpose or not.

As STS data is produced more frequently than SBS data, it is clear that different methodologies are used. For STS data, which are often published only as indices, timeliness is a must; hence, use of administrative data is common. Surveys and censuses are observed for SBS data more often.

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[6] Via Rail Canada is an independent corporation offering intercity passenger rail services in Canada.

Table 2: Options for Developing Turnover Statistics

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)	-	Most expensive
				-	Largest response burden
Good	Survey/Census and Administrative (tax data, industry association data etc.,)	Industry detail <u>only</u>	Sub-annual	-	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	-	Least expensive
				-	Little or no respondent burden
				-	Suitability for turnover measurement must be checked carefully

Overall, the majority of countries appear to have programs falling into the *good* category, with largely survey-driven programs that collect industry level data at a sub-annual frequency, but that also rely on administrative data to supplement their survey programs.

3.1 Other Considerations

3.1.1 Only few companies in the sector

Among the countries surveyed it is a frequent finding that the industry is highly concentrated. This poses challenges for turnover measurement and publishing:
- <u>Canada</u>, <u>France</u> and <u>Ireland</u> face problems with data confidentiality because of only few companies in the sector. Hence, France and Ireland do not publish their results due to confidentiality reasons.
- <u>Mexico</u> has an additional challenge in that some of the companies are state-run governmental organizations, and the absence or lack of records make accurate data collection difficult.
- <u>Czech Republic</u>, <u>the Netherlands</u> and <u>France</u> publish only aggregated railway data (passenger and freight transport) to avoid confidentiality problems.

But of course, the concentration of companies yields advantages as well: There are only few respondents to observe, and identification of companies and their main activity (often a problem encountered in other sectors) is rather easy. And, so far, secondary activities seem to be no problem for this sector.

3.1.2 The main problem with turnover measurement – what is turnover for rail passenger transport?

This seems to be a simple question, but it is not. This problem was elaborated in the EUROSTAT paper presented at the 2009 meeting of the Voorburg Group.[7] Main messages learnt from this paper regarding turnover measurement are:

- In countries, where public passenger transport is a "service of general interest", public authorities decide on the nature and scope of the service and ensure "that a certain level of transport opportunities is offered to the public." "The way the task bearer [a public authority responsible for transportation] chooses for ensuring the offer of a sufficient level of transport opportunities determinates what is measured as transport companies' turnover."
- Public payments by the "task bearers" should be counted as turnover, as long as they fulfil the turnover definition used for STS/SBS statistics: "the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties." (European STS/SBS regulation)
- Three different regimes can be identified for rail passenger companies that ensure competition on the markets:
    - Open-access-markets (every company can offer the service it wants; service without public grants; competition on the market)
    - Bidding for an exclusive concession (concession granted by public authority, service without public grants; competition about the market)
    - Tender for contracting a transport company (economically unprofitable: public grants for an ordered service; competition about the market)
    => Organisation of service and contract details lead to different contents of "turnover"
- Contents of turnover under each regime:
    - Services without public payments: ticket fees.
    - Economically unprofitable services: public authorities pay the contracted enterprise because the services are of public interest. Content of turnover depends on the content of the contract. It includes public payments and, occasionally, ticket fees.
- Further problems identified relate to recording of turnover which often violates the accrual principle, and contract agreements like the use of public vehicle pools that affect turnover generation as well.
- If competition is about the market, the market is not between passengers and railroad companies, but public authorities and railroad companies: "The good traded on this market is the offer of a transport possibility between an origin and a destination at a certain time to potential passengers." In this case, turnover depends on political programs and the budget situation of the public administration.
- If transport associations ("bodies for integrated public transport services that offer a one stop shop to public transport users") exist, they can complicate the situation as they all tend to have different structures.

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[7] See Kaumanns (2009).

The EUROSTAT paper highlights problems that are usual to sectors with large government involvement. And it shows that the expenses by users of passenger rail transport may be different from the turnover of the passenger rail companies because of public involvement. In this situation, the markets for passengers (getting transported) and rail passenger companies (getting the right to offer transportation means) is different. Because turnover of passenger transport is subject to public payments and the content of singular contracts between public authorities and railway companies, turnover for this industry seems to be less appropriate as an economic indicator; it is rather a picture of political decisions. However, while the paper strongly advocates for counting public grants as turnover from a business perspective, turnover statisticians have to consult National Accounts whether to include those payments or not.

It is not to forget that this was written from a European perspective where the rail network and the transportation performance have to be organised separately. In other legal frameworks – like in Japan, where rail companies are integrated means of network and transportation[8] - the situation may be entirely different and other sources of turnover may be considered.

3.1.3 Entities surveyed and new ways of payments

There are different practices regarding the entities surveyed for measuring turnover. E.g., while Germany samples companies and surveys them, Japan samples establishments like "…stations, conductor's offices, engineer's stations, coach and cargo sections, track maintenance sections, construction sections, electric power supply sections, signal-and-communication sections, electricity-related-affairs sections, etc."[9] They are surveyed for turnover. The survey of establishments caused problems to the NSI when new prepaid cards were introduced that can be used not only for the payment of rail transport services, but also of other services. Because they are charged at stations, but used to pay different goods and services, collection of the charged amounts of money would yield wrong results. Hence, the Statistics Bureau of Japan collects only those payments of railroad fares with this cards that are recorded at the station when passengers take the train.[10]

4.0   SPPI Recommended Development Options

So far, there are not so many experiences with SPPI's for rail passenger transport as only 4 out of 17 countries reported the calculation of an SPPI; in one country, the SPPI was under development. In 2009, only Germany presented a paper on SPPI for rail passenger transport, which was a conceptual paper instead of describing an already existing SPPI.[11] Before 2009, there have been four papers by the Voorburg Group covering rail passenger

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[8] Nagafuji (2009), p. 6.
[9] Nagafuji (2009), p. 7.
[10] Nagafuji (2009), p. 8.
[11] Goldhammer (2009), p. 2-14.

transport: <u>New Zealand</u> (2005)[12] and <u>United States of America</u> (2005)[13] describing their index methodologies; and two papers by the <u>United Kingdom</u> (2003[14], 2005[15]) describing approaches for quality adjustment for a passenger rail service SPPI.

Regarding the methodology employed, the approaches are quite comparable:

- <u>Direct pricing of repeated services</u> is the prevailing pricing method when it comes to passenger fares. All five countries in the survey which calculate or develop such an SPPI stated the use of this method. An efficient solution, used by <u>New Zealand</u>[16] and proposed by <u>Germany,</u>[17] is to use price quotations from the CPI, collect additional information needed for the SPPI, and derive a special weighting scheme. In the <u>US</u> paper, the details of the service specification is given: "The pricing factors are the type of rail fare, the type of train, type of travel (i.e., business, leisure, frequent), reservation status; rail fare level (time of travel), point of origin and destination, type of accommodations plus any surcharges minus discounts."[18] Regarding different sources of turnover (see ch. 3), it is important to note that direct pricing of repeated services has been employed only to measure the passenger fare development.

- If public grants for passenger service operation are treated as turnover, <u>contract pricing</u> seems to be the appropriate pricing method for that service. So far, only <u>Poland</u> includes government grants in its SPPI. As there are different types of contracts,[19] there is an apparent need for different treatments. It is important to catch the price determining characteristics which have to be defined for each type of contract separately, a need for research by the NSI's. The <u>German</u> case study points out that asking the public authorities that offer the contract may yield better results than surveying the railway companies.[20]

- Another possible pricing method for covering public grants is <u>unit value pricing</u>. Often, prices per train-km are laid down in the complex agreements between public authority and railway companies which can be easily surveyed. However, there may be a lot of quality changes when contracts change which must be reflected in the unit value, a high charge to the statistician.

- So far, none of the surveyed countries includes compensation payments (e.g. for the transport of pupils) or special transportation contracts with travel organisations etc. in the SPPI. As these payments form part of the

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[12] Hamilton-Seymour (2005).

[13] Willet (2005).

[14] Palmer (2003).

[15] Richardson (2005).

[16] Hamilton-Seymour (2005), p. 4.

[17] Goldhammer (2009), p. 3, p. 13.

[18] Willet (2005), p.5.

[19] Kaumanns (2009), p. 11, identifies two main types of contracts: for gross contracts, the railway company is only refunded by public grants; for net contracts, they receive (substantially lower) public grants and the passenger fares.

[20] Goldhammer (2009), p. 12.

railway companies' turnover, they should be included; <u>contract pricing</u> may also be able to track the price development for these services. However, a lack of experience can be stated in this field which restrains the author from giving recommendations.

Table 4 shows the recommended options of SPPI pricing methods for passenger rail transport regarding passenger fares and public grants.

Table 4.0: Options for Developing SPPI Statistics

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	• 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	• 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).
Best	Public grants: Contract Pricing	Data is based on real transaction prices	• 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.	• 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.

4.1 Other Considerations

The main issues with regards to SPPI development for the passenger rail industry are: quality adjustment; the appropriateness of the existing classifications for the SPPI; confidentiality and ability to publish; and CPI vs. SPPI.

4.1.1 Quality Adjustment

For direct pricing of repeated services, several situations can be found when quality adjustment is needed:[21]
- Changes in the number and range of on-board facilities and services (quality of the train);
- Changes in performance/punctuality (i.e. travel time, frequency etc.)

Any approach to adjusting for these changes in quality is likely to require the collection of additional data and using it in an appropriate way. While the quality of the train itself is often reflected in different train categories and therefore price differences can be estimated, changes in performance and punctuality – which, at least, can be measured in time units – need other approaches.

In its CPI, Germany uses quality adjustment when a remarkable change in journey times occurs (e.g. introduction of a new high-speed line) as well as when new trains of higher quality are introduced. Quality adjustment is done by estimating the price difference between the old and the new service together with the respondent and a respective adjustment of the price of the previous period is done.[22]

While this rather subjective method is quite common in use, the United Kingdom proposed a quality adjustment method based on time valuation in its 2005 paper.[23] It was suggested to use this method for quality adjustment of the following incidences:
- changes in travel time
- delays
- cancellations
- changes in frequency

Especially in transportation, valuation of time is done frequently to estimate the use of changes in infrastructure (e.g. construction of new roads). Hence, the proposed method used time values from the Department of Transportation that were adapted to the needs of SPPI quality adjustment. It is not clear whether the UK uses this approach today, but it is worth thinking about its use for quality adjustment, especially under regimes like in the European Union where passengers can get refunds for delayed trains.

When it comes to contract pricing (used for public grants), there are similar problems: Quality adjustment will be a problem when contracts expire. New contracts always have different conditions, for example the number of train-km may have changed as well as the requirements for rolling stock. In this situation, quality adjustment will require close

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[21] Palmer (2003), p. 7.
[22] Goldhammer (2009), p. 7.
[23] Richardson (2005).

collaboration with railway companies and public authorities. However, changing in frequencies or travel times at the time of contract change may be reflected by using the concept of time valuation.

If the unit value approach is used for public grants, it poses some difficulties, especially when a contract changes. Changes due to quality are hard to identify and separate out; e.g. a higher frequency – which means a higher quality of the service – may not be seen at all in a €per train-km figure. Identifying direct price changes in an SPPI is difficult when calculating an index based on unit value. As contracts have very different specifications regarding rolling stock, facilities on board etc., it is necessary to create homogeneous subgroups of services at a very detailed level, or maybe even using one unit value for every contract a single railway company holds.

4.1.2   Appropriate Classifications for the Rail Passenger SPPI

As pointed out in chapter 2, only NAPCS offers service products below the level of "rail passenger services, interurban"; and the services mentioned there might be not representative for the country that tries to develop an SPPI. As international classifications do not align with the national circumstances, national solutions have to be found to get satisfying classifications. Some examples:
-   Classification of the US SPPI for passenger rail transport:[24]

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

   This index is just a part of the overall SPPI for line-haul railroads (NAICS 482111).
-   In New Zealand, the index is industry-based and covers secondary activities as well. The following five commodities are covered:[25]
      - Rail freight transport
      - Rail passenger transport
      - Storage services
      - Plant and machinery hiring and leasing
      - Engineering services
-   The German proposal differentiates between long and short distance rail passenger transport, and between different sources of turnover:[26]
         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)

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[24] Willet (2005), p. 3.
[25] Hamilton-Seymour (2005), p. 3.
[26] Goldhammer (2009), p. 6, 13.

        Short distance rail passenger transport
           Gross contracts (only public grants)
           Net contracts (public grants and passenger fares)
           Compensation payments
-      Japan and Korea derive their weights from the input-output-tables of the National Accounts, a procedure not clear to the author.

In conclusion, it is the task for the price statistician to identify himself an appropriate classification instead of sticking to classifications already in place that do not reflect the national market situation.

4.1.3 Confidentiality and ability to publish

In most countries, the industry is heavily concentrated. Hence, publishing an SPPI requires the consent of the respondents; otherwise confidentiality rules would be broken. While this may not be an important issue in the case of turnover data, pricing strategies are often more closely guarded against by what little competition does exist. Regarding passenger fares, large price increases can also be viewed unfavorably by service users, government regulatory agencies, etc. It is even worse with public grants. German experience shows that these contracts are treated as strictly confidential. Trying to access contractual data requires the definitive backing of politics, which is involved in this field; otherwise the attempts may fail. Hence, without backing of politics and the approval of the few respondents, these series can only be used internally if it can be established at all.

4.1.4   CPI versus SPPI

When it comes to passenger fares, using the CPI data to approximate an SPPI may be a viable solution. As the CPI represents B-to-C market which has a large market share in the overall rail passenger transport market, this part of the SPPI can be fully covered with CPI data; however, the drawbacks of complete SPPI approximation by CPI should be clear:
- VAT is included in the CPI, not in the SPPI. Changes in VAT cause biases between SPPI and CPI.
- CPI should cover only private consumption. Business consumption of passenger rail transport may differ:
  - Higher percentage of 1ˢᵗ class users
  - Other relations preferred, e.g. between economic centers of the country, but not to tourism destinations
  - Use of special offers for business customers or offers that are normally out of scope of the private customers (e.g. yearly ticket for the whole network)
- There are services that are not offered to private customers, but laid down in special agreements with business customers, e.g. special contracts with travel companies. These contracts have to be included as well.

Overall, rail passenger transportation yields the same problems as air passenger transportation when moving from CPI data to SPPI. Weighting schemes must be adjusted, taxes subducted, and business services added. However, where CPI data can be used, this means a reduction in workload for the SPPI statistician.

5.0 Summary and Further Suggestions

Passenger rail transport is an essential and longstanding service. However, due to public involvement, service and especially turnover definition is not an easy task, centering on the question whether to include public grants for provision of train services into turnover measurement or not. The decision made for this problem determines price development measurement as well: When public grants are included in turnover, the SPPI must incorporate public grants as well as passenger fares (as long as they are part of turnover themselves). Hence, the use of CPI data is not in all situations an appropriate proxy.

Another problem from a statistical point of view is classification. In many national cases, the line between interurban and urban/suburban passenger rail transport seems to be thinner than suggested by international classifications. There is no simple solution to this topic; to assure coherence at least among national statistics, it is important that statisticians from different departments – business register, structural statistics, price statistics, transport statistics etc. – work together closely.

Regarding quality adjustment for SPPI's, subjective methods in cooperation with the respondents may yield satisfying results; however, the method of time valuation presented by the United Kingdom seems to be an innovative approach to catch service quality changes related to travel time.

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APPENDIX

A.0 Overview of International Progress

For the 24th Voorburg Group meeting in Oslo, Norway, countries were asked to provide a progress report for a selected group of industries to be revisited. The survey asks for progress on collecting turnover and prices. Table A.0 provides a summary of the information received to date, which is based on 20 countries responding.

Table A.0: Summary of Progress Reports

ISIC 4911: Passenger Rail Transport	Out of 20 Countries
Total:	
Number of countries producing an SPPI	6
Number of countries producing turnover data	17
Details:	
a. PPI details >= CPC	1
b. PPI details >= CPC soon	0
c. Turnover details >= CPC	2
d. Turnover details >= CPC soon	0
e. Industry prices calculated	5
f. Industry turnover collected	15
Ratings:	
1. Detailed turnover and prices well aligned	0
2. Detailed turnover and prices well aligned soon	0
3. Industry level turnover and prices aligned	2
4. Industry level turnover and prices aligned soon	1
5. Other - no industry coverage for prices and/or turnover, etc.	17

Table A.1: Comparison of Industry Classifications

Level	ANZSIC	ISIC 4.0	NACE Rev.2	NAICS 2007
General	Division I: Transport, Postal and Warehousing Subdivision 47: Rail Transport	Section: H - Transportation and storage Division: 49 - Land transport and transport via pipelines	Section: H - Transportation and storage Division: 49 - Land transport and transport via pipelines	48-49 Transportation and Warehousing
First main level of detail	Group 472: Rail Passenger Transport Class 4720 Rail Passenger Transport This class consists of units mainly engaged in operating railways (except tramways) for the transportation of passengers over short and long distances. Primary activities • Commuter rail passenger service • Metropolitan rail passenger service • Monorail operation • Rail passenger transport service Exclusions/References: Units mainly engaged in • operating tramways for the transportation of passengers are included in Class 4622 Urban Bus Transport (Including Tramway); • operating passenger railway terminals or stations are included in Class 5299 Other Transport Support Services n.e.c • operating railways as a tourist attraction (scenic railways) are included in Class 5010 Scenic and Sightseeing Transport.	Group: 491 - Transport via railways Class: 4911 - Passenger rail transport This class includes: • passenger transport by inter-urban railways • operation of sleeping cars or dining cars as an integrated operation of railway companies This class excludes: • passenger transport by urban and suburban transit systems, see 4921 • passenger terminal activities, see 5221 • operation of sleeping cars or dining cars when operated by separate units, see 5590, 5610 Group: 492 – Other land transport Class: 4921 – Urban and suburban passenger land transport This class includes: • land transport of passengers by urban or suburban transport systems. This may include different modes of land transport, such as by motorbus, tramway, streetcar, trolley bus, underground and elevated railways etc. The transport is carried out on scheduled routes normally following a fixed time schedule, entailing the picking up	Group 49.1: Passenger rail transport, interurban Class 49.10 - Passenger rail transport, interurban This class includes: • rail transportation of passengers using railroad rolling stock on mainline networks, spread over an extensive geographic area • passenger transport by interurban railways • operation of sleeping cars or dining cars as an integrated operation of railway companies This class excludes: • passenger transport by urban and suburban transit systems, see 49.31 • passenger terminal activities, see 52.21 • operation of railroad infrastructure; related activities such as switching and shunting, see 52.21 • operation of sleeping cars or dining cars when operated by separate units, see 55.90, 56.10 Group 49.3: Other passenger land transport Class 49.31 - Urban	482 Rail Transportation 4821: Rail Transportation 48211: Rail Transportation 482111: Line haul railroads 4821113: Rail transportation, passenger Exclusion(s): Establishments primarily engaged in operating… • switching and terminal railways • railroads over a short distance on local rail lines • commuter rail systems 485 Transit and Ground Passenger Transportation 4851 Urban Transit Systems 48511 Urban Transit Systems 485111 Mixed Mode Transit Systems Establishments primarily engaged in operating local and suburban ground passenger transit systems using more than one mode of transport over regular routes and on regular

		and setting down of passengers at normally fixed stops. • town-to-airport or town-to-station lines • operation of funicular railways, aerial cableways etc. if part of urban or suburban transit systems This class excludes: • passenger transport by inter-urban railways, see 4911	and suburban passenger land transport This class includes: • land transport of passengers by urban or suburban transport systems. This may include different modes of land • transport, such as by motor bus, tramway, streetcar, trolley bus, underground and elevated railways etc. The transport is carried out on scheduled routes normally following a fixed time schedule, entailing the picking up and setting down of passengers at normally fixed stops. • town-to-airport or town-to-station lines • operation of funicular railways, aerial cableways etc. if part of urban or suburban transit systems This class excludes: • passenger transport by interurban railways, see 49.10	schedules within a metropolitan area and its adjacent nonurban areas. 485112 Commuter Rail Systems Establishments primarily engaged in operating local and suburban commuter rail systems over regular routes and on a regular schedule within a metropolitan area and its adjacent nonurban areas. Commuter rail is usually characterized by reduced fares, multiple ride, and commutation tickets and mostly used by passengers during the morning and evening peak periods.

Table A.2: Comparison of Product Classifications

Level	CPC -Ver.2	CPA 2008	NAPCS – Ver 0.1 (US)
General	Section: 6 - Distributive trade services; accommodation, food and beverage serving services; transport services; and electricity, gas and water distribution services Division: 64 - Passenger transport services	49 : Land transport services and transport services via pipelines	48211 Interurban passenger transportation by rail; 485 Transit and Ground Passenger Transportation
Main sub-groups	Group: 641 - Local transport and sightseeing transportation services of passengers Class: 6411 Urban and suburban land transport services of passengers • 64111 Urban and suburban railway transport services of passengers • 64113 Mixed mode urban and suburban transportation services of passengers Group: 642 - Long-distance transport services of passengers Class: 6421 - Interurban railway transport services of passengers	49.10 Passenger rail transport services, interurban 49.10.1 Passenger rail transport services, interurban • 49.10.11 Passenger rail transport services for sightseeing • 49.10.19 Other passenger rail transport services, interurban 49.3 Other passenger land transport services 49.31 Urban and suburban passenger land transport services 49.31.1 Urban and suburban railway transport services of passengers	482111 Interurban passenger transportation by rail • 482111.7 Other interurban passenger transportation services by rail • 482111.8 Scheduled interurban passenger transportation by rail 482112 Rental of rail transportation equipment with operator 482113 Operations service for passenger transportation system vehicles 482114 Management service for passenger transportation systems 482119 Related products – among others: • 482119.1 Transportation of goods by rail transporters • 482119.2 Meals and beverages, prepared and served or dispensed for immediate consumption • 482119.7 Rental of rail transportation equipment • 482119.8 Maintenance and repair and related services for railway rolling stock • 482119.11 Leased display advertising media space, transit • 482119.12 Communication access services • 482119.13 Packaged tours by rail with overnight accommodation • 482119.14 Parking services 485 Transit and Ground Passenger Transportation 485.2 Local, fixed-route, passenger transportation by road and transit rail 485.2.5 Local, fixed-route,

			passenger transportation on common-carrier road and transit rail systems
			485.2.5.5 Local, fixed-route, common-carrier passenger transportation by commuter-rail systems
			485.2.5.7 Local, fixed-route, common-carrier passenger transportation by multimodal transit systems