Federal Statistical Office of Germany

Division Prices
Peter Roemer
peter.roemer@destatis.de

The integration of CPIs and PPIs for services in Germany

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1. EU legislation and the role of international cooperation

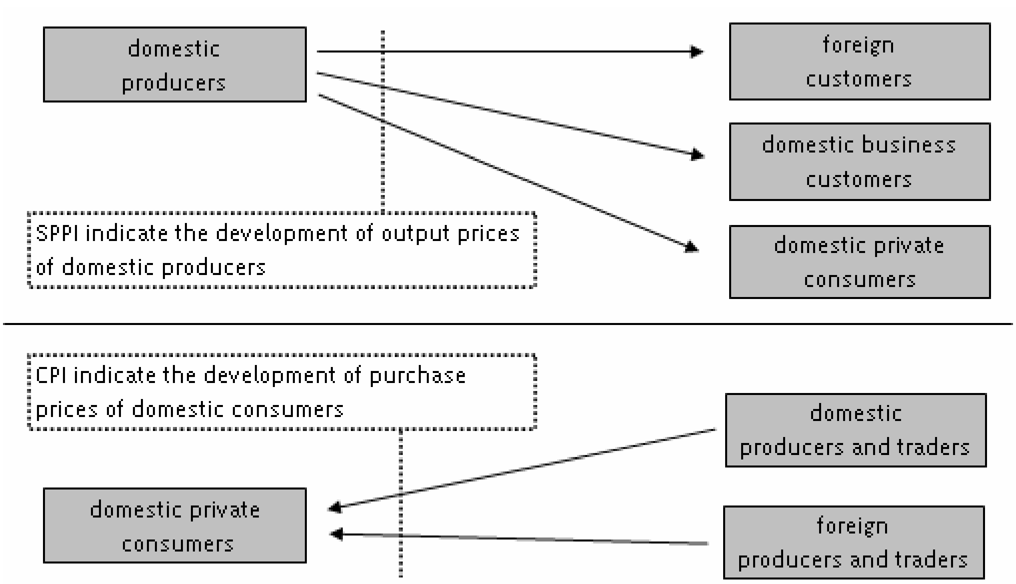
The statistical programme of Germany is determined to a large extend by the common statistical programme of the European Union. Especially the provision of harmonised indices of consumer prices (HICP) and of producer price indices for services (SPPI) is defined in detail by EU-regulations.

The methodology of the German statistical programme is also influenced by the international discussions with UN and OECD. The Voorburg Group for service statistics, a subgroup of the UN, meets annually and puts the emphasis on developing methodology for service statistics[1]. The contributions from this forum were the methodological basis for the EU working programme in SPPI.

Another important milestone for the development of SPPI was the publication of the “methodological guide for developing producer price indices for services”, 2005 edition, commonly edited by Eurostat and OECD.

2. Some methodological and technical aspects of CPI and SPPI

Whereas the CPI focuses on the consumption of private households, the SPPI is defined as an output price index for the service production of resident producers. Hence the weighting pattern of SPPI is based on the turnover structure of domestic producers, while the weighting pattern of CPI is based on the structure of expenditure of private consumers. The CPI therefore includes imported items as they are purchased by private households, whereas the SPPI only contains home produced services- imports are excluded. The following overview shall illustrate the difference:



[1] Annual meetings of the Voorburg group in 2006 and 2007 were held in Wiesbaden (Germany), und in Seoul (Korea). The ongoing meeting in 2008 will take place in Mexico. See Statistics Canada, Voorburg, website: http://www4.statcan.ca/english/voorburg/

Another major difference between CPI and SPPI is the inclusion/exclusion of the VAT. From a technical point of view: CPI are to be provided on a monthly basis, SPPI on a quarterly basis. Base year for the German CPI is 2005; base year for the SPPI is 2006.

3. Discussion on the Business to Business- and Business to all-approach

Although the services in focus of the SPPI programme are mainly business services, the scope of SPPI as defined by the OECD/Eurostat task force[2] is wider than the provision of goods and services from business to business. It also comprises deliveries to all sectors including the public sector or private households (Business to all-concept: B to A concept). The scope chosen by the Task Force constitutes a more general approach consistent with the International PPI manual and national accounts.

On the other hand the EU-regulation 1158/2005 concerning short term statistics[3] (STS-regulation) takes a more restrictive position. According to the STS-regulation the SPPI only covers services delivered to customers that are enterprises or persons representing enterprises (Business to Business-concept: B to B concept). Thus by definition deliveries to the public sector or to private households are excluded in the SPPI. The restrictive position of the STS-regulation can mainly be explained by history. In the years 2003 and 2004 during the preparation of the EU-regulation only very few EU-member states had already produced SPPI and the more advanced countries such as UK and France had adopted a B to B-approach. Another argument was that for business to private consumers (B to C) data were already available from the CPIs and that most SPPI are oriented towards a B to B approach.

After the adoption of the STS-regulation discussions within EU working groups started whether the B to B concept is too restrictive and whether the B to A concept should be preferred. Present state of the discussion is that the B to A concept has several advantages and should be adopted. This has consequences for data deliveries to the EU. In order to assure consistency with former data deliveries Eurostat now suggests a B to A approach with a subdivision of the SPPI into a B to B and B to C index.

The SPPI Task Force meeting 23-24 April 2008 in Luxembourg will discuss for which activities this question is relevant and how to proceed in the future.

[2] For more detail see „Methodological guide for developing producer price indices for services, p.15 ff.
[3] Council regulation No 1165/98 of 19 May 1998 concerning short term statistics amended by the regulation NO 1158/2005 and further amendments concerning the Revision of the NACE; Annex D.

4. List of SPPI activities, practical relevance of the B to B/B to A approach

Within the EU there is a list of activities for which SPPI should be compiled in a harmonised way

Activities ,[4] for which SPPI need to be compiled within the EU
Base Year 2006

Transport, storage and communication:

- 60.24 Freight transport by road
- 61.1 Sea and coastal water transport (freight, passengers)
- 62.1 Scheduled air transport (freight, passengers)
- 63.11 Cargo handling
- 63.12 Storage and warehousing
- 64.11/12 National post activities, courier services
- 64.2 Telecommunications

Business activities:

- 72 computer and related activities
- 74.11 Legal activities
- 74.12 Accounting, bookkeeping and auditing activities; tax consultancy
- 74.13 Market research and public opinion polling
- 74.14 Business and management consultancy activities
- 74.2 Architectural and engineering activities and related technical consultancy
- 74.3 Technical testing and analysis
- 74.4 Advertising
- 74.5 Labour recruitment and provision of personnel
- 74.6 Investigation and security activities
- 74.7 Industrial cleaning

[4] Statistical activity classification of the European Community, NACE rev. 1.1

Only few but important activities are concerned by the B to B and B to All-discussion. These activities mainly are:

- Telecommunications
- Postal and courier services
- Scheduled air transport (passengers)
- Sea and coastal water transport (passengers)
- Legal activities
- Tax consultancy.

An important activity outside the STS regulation is

- Transport via railways (passengers).

5. The European programme for the development of SPPI

According to the STS-regulation SPPI should be based on the year 2006=100 and produced on a quarterly basis. In 2003 Eurostat started a statistical development programme for SPPI. Member States could get expertise in this entirely new area of statistics and obtain financial support for the development. Member States not able to provide SPPI from the very start could ask for derogations to deliver data later than in August 2007. The official derogation period ends August 2008 but many Member States have longer derogation periods. Germany also asked for derogations till August 2008 and has to take strong efforts to complete the SPPI working programme within the next time.

Thus it will still take some time before SPPI data may be published EU-wide.

6. The organisation of price statistics in Germany.

The federal statistical office (Destatis) has the mandate to develop the methodology for statistics as well as to collect data and publish them at a federal level. The statistical offices of the Länder (16 regional units) are responsible for collecting and processing federal statistics at a regional level.

However, as an exception to this rule, SPPI and specific parts of the CPI are both collected centrally at Destatis. CPI and SPPI for the activities telecommunication, postal and courier services, transport services, legal activities and tax consultancy are compiled/developed within the same unit (unit VA5)[5] by the same persons. These activities are those concerned by the B to B/B to A discussion. Thus methodological solutions for this discussion could be developed within one unit and no further need of coordination with other units.

[5] There is another unit VA3, which has the overall responsibility for CPI. Units VA3 and VA5 have to coordinate their work.

7. The German Work in CPI and SPPI

The common production of CPI for services and SPPI by the same persons within one unit offers considerable operational advantages. These persons have

- a good expertise of the markets,
- good contacts to companies concerned and
- the confidence of partners within these companies.

The experience of these persons is therefore a good starting point for developing new SPPI.

Concerning data collection there are positive interactions between CPI and SPPI as a dual use of information is possible. The dual use may refer to price quotations or to information relevant for the weighting structure.

Practical problems however may arise from

- methodological differences of CPI and SPPI (see chapter 2),
- separate calculation procedures for CPI and SPPI,
- additional workload for rebasing the CPI during the SPPI development.

These general aspects will be illustrated in more detail.

In Germany, there was a broad consensus that the development of SPPI is urgently needed especially for deflating and for measuring volumes of the service sector in national accounts. The working base for developing SPPI was established by an internal paper of 2002 with a time schedule for the time period 2003 to 2008. The paper proposed to develop sectoral SPPI in a step by step approach. It became clear that Destatis had to start a very ambitious working programme and that it would become difficult to recruit the necessary staff for the work due to general budgetary restraints of the federal state.

The methodological work for SPPI in Germany started in 2003. Several pilot studies on behalf of Eurostat were launched since then. The first studies referred to telecommunications (TC) and to legal services, accounting, auditing, tax consultancy. These studies were hindered by the fact that -at that time- the STS-regulation concerning SPPI was not yet adopted and the pilot surveys were undertaken on a voluntary base. In TC only few companies volunteered in the pilot study. The main reasons for refusing participation were the lack of legal obligation, the burden for companies and the sensitiveness of data. In consequence it was not possible to obtain sufficient information to develop the SPPI for TC. Fortunately later pilot studies for other activities provided more reliable information.

In October 2007 first results for SPPI could be published by Destatis[6]. By May/June 2008 first results for TC, postal and courier services, sea and coastal water transport and industrial cleaning are expected.

8. SPPI and CPI for TC as an example

8.1 General remarks

To compile price indices for TC is one of the most demanding tasks in price statistics and it requires experienced, qualified personnel to do this work.

Rapid changes in technology and the permanent introduction of new services are large and permanent challenges in TC. Particular challenges are

- quality adjustment for new services,
- bundling of services,
- changes in the condition of services.

Quality adjustment methods need very good technical expertise and knowledge of the market conditions. Also a good timing for the introduction of new services and the dropout for old services is very important.

This is equally valid for the CPI and the SPPI.

Concerning the sample design and the collection of information for SPPI the following characteristics may be noted[7]:

- In most countries the market is dominated by one or a few market leaders,
- Confidentiality problems arise,
- In various countries a regulator collects data on a regular basis,
- In other countries data are not collected by a regulator or –for confidentiality- are not accessible from the regulator. In these countries price surveys are conducted by statistical offices themselves.
- Information from respondents is often very sensitive, especially discounts or activities dominated by one or few market leaders.
- Regular contact with regulator and/or companies for new information is necessary.

[6] See the web site of Destatis: http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/EN/Navigation/Statistics/Preise/ErzeugerpreiseGrosshandelspreise/ErzeugerpreiseDienstleistungen.psml
[7] See also the results of the EUROSTAT workshop on SPPI, Luxemburg, 16 – 19 October 2006.

8.2 The German example

The market structure for TC in Germany according to the German regulation authority is as follows:

63.6 Bill. EUR turnover in 2007, thereof..

- 20.5 Bill. EUR for fixed line telephony
- 22.1 Bill. EUR for mobile phone services
- 0.8 Bill. EUR for leased lines
- 7.4 Bill. EUR for interconnection
- 3.0 Bill. EUR for cable TV
- 9.8 Bill. EUR for other services[8]

Some of these activities are typical B to B activities such as leased lines, whereas cable TV is a typical B to C activity. For other activities such as fixed line telephony and mobile phone services B to B and B to C activities are possible.

To calculate the German CPI mainly list prices for certain services in fixed line telephony, mobile phone services and internet from a commercial data base are used. Additional information from TC companies on the relevance of certain tariffs is obtained. There are approximately 2000 price quotations from 30 companies to be observed per month. The index is divided into fixed line telephony/internet and mobile phone[9]. To establish the weighting structure of the index specific surveys at TC companies are conducted.

In the course of the general revision of the German CPI with base year 2005=100 the CPI for TC had to be revised, too. The weighting structure is a Laspeyres type construction, base year 2005. It must be noted that for TC the index will not be a Laspeyres type index in its strict sense as changes in technology and in products will require a regular adaptation of the weighting structure. This proceeding is in line with EU legislation on HICP which -given certain criteria- asks for a regular examination of the weighting structure.

In 2006 Destatis started coordinated work to revise the weighting structure for the CPI and to develop the concept of the SPPI. It was a work in two stages: First obtaining the waiting information for CPI and SPPI , in a second and later stage developing the current surveys for SPPI.

The existence of a legal obligation to reply to surveys for CPI and SPPI made the work much easier than in 2003/2004. Through international cooperation Destatis also received recent methodological

[8] E.G. services for data communication (Internet), services for the transmission of radio/TV, not specific TC services provided by TC companies.
[9] As flat rates for the common use of fixed line telephony and internet become increasingly common, it is not possible any more to provide separate results for both categories.

information from other countries. Last but not least the assistance of the German regulation authority[10] facilitated work in several ways.

In Germany the regulation authority by legislation and in contrast to other countries is not allowed to pass individual statistical data to Destatis. However, for the first stage of work Destatis got valuable technical advice from the regulator and used regulators questionnaires as a pattern to develop its own statistical questionnaires. These questionnaires mainly were simplified versions of the regulators questionnaires. But the statistical questionnaires in addition also contained the weighting information required for CPI and for SPPI. Thus in some respect they went beyond the regulators questionnaires mainly to distinguish products for the use of business consumers and for private consumers.

Here it proved very helpful that price statisticians from the CPI work were already familiar with partners in TC companies. Consultations with companies were a repeated and very time consuming process.

Statisticians could explain the purpose of the surveys and find a cooperative and individual way of data transmission. As detailed data on turnover by activities were asked the confidentiality of data was a major concern for most enterprises. But also through the good cooperation of companies with Destatis for long years this question could be solved.

Because of this cooperation and the compatibility of Destatis questionnaire with the regulators questionnaires TC companies had few arguments against providing statistical data to Destatis. No company complained the extra burden for answering two questionnaires with similar content to two institutions. Keeping data confidentiality and avoiding intransparent data exchange between both institutions was regarded as a higher good for companies than the duplication of work.

The collection and validation of data for the first stage of work lasted about 8 to 9 months.

From spring 2007 onwards works for the rebasing of the CPI for TC and other CPI (e.g. passenger air transport and passenger transport by rail) become an absolute priority and research for the SPPI in TC (and other SPPI as well) had to be postponed. The general time schedule for the revision of the German CPI was very strict as this was a coordinated effort of the Länder and the federal state and no time delay of any work was allowed. In this situation the absolute priority for the CPI work proved as a disadvantage for the development of the SPPI.

When the rebasing of the CPI was finalised the second stage of work for developing the SPPI in TC could start in October 2007. These works were undertaken by a very qualified statistician with 10 years experience in CPI for TC and a young person with special engineering formation.

As a starting point a draft questionnaire for the quarterly survey was developed. The concept was based on a unit value approach.

[10] Bundesnetzagentur, see web site : http://www.bundesnetzagentur.de/enid/2.html

In the international discussion[11] this approach was considered as advantageous compared to a model price approach with which several countries had experimented in the past[12] . The model price approach was found to complex and not flexible enough for the permanent changes in the technical evolution of TC. Thus the structure of a model price approach soon becomes outdated and the updating of the model structure is very demanding. It was also found out that price reductions in TC in the past were underestimated by the model price approach.

As a first approximation for the German questionnaire the concept of the Austrian regulator[13] to supervise price development was examined and discussed with German TC companies. It proved that certain amendments to the survey programme were necessary as the Austrian concept dated from October 2004 and the market had evolved since then. German TC companies judged the draft working programme as rather “sporty” (=ambitious) but feasible.

A modified concept from November 2007 followed a B to B concept and was applied to large TC companies in fixed line telephony/internet. As a complement for the B to C market CPI data shall be used.

In the adaptation of the B to B concept especially the 2 largest companies had to install new monitoring systems and to coordinate data deliveries within their company. Other smaller companies had less extensive reporting programmes.

The installation of a new reporting system takes a lot of time, needs much coordination and a lot of work for companies. The installation with the exception of 1 company now has come to an end. Data deliveries for 2006 and 2007 were provided during the last weeks. Because of the large burden for answering the questionnaires companies insisted that modifications of the reporting system are only made rarely and in longer time intervals.

A later and necessary extension of the reporting system referred to unit values for bundled products and for flat rates. Because over time there is a permanent change from “low standard” flat rates to flat rates with a higher technical standard a quality adjustment in price statistics is necessary. Here companies will provide additional and sensitive information on the turnover for the several products of bundled products and flat rates.

The proceeding for installing a reporting system in the mobile phone sector was similar to the proceeding in the fixed line telephony/internet sector. However for mobile phone services –with the exception for the wholesale market- it was not possible for companies to distinguish in detail between products for private consumption and for business use. So a B to A approach in the survey programme had to be adopted.

[11] See e.g. the recommendations of the Voorburg group meetings and the Eurostat Task force meeting on SPPI 16 - 19 October 2006.
[12] See e.g. the UK papers presented to the Voorburg Group meeting in 2003 and 2004.
[13] See the web site http://www.rtr.at/de/tk/TKStartseite

Data deliveries at Destatis for the mobile phone sector now are complete. If Eurostat - as described in chapter 3- needs separate B to B and B to C data estimates for mobile phone services will become necessary.

In the ongoing weeks a final validation of data for the whole TC sector will take place. The coherence of price statistical data in CPI and in the SPPI will particularly be examined.

9. Conclusions

Using the experience in developing an SPPI for TC as an example for the development of other SPPI the following main conclusions can be drawn:

- A lot of new experience was obtained by developing a B to B concept in SPPI. The recent methodological discussion within the EU to change from B to B to a B to A concept required the adaptation of the reporting systems. This change was largely facilitated by the flexibility when the methodological work is done within one unit and by the same persons responsible for CPI and SPPI.
- The good expertise of qualified staff in the market for TC (or another activity) is a very good starting point for SPPI work.
- The collision of work for rebasing the CPI with the SPPI work was felt as a major disadvantage for an integrated procedure in CPI and SPPI.

These conclusions show that the integration of work for CPI and SPPI offers specific advantages. However the work load for revising CPI and developing SPPI in common may slow down the progress of work for SPPI.