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## **SERVICE STATISTICS**

## **PROGRESS REPORT OF SWEDEN**

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# Development of Service Price Indices (TPI) in Statistics Sweden

## Introduction

Private services represent about 50 percent of GDP in Sweden. Together with governmental services, services represent 70 percent of GDP. These large amounts should be deflated with good figures. Designing price indices for that purpose is a true challenge. Since the subject is methodologically complex, it is difficult for small countries to initiate the work and allocate resources for developing price indices for services.

The Price section of Statistics Sweden compiles several price indices for services. It also develops new service price indices. The National Accounts section of Statistics Sweden has commissioned the development of new service price indices. Since January 2000, the Department of Economic Statistics at Statistics Sweden has been conducting a development project involving users, the National Accounts section, the Price section and the Services section. The target is to create producer price indices for services designed for use in the Swedish National Accounts system for calculating the production value of services at fixed prices at the product group level in concordance with the European Union's recommendations.

## The historical origins of the abbreviation

TPI is an abbreviation for Service Price Index in Swedish (TjänstePrisIndex). The term, as well as its abbreviation, probably originated from a study project with the same name in the early 1980s. The purpose of that project was to study the requirements for the creation and production of a price index for the growing service sector. This would enable a more accurate calculation of services at fixed prices for the National Accounts. The project's final report pointed out some of the obvious methodological and practical difficulties.

One of several methodological difficulties was the intractable situation in the classification of service businesses.

## Current production of TPI

### There are six indices:

- 55.1 Hotels, quarterly
- 62.10 Scheduled air transport services of passengers, monthly
- 64.2 Telecommunications, monthly
- 70.20.12 Real estate activities on a fee or contract basis, annually
- 71.10 Car Rentals, quarterly
- 72 Computer consultancy and computer service companies, quarterly

Three price indices for service industries have been collected by the Price section since the mid-1990s: Hotels, Scheduled air transport services and Real estate activities on a fee or contract basis. This production was fragmented and a review has been ongoing since 2000. Differences in existing TPI indices are primarily due to the lack of uniform rules and control instruments for the area as a whole, in Sweden and internationally.

Three of these six indices were derived from CPI production in the same area. Two indices were currently revised, one is under revision just now. The last two indices are the first results of the latest development work.

## **The development of TPI**

Thus, the first price indices for services had a CPI component. List prices were collected once every measurement period, sometimes including VAT. Their goal was not to model the PPI for goods, which in Sweden intends to measure the average price development for goods during a month. Nonetheless, the production of these first price indices for services can be considered quite an achievement. The above experience provided insight into the necessity for the new project of having a firm foundation of knowledge on how the PPI for services should be formed and what is considered valid in an international context.

The project started the review and found that the price indices for services were not included in the terms of reference of the European regulations. At that time the work on the Handbook on Price and Volume Measures in National Accounts was ongoing under the leadership of Eurostat. The first work, which the project ordered from the co-operating National Accounts section, was an inventory of the A, B and C methods then used for deflating services (at the product group level). From this inventory, the project was able to gain a clear picture of the number of product groups that awaited an improved deflator. There were over 100 product groups that were to be replaced.

The project were of course depending on know-how input from countries, which are leading the development and producing several indices. To make new contacts and learn from other colleagues was extremely important. Participation in the Voorburg Group's meeting in Madrid (September 2000) provided a new network and an overview of international work in the area. In November 2000, the project visited the Bureau of Labour Statistics, Division of Industrial Prices and Price Indexes in Washington, USA. Work methods, methodology and organisation were matters of interest. In December 2000, the project made a similar visit to the Office for National Statistics, Corporate Services Price Index section in Newport, UK. Both the US and the UK serve as models, but they work quite differently.

All experiences led to the creation of a basic work strategy that the project follows and develops. The main part of the work is the development of indices for new service industries. This is the most important objective. At the same time is the revision of existing indices to transform them to PPI for services important as well.

## **Prerequisites and definitions for statistical work in the TPI area**

Two guiding principles have been applied:

The service price index shall be a **producer price index** that describes the average price development at the producer level for service industries, where services are delivered from domestic service producers. The index figure refers to a quarter period and the price data represent **an average** per quarter.

At present, there are neither manuals nor international regulations for this area. The forthcoming PPI manual, which is under development at the UN, is expected to include services. The draft copy states that measurements should refer to **transaction prices**. The transaction price is the true price for the good/service that the buyer pays and at which the seller sells, i.e. the price after deduction of all discounts.

## **Work methods**

The project maintains co-operation with industry organisations and companies since price changes should be observed and described. Initially, a special industry competence has to be developed. These special service industry competences require much time, but both co-operation and competence are extremely essential components of our work for each service industry where a price index should be developed. Both industry studies and communication with firms and their industry organisations are very time consuming. Due to budget restrictions, we prefer to find price leaders and limit our inquiries to them during the test.

## **This year's task**

The project's task for this year is to complete all ongoing major areas with testing and make preparations for next year's production. This will be Architectural and engineering activities and related technical consultancy and Legal and Economic activities. A further major area has been added: Freight transport by road and Activities of other transport agencies. A new task is to take stock of the production systems for PPI for services in other countries.

### **The project's task for this year:**

- 60.24      Freight transport by road
- 63.40      Activities of other transport agencies
- 64.11      National post activities
- 74.11      Legal activities
- 74.12      Accounting consultancy
- 74.20      Architectural and engineering activities and related technical consultancy

From May 2002 TPI can be found on Statistics Sweden's website (<http://www.scb.se/statistik/pr0801/pr0801.asp>).

## **Plans for year 2003**

- 65.1      Monetary intermediation
- 74      Other business activities (74.4 Advertising a s o)
- 80.4      Adult and other education  
            Development of a new production system

## **International Relations**

The organisation of development work as a departmental project with the co-operation of several sections has created interest from some smaller countries, which are looking for solutions to problems of price indices for services. Since 2000 the project is participated at Voorburg Group meetings. The project is already part of an informal Nordic network (Norway, Finland, Sweden, Netherlands and France). Even though the project has grown by nearly 150 per cent, the resources are small. That's why the international co-operation is very important. The project will take place at Eurostat/OECD Joint Task Force starting in September this year and expects a lot from the co-ordination of efforts.

## **Demand for services**

Statistics Sweden participated in a pilot study co-financed by Eurostat along with Denmark, Spain and United Kingdom in 1999/2000. The survey covered the following activities:

29	Manufacturing of machinery and equipment n.e.c.
52.1	Retail sale in non-specialised stores
52.4	Other retail sale of new goods in specialised stores

The main objective of the study was to provide quantitative data on the purchase of services by enterprises broken down by type of services. The pilot study focused on purchased services in principle supplied by services sector enterprises. The classification used was the CPA. One conclusion from the pilot was that the accounts of the enterprises were not adjusted for this type of questions implying that the enterprises often had to investigate every single invoice in order to answer the questionnaire.

Statistics Sweden has then continued to collect this kind of data. The first action was a sample survey of 700 manufacturing industries concerning breakdowns of goods and services for the reference year 1999. In order to facilitate for the respondents the variables on purchased services were defined in terms of the general accounting plan. The variables on purchased goods were expressed in the combined nomenclature (CN). The reason to choose CN and not CPA was that manufacturing industries are familiar with the CN-nomenclature since this nomenclature is also used for collection of production data that afterwards are transformed to the Prodcom nomenclature. Due to huge number of different goods used as input in the surveyed industries, specific questionnaires have been designed. Since 1999 approximately one third of the manufacturing has been investigated every third year.

The developing work on how to collect data on purchased goods and services for the service sector has yet only begun. A first attempt to study the sector Hotel and restaurants has started. The approach is to select a few enterprises and study them in depth in order to see if a stable sector breakdown structure could be found and used for breakdown of total purchases of goods and services. After Hotel and restaurants the work will continue with Transports on roads and some Business service activities.

## **Non profit institutions**

A second pilot study on income, costs and investments for non-profits institutions serving households (NPISH) is currently being carried out. The survey covers all NPISH with employees. Due to a large non-response rate in the previous survey a large amount of work has been put into improve the frame and the sample and simplify the questionnaire. So far the survey has been voluntary but we hope that it will be obligatory as from reference year 2002. The survey is meant to be conducted on a yearly base.

## **Sales by services products**

Statistics Sweden is currently participating in a Eurostat project concerning methodological development and harmonised data collection on business services. For reference year 2001 the following activities are covered:

NACE 72	Computer and related activities
NACE 74.12	Accounting, book-keeping and auditing activities; tax consultancy
NACE 74.13	Market research and public opinion polling
NACE 74.14	Business and management consultancy activities

NACE 74.2 Architectural and engineering activities and related technical consultancy  
NACE 74.4 Advertising

For reference year 1999 we participated in a full scale pilot survey on computer services at the request from Eurostat in order to test the questionnaire before other countries were involved. Statistics Sweden has conducted these kind of surveys since reference year 1985. Different sectors are investigated every year and with an interval of two to five years depending how expansive the sector is. Approximately four surveys are conducted every year at the request from the National accounts.

## **Short term indicators**

Statistics Sweden plans to produce retail trade index after T+26 days as from January 2003. This is an improvement of timeliness of 19 days. This means that Statistics Sweden is going to join the European sub-sample approach with the whole sample from today's retail trade. During the last year we have also improved the coverage of quarterly data for turnover to cover almost the whole service sector. The only sectors missing are NACE 65-67, 75, 91 and 95.

There are a huge demand for different short term indicators especially for the service sector. In Sweden we hope to be able to use more administrative data to develop new indicators for services. Due to the respondent burden and the fact that the service sector consists of many small enterprises a different approach than using questionnaires must be developed. This is something we will put a great effort in doing during the next years.

## **International trade of services**

The current settlement-based system for Balance of Payment statistics on international trade in services will be replaced with a survey-based system from 2003. The central bank of Sweden "Sveriges Riksbank" has commissioned to Statistics Sweden to take over the production of statistics on imports and exports of services, compensation of employees and transfers from 2003.

The statistics on foreign transactions of services, compensation of employees and transfers will mainly be based on quarterly and annual surveys directed to enterprises, central and local governmental institutions and non profit institutions serving households. The surveys will be supplemented with model estimations for data that are not feasible to collect from the enterprises (e.g. commissions on share brokerage).

The developing work is in full progress. A pilot survey will be conducted in the nearest future with the third quarter as the reference period.

## **Statistics on the Information Society**

### **Surveys and studies carried out**

Statistics Sweden has during the last years conducted a number of surveys aiming at measuring access to and use of ICT among individuals and in enterprises. In addition to this recurrent publications which describes the ICT sector has been produced. Each of these areas are summarised below.

### **Use of ICT among Individuals**

During May/April 2002 a large scale survey aiming at measuring individuals use of computers and Internet was conducted. This survey was carried out as a part of the Eurostat initiative on carrying out harmonised surveys in this area. The sample size was 4 400 individuals were interviewed. The survey itself focused on the access to and use of computers and the Internet.

## **Survey of use of ICT and e-commerce in enterprises**

This survey has been carried out three times, 2000, 2001 and 2002. The second and third time it was co-financed by Eurostat and coordinated with 12 other member states of the European Union. The aim is to provide estimates for access to and use of ICT in enterprises and to determine the level of e-commerce among the enterprises. A cut off limit of 10 employees or more has been used and about 4000 enterprises were surveyed 2002.

## **The ICT sector**

In this study the ICT sector, which conducted on a yearly basis, is described from the two perspectives of industries and goods produced. The latter is possible to carry through due to the fact that Statistics Sweden has detailed information on goods that are produced by each Swedish enterprise.

The ICT sector is accounted for concerning e.g. production, import and export, turnover, number of employees and R&D. This study which is published as a yearly report obtains a lot of attention and is considered a “bestseller”.

## **International cooperation**

On the International scene Statistics Sweden has taken an active part in the development work conducted in cooperation between the Nordic countries, by Eurostat and OECD. The Nordic cooperation will result in a Nordic publication on the information society and guidelines for measuring use of ICT in municipalities.