



**Economic and Social  
Council**

Distr.  
GENERAL

CES/2004/26  
30 March 2004

Original: ENGLISH

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**STATISTICAL COMMISSION and ECONOMIC COMMISSION FOR EUROPE**

**CONFERENCE OF EUROPEAN STATISTICIANS**

Fifty-second plenary session  
(Paris, 8-10 June 2004)

**THE DUTCH STRATEGY FOR REALIZING PPI'S AND VOLUME MEASURES FOR  
THE SERVICE SECTOR**

Invited paper submitted by Statistics Netherlands<sup>1</sup>

**INTRODUCTION**

1. Statistics Netherlands has been improving price and volume measures for services for a number of years. This effort received a big boost from the compilation of Eurostat's Handbook on Price and Volume Measures in National Accounts, and more recently from the planned revision of the Short Term Statistics Regulation which prescribes quarterly producer price indexes (PPI's) for a whole range of services. This paper outlines the Dutch strategy to develop and produce PPI's and volume measures for services. It successively treats the backgrounds, goals, organization, work procedure, the development of volume measures, and finally specific issues regarding PPI's for services. This paper does not cover the demand for services PPI's nor for improved price and volume measures in National accounts.

2. Price and volume are often mentioned together. This usage stems from National accounts. The development between one period and another of the value of transactions is firstly recorded irrespective of price differences between the periods. This development (a) has to be split in a price development (b) and a volume development (c). The volume development corresponds to development of real economic performance. As  $a=b*c$ , only two of these have to be measured; the third can be calculated. Value developments (a) are widely available in National accounts. Consequently, a measure of either price development (b), or

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<sup>1</sup> Paper prepared by Aurél Kenessey de Kenese.

volume development (c) is needed. Next to use in National accounts, price indices have other functions.

## **GENERAL STRATEGY**

### Background

3. Statistics Netherlands has long worked on the improvement of the measurement of price and volume development. National accounts has developed a number of volume indicator methods in the 1990's that are still in use, for example, for financial intermediation services and education. Price statisticians have worked on PPI for services since 1985.

4. In line with these efforts, Statistics Netherlands contributed considerably to the origination of Eurostat's Handbook on Price and Volume Measures in National Accounts. This Handbook was completed in 2001. It sets minimum standards for price and volume measures per industry. The Handbook uses an A/B/C classification for preferred, acceptable and prohibited methods respectively. For many industries, especially in agriculture and manufacturing, the methods of National accounts have met the Handbook's standards for a long time. For many services industries, new measures are necessary. For a number of services industries, notably Business services, the Handbook effectively prescribes deflation with a PPI. For many industries, new volume measures suffice or they are the only possible improvement.

5. After the drafting of the Handbook, inclusion of a quarterly PPI for a number of services was planned for the revised Short Term Statistics (STS) Regulation of the European Union. Among other European statistical institutes, Statistics Netherlands propagated successfully that there be a connection between the need for PPI's on account of the Handbook and the PPI's included in the STS Regulation. The present draft of the revised STS Regulation includes all PPI's that are prescribed by the Handbook and contains PPI's for additional industries, mainly in the transport sector.

### Goals

6. The first goal of the strategy is to acquire complete coverage of the entire economy with adequate price and volume measures, and to produce a series of PPI's for services. This also includes notoriously difficult areas, for instance, government and financial intermediation services. For this first objective, it is sufficient to realize acceptable methods, 'B' methods in the Handbook. If a better measure, an 'A' method, is conceivable but significantly harder to reach than some acceptable measure, it is not pursued. Table 1 gives an overview of the production value according to the need for improvement of its price and volume measures.

7. The second goal of the strategy is to upgrade the measures, ideally to measures in which quality development is entirely recorded as volume development, e.g. fully quality corrected PPI's. This corresponds to 'preferred' or 'A' methods in the Handbook. Work towards this goal could be envisaged to start in a couple of years from now.

**Table 1** Production value (1999) by Section of the Classification of Product by Activity (CPA) and adequacy of price and volume measures; situation in July 2003.

CPA	Section	Covered by adequate measures	No adequate measures, in scope for improvement	Total
<i>bln euros</i>				
A/B	Products of agriculture, etcetera / fishing	19	1	20
C	Products from mining and quarrying	8	0	8
D	Manufactured products	163	5	168
E	Electrical energy, gas, steam and water	16	0	16
F	Construction work	23	33	56
G	Trade services; repair of motor vehicles	75	0	75
H	Hotel and restaurant services	14	0	14
I	Transport, storage and communication services	42	5	47
J	Financial intermediation services	22	9	31
K	Real estate, renting and business services	51	75	126
I	Public administration and defense	39	0	39
J	Education services	15	2	17
N	Health and social work services	17	16	33
O/P	Social and personal / household services	12	12	24
<b>Total</b>		<b>516</b>	<b>158</b>	<b>674</b>
		(77%)	(23%)	

### Organization

8. The internal *Working Group Prices and Volume of Services* has a central function in the work. The Group consists of representatives of the three departments that are mainly involved in the work. These departments are National accounts, Prices and Research, and Development. National accounts chairs the Group since it is the main user of new price and volume measures.

9. The Working Group reports to a Steering Committee. This Committee is made up of senior management of the departments mentioned above. The Committee makes all formal decisions.

10. Around the time of the compilation of the Handbook, Statistics Netherlands agreed upon a funding system which included additional funding for all new statistics that have to be compiled on account of European requirements. This type of additional funding of earmarked resources is also the basis for the staffing of the improvement work for price and volume measures. The additional funding was first based on the Handbook only and later also on the STS Regulation.

### Work procedure

11. The Group coordinates and plans the work in such a way that the dates for obligatory implementation of accepted methods in the National accounts are met. This planning can be a laborious task as there are numerous industries with different deadlines and different

approaches. In addition to the Handbook's requirements, those of the STS Regulation are also included in the scope of the Group, although the STS Regulation is, strictly speaking, not of direct interest to National accounts. The construction industry is also included in the scope of the Group, but the priority has until now been given to services industries.

12. The Group chooses one of three standard approaches for each industry for which the price and volume measures need improvement.

- The first approach is simplest. It is taken if a quick or easy win is reachable. In this case, the work is limited to National accounts experts.
- The second approach is the development of a PPI. This approach is taken only when a PPI is prescribed by the STS Regulation, often in conjunction with, effectively, a prescription from the Handbook.
- The third approach is the development of a volume measure. For a number of services, there is no PPI needed, neither for the STS Regulation nor for the Handbook. For these industries, the strategy aims at developing a volume method<sup>2</sup>. The main reason for this preference for volume methods is that volume measures are cheaper than a PPI in respondent burden and in human resources needed for periodical calculation. Consequently, the development of a volume measure is the default approach.

Next to its coordination function, the group discusses results and gives guidance on future steps. It also advises the Steering Committee on implementation in the National accounts.

## **VOLUME MEASURES FOR SERVICES**

13. There are many types of sources for volume measures. The development of volume measures is comparatively easy if quantity information is available from existent statistics of Statistics Netherlands itself. For a number of financial services for instance, adequate volume measures have been developed solely based on internally available figures.

14. The development of new volume measures is more complex if external sources have to be sought. The existence of available sources has to be examined and after that the willingness of the institutes that 'own' the source can prove a delay and complication of the development. Extra practical problems can exist in timeliness and continuity of the sources and a mismatch between Statistics Netherlands' definitions of variables and those in the source data. An aid in these cases, however, is a new legal obligation for owners of registrations that are entirely or partly funded by the government to give Statistics Netherlands free access to these registrations.

15. The R&D department is responsible for the development of volume measures. This work ends when a system for periodical calculation is fully developed and operational. First results of a new method are provided to help decide on the acceptance of a new method. Next to estimation on the feasibility of the figures, the figures are compared to earlier National accounts figures.

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<sup>2</sup> For some industries, an approach from the price side is not even conceivable, like life insurance.

16. After acceptance, National accounts takes over the system and performs the routine calculations. Better methods can be introduced directly into the National accounts, as a change in the method does not cause a discontinuity in National accounts figures; it only marks an improvement. In other words, there is no need to postpone the introduction to a special occasion like a revision of National accounts.

17. The effects of the introduction of new volume indicators on labour productivity, among other things, for industries of political interest like education and health have not been unnoticed by external parties.

## **SERVICES PPI'S**

### Introduction

18. As mentioned, the general strategy aims at reaching at least acceptable measures. This strategy encompasses the approach to PPI's for services. The first goal is achieving coverage of all 20 industries in scope. A PPI free of quality development for a specific industry is only developed if it does not require much more effort than a simpler but acceptable PPI, a 'B' method. Once the coverage of the 20 industries has been achieved, the next goal will be the improvement of all services PPI's to meet the highest standards, 'A' methods.

The 20 industries in scope are listed in Table 2. In the process of developing PPI's some of these industries are further split up, for example, legal services are split into a separate PPI for services of lawyers and one for services of civil law notaries.

### Key aspects and challenges

19. The goal is the development of true Producer Price Indexes. In accordance with the concepts underlying PPI's, all production is in scope. Imports are excluded, but exports are included as are services sold to consumers, although the focus lies on industries of which the services are sold mainly to other businesses.

20. A difficulty in developing services PPI's lies in the need to get a grasp on the nature of the economic value of a service - often a comparatively abstract notion. Furthermore, as it is necessary to delve into the detail of individual transactions, knowledge of industry is necessary. As this knowledge is not yet available within Statistics Netherlands, services PPI's are set up in close contact with the industry.

21. The main challenge lies in finding the optimal type of price information to be surveyed, not in the subsequent compilation of the PPI (index or aggregation formula). Therefore, conventional formulae are used<sup>3</sup>.

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<sup>3</sup> For example, the Eurostat/OECD Task Force Services Prices suggests Laspeyres' formula.

**Table 2** Necessity of PPI's for the Handbook on Price and Volume Measures in National Accounts and the revised Short Term Statistics Regulation by group or class of the Classification of Product by Activity (CPA).

CPA groups and classes		PPI needed for Handbook	PPI needed for STS
60.24	Freight transport by road		x
61.1	Sea and coastal water transport		x
62.1	Scheduled air transport		x
63.11	Cargo handling		x
63.12	Storage and warehousing		x
64.11	National post activities	x	x
64.12	Courier activities	x	x
64.2	Telecommunications	x	x
71.1	Car renting		
72	Computer services	x	x
74.11	Legal activities	x	x
74.12	Accounting, etcetera; tax consultancy	x	
74.13	Market research and public opinion polling	x	
74.14	Business and management consultancy activities	x	
74.2	Architectural and engineering activities	x	x
74.3	Technical testing and analysis	x	
74.4	Advertising	x	x
74.5	Labour recruitment and provision of personnel	x	x
74.6	Investigation and security activities	x	x
74.7	Industrial cleaning	x	x

22. PPI's are developed for services and not for industries. There can be a mismatch between (international) classifications and the demarcation of markets in practice<sup>4</sup>.

23. It has been proven invaluable to study foreign experiences before the development of the PPI of a specific industry takes shape. The Voorburg Group is an effective forum for the disclosure of practices around the world. Additionally, information from other NSI's on the organization of their services PPI team has been an inspiration for the design of the Dutch team.

#### Standardised development framework

24. The new PPI for each selected industry is set up in a standardised development framework. The framework is used for all industries, except those with a deviant structure like post, telecommunication and air transport. The work contains the following steps:

- preliminary desk research includes studying business statistics, e.g. turnover information, treatment in National accounts, and foreign experiences;
- visits to industry or professionals' organizations can offer a head start in contacting the firms and creating goodwill;

<sup>4</sup> For instance, architectural and engineering services are treated as one intertwined industry in classifications and turnover surveys, but the respective price fixing methods and possibilities for price measurement are very different.

- between 10 and 20 firms per industry are contacted for an interview. Although it is not possible to have a fully representative sample, firms from different regions, sizes and any known sub-markets are contacted. The central questions during the interviews are:
  - What products do you market?
  - How are prices fixed?
  - What relevant price information can Statistics Netherlands measure quarterly?  
(Statistics Netherlands suggests a number of survey methods);
- this limited group of firms is requested to try out all survey methods that have the potential to become the standard. This pilot survey lasts two quarters;
- the results are evaluated and discussed in the Working Group. The most important aspect is the choice for the type of price information to be surveyed;
- a panel for regular surveying is recruited according to a sample design;
- quarterly price collection starts;
- results are published as 'experimental PPI'.

25. Currently, PPI's for four industries are in routine production. Work at different stages is underway for another ten industries, of which three are scheduled to result in publication of experimental PPI's in 2004. Development of PPI's for the remaining six industries is scheduled for the coming years.

## **CONCLUDING REMARKS**

26. With the strategy outlined in this paper, Statistics Netherlands is well on track for realizing coverage of the entire economy with adequate measures for price and volume development. Additionally, a series of quarterly PPI's has been developed. After this first stage of reaching broad coverage, further improvement is foreseen, resulting in measures that are fully corrected for quality development.