

**WORKING PAPER No 4
17 April 2002**

ENGLISH ONLY

**STATISTICAL COMMISSION and
ECONOMIC COMMISSION FOR EUROPE**

**ORGANISATION FOR ECONOMIC
CO-OPERATION AND
DEVELOPMENT (OECD)**

**CONFERENCE OF EUROPEAN
EUROPEAN STATISTICIANS**

**COMMISSION OF THE
COMMUNITIES (EUROSTAT)**

**Joint ECE/Eurostat/OECD
Meeting on National Accounts**
(Geneva, 24-26 April 2002)

**THE EUROSTAT HANDBOOK ON PRICE AND VOLUME MEASURES IN
NATIONAL ACCOUNTS**

Supporting paper submitted by Eurostat*

1. INTRODUCTION

Economic and monetary policy of the European Union (EU) is becoming increasingly integrated, especially since the introduction of the Euro. This requires higher and higher standards of national accounts data as a solid foundation for the formulation and monitoring of economic policy. Key players such as the Council, the European Commission and the European Central Bank need in particular high quality and comparable data on price developments and economic growth. Within the EU, national accounts data are also increasingly important for more administrative purposes such as the determination of countries' contributions to the EU budget, assessment of economic convergence, regional funds, etc.

* Prepared by Mr. Paul Konijn, Eurostat.

This broad international use of national accounts data has led to an extensive set of international definitions and guidelines, necessary to ensure the reliability and comparability of data. These definitions and guidelines are contained in the System of National Accounts 1993 (SNA93) for worldwide application and the European System of Accounts 1995 (ESA95), which is the EU version. Besides that, a lot of more practical work has been done on the harmonisation of GNP data for the purpose of the Member States' EU budget contributions.

Most of the harmonisation work of national accounts so far has focussed however on current price data, such as the level of GNP. SNA93 and ESA95 each contain one relatively short chapter on price and volume measures, while in fact the volume growth of GDP is one of the most utilised figures of the national accounts. In the area of price statistics, the work on harmonising the Consumer Price Indices within the EU, resulting in the 'Harmonised Index of Consumer Prices', has been proceeding for a number of years.

Renewed demand for more harmonised national accounts price and volume data came when the European Council in July 1997, agreed on the so-called "Stability and Growth Pact". In this political instrument for ensuring the stability of the Euro, the Member States commit themselves to keep their government deficits below 3% of GDP. Only in cases of severe recessions, countries may have a higher deficit. A severe recession is defined by the Pact as "an annual fall in real GDP of at least 2%". "Real GDP" must be understood here as the growth of the volume of GDP, not the purchasing power of GDP. This was the first time that growth data were used for administrative purposes, and this stimulated the work that has now led to this handbook.

The handbook came about following a program that started in 1997. A Task Force "Volume Measures" showed at that time that the comparability of price and volume data in the EU could be improved. It discussed the issues of the choice of index formula and base year and the adjustments for quality changes. In both cases, it concluded that differences in choices made by different countries could lead to significant differences in growth rates.

The Task Force also noted that the ever increasing importance of the service sector in the economy, for which price and volume measures are underdeveloped, can seriously hamper the reliability and comparability of GDP growth rates. This is evidenced for example by the difficulties in measuring the impact of the "new economy", due to differences in the estimation methods for the growth of investment in computers and software.

It was concluded that the existing guidance given by the SNA93 and ESA95 was not sufficient to guarantee harmonised price and volume data. Therefore Eurostat initiated a work program to provide further guidance. The first step was a Commission Decision, based on the work done by the Task Force, that defined the framework for the further work on price and volume measures.

Commission Decision 98/715¹ specified three main principles that price and volume measurement should follow. Furthermore, it introduced the A/B/C classification for methods,

¹ Official Journal of the European Communities, 16 December 1998, L 340, p. 33

defining - broadly speaking - which are good (A), which are acceptable (B) and which are unacceptable (C) methods. The Decision specifies A, B and C methods for a number of products, but not for all.

Those products for which no classification could be given were referred to a research program that was to be concluded by the end of 2000. The research program consisted of in total 10 Task Forces, consisting of participants from those Member States known to have particular expertise in that area plus Eurostat and the OECD, on the following topics:

Health services, education services, public administration, construction, large equipment, computers and software, financial intermediation services, real estate, renting and other business services, post and telecommunication services.

Information on best practices outside the EU was also used extensively. Each Task Force produced a report, including recommendations on A, B and C methods, that was presented to the National Accounts Working Party (NAWP)². Besides those Task Forces, various topics were discussed at the NAWP, such as changes in inventories and exports and imports.

The Handbook on Price and Volume Measures in National Accounts, now published by Eurostat, is the culmination of the research program that was established by the Commission Decision. It integrates the Commission Decision with the conclusions and recommendations of the Task Forces, and extends on them by discussing those issues that were not the topic of a Task Force or NAWP discussion. It formulates A, B and C methods for all relevant transaction categories of ESA95 and for all products of CPA.

It is the aim of the handbook to provide a unified framework for price and volume measures,

- which is consistent with SNA93, ESA95 and the Commission Decision;
- which is both theoretically sound and practically useful for improving existing methods, incorporating best practice from within the EU and from other experienced countries; and
- which gives detailed guidelines by product.

The handbook is of course not the final word on price and volume measures in national accounts; it does not pretend to have all the answers to the difficulties that national accountants are confronted with. Work on implementing, reviewing and improving the methods described here will have to continue.

2. CONTENTS OF THE HANDBOOK

The handbook is structured following a "top-down" approach:

² The Task Force reports are available on <http://forum.europa.eu.int/Public/irc/dsis/pnb/library> (go to "National accounts", then "Task Forces").

- Chapter 2 discusses the issues that concern all transaction categories and all products, e.g. the fact that quality changes should be taken into account.
- Chapter 3 discusses the issues that concern specific transaction categories, e.g. the valuation of output, intermediate consumption, final consumption, etc.
- Chapter 4 goes into still more detail by focussing on those issues that concern price and volume measurement of the output of specific products.

These chapters concentrate on estimate for the annual national accounts. Finally, chapter 5 describes the application of the recommendations of the earlier chapters to the quarterly accounts.

The handbook does not repeat the SNA93, ESA95 or the Commission Decision, but attempts to integrate those texts. At various points, the reader is referred to those texts for more discussion. At the same time, the handbook is much more detailed, in particular in the recommendations on individual products.

It is however not very detailed on specific practical issues related for example to price index compilation. Two other manuals are currently being prepared that will deal with such issues in great detail. One handbook is the manual on Producer Price Indices prepared by the IMF, the other is the manual on Consumer Price Indices prepared by the ILO.

Another handbook that is currently being drafted under the auspices of Eurostat is the Input-Output Handbook. That handbook will contain a chapter on supply and use tables at constant prices, a topic that is also of great relevance for this handbook. Both handbooks are consistent and complementary: the focus of the Input-Output Handbook being on the specific input-output aspects, the focus of this handbook being on aspects relating to the price/volume decomposition.

3. SOME KEY POINTS OF THE HANDBOOK

This is a summary of some of the main recommendations of the Handbook:

- The use of an integrated approach to price and volume measures in national accounts is important. In particular, the compilation of supply and use tables at constant prices is recommended.
- Price and volume measures should be compiled at a level of detail that is as low as possible.
- Laspeyres volume and Paasche price indices are recommended, in conjunction with using the previous year as base year (ie. a system of chain indices).
- It is important to account for changes in quality of products.

- So-called "input methods" to deflate output of any product should be abandoned. An exception is made for collective services such as public administration and defence.
- For value added, the double deflation method is superior to single deflation.
- For exports and imports, genuine price indices are superior to unit value indices.
- For computers, co-ordinated work on hedonic methods should be pursued.
- For market services, output price indices need to be developed. For individual non-market services such as health and education output indicator methods have to be developed.

4. WHERE TO FIND THE HANDBOOK

The Handbook on Price and Volume Measures can be downloaded free-of-charge as PDF-file from Eurostat's website (<http://europa.eu.int/comm/eurostat>). Choose theme "Economy and Finance" and then collection "Methods and Nomenclatures".

5. IMPLEMENTATION OF THE HANDBOOK

To implement the Handbook, a draft Commission Regulation has been prepared. This Regulation complements the 1998 Decision in defining the A, B and C methods for those products for which this was not yet defined.

The draft Regulation also specifies a timetable of implementation, ranging from 2004 to 2006. The Regulation is planned to be adopted before summer 2002.
