A report on current and planned ONS work on Constant Price Input-Output Supply-Use Balances:

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Introduction

In July 1999 we published an article in Economic Trends reviewing work on the production of Constant Price Input-Output (KPIO) tables. The article began by giving some background on the benefits of KPIO tables and discussing their development in the UK and plans for integrating them into the process of balancing the National Accounts. It ended by describing how experimental tables for 1996 in 1995 prices had identified inconsistencies in the accounts, and discussing plans for resolving them.

The aim of the present article is to report on progress on implementing the plans in the 1999 article and how those plans have changed since July 1999. The inconsistency in growth measures for manufacturing, the key discrepancy highlighted in the article, has been extensively covered in the Short-Term Indicators Review. The review and a report on progress in implementing its recommendations are available on the National Statistics Website and will not be covered further here. The rest of this article will deal with work on KPIO tables.

Problems encountered in using KPIO tables in the UK

The 1999 article said that “The process of producing input-output supply-use tables at constant prices can be split into four main stages:

(1) production of current price input-output supply-use balances;
(2) deflation;
(3) balancing;
(4) feedback loop to current price input-output.

The article also said that existing constant price estimates “ensure consistency in estimates of constant price GDP measured by the expenditure and output approaches...” but “...do not ensure that constant price estimates of lower level national accounts aggregates, and their associated deflators, implied or otherwise, are consistent.” In other words, ONS already had well established, if inconsistent, systems for stage (2), of the process of producing KPIO accounts.

Paradoxically this has been the most important barrier to the plans in the 1999 article. While deflators are available for each component of the National Accounts: Household Final Consumption, Capital Formation, Output, etc, these are classified using the product or industry classification appropriate to that component not the product classification of the input-output table. If current price supply-use balances are deflated using separately compiled product deflators, as they were for the 1999 article, it is impossible to draw clear conclusions as to why the results differ from previously published figures. It is therefore very difficult to say whether or not the new, balanced estimates represent an improvement.

Some statistics offices cope with this difficulty by publishing constant price supply use tables and short-term indicators separately and leaving users to reconcile the two or choose the one most appropriate to their needs. The ONS however has a strong preference for producing a single message and the resulting impasse stalled the KPIO project from mid 1999 until its relaunch in September 2001.
The relaunched KPIO project

The new approach is to use deflators that are transparently linked to those used in the existing National Accounts, in effect to break down each item of constant price data in each component of the existing system into the input output classification. Where constant price estimates are balanced at the whole economy level the supply-use gaps will net to zero. The gaps for individual commodities however may be large and, assuming that the allocation into input-output categories has been properly made, will pinpoint the commodities where inconsistent deflation methods have been adopted.

The method is similar to that adopted in the commodity flow model but differs in the following respects:

- We are working at a more detailed level and so with more realistic assumptions;
- The new systems are automated, menu driven, and password protected;
- The new systems are transparent and fully documented;
- The new systems allow users to change the base year quickly and easily;
- Formal processes have been developed to seek advice from the existing data producers on how to break down their constant price estimates into input output categories and to quality assure the resulting systems.

This work will be completed by May 2002.

Future Plans

As well as the traditional quarterly analysis of supply demand gaps we intend to use the system to examine the coherence of the implied deflators for each product in different components of the accounts and the possible effects of using double deflation. Wherever possible analyses will be carried out with both chain-linked and base weighted data.

Once the results have been evaluated, the ONS will examine ways to allow the traditional National Accounts systems to take on adjustments suggested by the model. (Present systems are able to take on adjustments for only a limited range of commodities at once). At this stage we will also consider a publication strategy.

References