

Capital Stock Conference
March 1997
Agenda Item III

CONFERENCE ON CAPITAL STOCK- CANBERRA 1997
Review of Country Practices- UK Contribution

UK, OFFICE FOR NATIONAL STATISTICS

1. Basis of valuation of Capital Stock

Estimates are on a replacement cost basis. Both current and constant price series are produced.

2. Asset types for which estimates are derived

At present the asset types covered are:

New Construction works excluding dwellings

New Dwellings

Improvements to dwellings

Plant and machinery

Road vehicles

Railway rolling stock

Ships

Aircraft

Transfer costs

Land is not a reproducible asset, and is therefore excluded.

3. Types of volume indices used

Fixed base price indices (eg the Producer Price Index) are used to convert historic cost data to a replacement cost.

4. Method used

P IM has been in use for estimates of most categories of capital stock since 1955. The exceptions are the forestry and sea transport industries. In the case of forestry the product of the area of plantations and the replacement cost per hectare is used; in the case of shipping a valuation is placed on the total tonnage of the UK merchant fleet.

5. Data sources for values and price indices

The sources of the data on capital expenditure are the Annual Census of Production, the Annual Census of Construction, and other similar inquiry based sources to cover service industries. The price indices used are also inquiry based.

6. Price indices used

Price indices relate to the assets themselves, and are on a fixed base year basis. They are used to convert historic cost data to replacement cost.

7. Determination of asset lives

Data on asset lives are derived from a variety of sources; Inland Revenue depreciation allowances plus one seventh were used originally as a basis for manufacturing industry.

Asset lives are not variable, but over the years a number of revisions to asset lives have been made based on information from industry, and research undertaken by consultants.

8. Depreciation

Net capital stock is calculated by depreciating assets over their expected lifetime on a straight line basis.

9. Survival function

Retirements are evenly distributed over a period from minus 20 percent to plus 20 percent of the mean expected life. Thus, where a group of assets is expected to have a service life of 25 years, retirements are spread evenly over a period from 20 to 30 years.

10. SNA 1993

The new 1993 System of National Accounts will enlarge the boundaries of capital formation. To ensure coherence, it will also be necessary to change the definition of capital stock to include certain intangible produced fixed assets. The effect will be that capital stock estimates will, as now, cover tangible fixed assets other than land, but will also cover computer software, the costs of mineral exploration, certain categories of military equipment, historic monuments, and the value of literary and artistic originals.

11. Chain linking

There are plans to adopt chain linked indices, in accordance with ESA requirements, but implementation is not expected in the near future, and the type of index to be used has not yet been determined.

12. Alternative estimates

No, balance sheets are separately calculated, and include the value of land. They cannot therefore be considered as an alternative.

13. Major weaknesses and solutions

A separate paper under item 5 of the agenda - "The use of the Perpetual Inventory Method in the UK: Practices and Problems" - describes the problems which the UK have encountered. It will be seen that the major difficulty is with estimating asset lives. In the search for a possible solution the UK has conducted research into the possibility of direct collection. We report on the results of this research in a separate paper - "An account of the UK's research into direct collection as an alternative to the perpetual inventory method."

14. Challenges

The major challenge is to solve the problem of asset values within existing resource constraints and priorities, and with due concern for the burden imposed on industry, whether within PIM, or by adopting a completely new approach.

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UK, OFFICE FOR NATIONAL STATISTICS