

A SUMMARY SURVEY OF NATIONAL WEALTH ESTIMATES

INTRODUCTION BY THE EDITORS

THE problems involved in the measurement of national wealth constituted the principal subject of discussion at the fifth meeting of the International Association for Research in Income and Wealth, held in August 1957 near Arnhem, in the Netherlands. The Council of the Association thought it useful to include in the present volume, as well as a selection of the papers presented at the Conference, a general review of the statistical material relating to national wealth. It accordingly invited Mr. Th. van der Weide of the Netherlands Central Bureau of Statistics to make a statistical survey of the available data. The present introduction, which is based on the survey by Mr. van der Weide, includes not only the main statistics from the Conference papers, but also recent estimates drawn from a number of other sources. It does not claim to be a complete summary of existing national wealth estimates, but it covers all the recent estimates which could conveniently be assembled. The sources used are listed on p. 33.

The Council is grateful to the authors of the estimates, some of whom have taken a considerable amount of trouble to supplement the data presented in their own papers so that wherever possible the estimates could be presented in comparable classifications.

Inter-country comparisons of economic structure derived from the estimates of national wealth, and from the relationships between capital assets and current output, necessarily present many problems. Even when the theoretical concepts and categories, and the methods of estimation, appear to be identical, the resulting estimates may still fail to yield precisely comparable results between one country and another. Differences in valuation methods, in relative prices, and in the nature of the basic statistics used can be responsible for wide differences in the resulting estimates – probably even wider differences than those involved in national income estimates. Nevertheless, a limited number of broad conclusions can probably be drawn.

The present review expresses no preferences between the

various concepts and methods employed. But it may constitute a guide to the use of the statistics in comparative analysis and to their future development.

The present chapter includes figures for eighteen countries:

Europe	Belgium
	France
	Germany (West)
	Luxembourg
	Netherlands
	Norway
	Sweden
	United Kingdom
	Yugoslavia
North America	Canada
	Mexico
	U.S.A.
South America	Argentina
	Colombia
Oceania	Australia
Africa	Union of South Africa
Asia	India
	Japan

Concepts and coverage

The purposes for which national wealth estimates are compiled are discussed in several of the papers in the present volume. Some authors use estimates of national wealth at different periods of time as indicators of economic growth; others are primarily interested in analysis of the composition of national wealth as a contribution to knowledge of the structure of the economy. The papers show that considerable attention is paid to the analysis of capital-output ratios, which, in spite of great difficulties of interpretation, may be valuable measures for comparison of economic structures both over time and between countries.

Broadly speaking, the purposes for which the estimates might be used are too broad to impose particular concepts or definitions on the measurement of national wealth. It is, however, generally recognized that the framework of national wealth

estimates should be consistent with the framework used for the accounts of national income, expenditure, and output.

The components of national wealth can be classified either by the sector of the owner (or user) or by the type of asset. Most of the estimates permit classification on the following lines, which is used in the summary tables in the present chapter:

Domestic tangible wealth

A. Enterprises:

I. Reproducible assets —

1. Structures (separating dwellings ¹)
2. Equipment
3. Inventories

II. Non-reproducible assets (land)

B. Government:

I. Reproducible assets —

1. Structures (separating dwellings ¹)
2. Equipment
3. Inventories

II. Non-reproducible assets (land)

C. Households (consumers' durables ¹)

D. Foreign assets (net)

'Intangibles' (except for financial claims on other countries) are not included in the tables as not forming part of national wealth, a point of view also taken by most of other estimators. The question of the analysis of financial claims and liabilities within the economy is, however, touched upon in several papers, and is discussed in detail in Paper 3 (by Bjerve and Selsjord) and in Paper 5 (by the Netherlands Central Bureau of Statistics).

Sub-soil resources are also excluded — primarily because of lack of data — but the desirability of including them is stressed in Paper 8 (by Scott). *Standing timber* is also excluded so far as possible in the summary tables in the chapter, again because of absence of information for most countries, although some authors include it in their own estimates. Hence the item 'non-reproducible' assets is in effect confined to land.²

¹ In accordance with international convention, privately owned dwellings are classed under the Enterprises sector.

² In principle, land includes an element of 'reproducible' or improvement value, but none of the papers have in fact attempted to separate it.

Although expenditure on *consumers' durable goods* (other than the purchase of dwellings) is conventionally treated as consumers' current expenditure in the national accounts of most countries, an attempt has been made by most authors to provide estimates of the value of the stock of consumers' durable goods, and these are shown in the tables.

Military goods are excluded in all cases from the aggregate of national wealth.

Methods of estimation

The main problems arise in the estimation of the value of fixed assets (structures and equipment). There are two basic methods of estimating the stock of fixed assets. The first is the 'perpetual inventory method', consisting of the cumulation of statistics of gross capital expenditure over time, making allowance for the depreciation or disappearance of old assets and for changes in prices. The second is a direct estimate of the stock of assets in use at a given time, derived from official censuses, the balance sheets of enterprises, fire-insurance valuations, etc. The choice of method necessarily depends largely on the extent and nature of the basic statistics available to the estimator. Both methods are extensively used for the set of estimates now under review.

In Table V the methods used for various types of assets in the different countries are classified. Most estimators are obliged to use a variety of methods for the various components of national wealth. The estimates for Argentina, Colombia, Australia, Canada, South Africa, the United States, and the United Kingdom are all based principally on the perpetual inventory method. It is also used for certain components of the estimates for Western Germany, France, and Mexico.

The perpetual inventory method requires: (a) estimates of capital expenditure over long periods in the past; (b) some basis for estimating the length of life of capital goods; and (c) price series for capital goods. At each point more or less hazardous estimates are involved. One major difficulty is that of obtaining realistic figures for the length of life of the different types of capital assets; accounting and fiscal conventions are often used but may introduce substantial and biased errors. This is a matter on which further empirical research is certainly required. Price indices for capital goods extending over long periods are,

of course, notoriously dubious because of the difficulties of allowing for changes in quality and, indeed, of defining what is meant by 'quality'.

The nature of the alternative methods of estimation vary considerably. The most common are: (a) *insurance valuations* (used, but for certain classes of assets only, for Belgium, Luxembourg, Norway, Sweden, India, and United Kingdom); (b) *censuses of assets*, usually in quantitative terms, to which prices are attached (used as the principal source of information by Yugoslavia and to some extent by almost all countries, especially for dwellings and land); (c) *balance sheets of enterprises*, which normally need adjustment to current replacement cost (again used to some extent by almost all countries). Some less commonly used methods, listed in Table V, are based on the capitalization of income and on tax statistics.

The differences that can arise from different methods of estimation are illustrated in the United Kingdom. The only comprehensive estimate for the United Kingdom, which is used throughout the tables in this chapter, is that made by Redfern, based wholly on the perpetual inventory method. But an alternative estimate, based on fire-insurance valuations, has been made by Barna for manufacturing industry only. The very wide difference between the results of the two methods is discussed by Barna in Paper 2 of the present volume.

Several of the statistical methods involve the estimation of depreciation rates. In addition to the major difficulties of estimating the useful lives of assets, referred to above, the choice arises between the various systems of depreciation. In most cases, straight-line depreciation is used. The declining-balance method, however, is used for South Africa and for certain assets in the United States. Both methods are applied in the calculations for Australia and the results compared (see p. 354).

The composition of national wealth

The estimates of national wealth in each country are summarized, in national currencies, in Table II, in accordance with the classification scheme set out above. A certain amount of additional detail is given where possible; thus the value of standing timber, which most countries omit, is given as a supplementary item (excluded from the total) for the countries recording it.

At the foot of Table I is given a number of alternative aggregates of 'national wealth'. Each aggregate is completed for each economy so far as the statistics are available.

In Table III the data of Table I are converted into percentages of three of the most commonly used aggregates, namely:

- Total reproducible tangible wealth of Enterprises and Government (A.I. + B.I. of classification scheme above)
- Total tangible wealth (A + B)
- Total tangible wealth plus net foreign assets (A + B + D)

One important distinction in the estimates is that between gross replacement cost (i.e. undepreciated values) of assets and their net values, and it is the net values that are given in the tables. For four countries, however, estimates have been made of both the gross and the net value, and the two sets of figures are shown in Table II.

For twelve countries information is available about the development over time of national wealth and its composition. These estimates are summarized in Table IV.

Capital-output ratios

Some authors have calculated capital-output ratios, exhibiting both average and marginal relationships. These are summarized in Table VII. In Table VI the development of average capital-output ratios over time is displayed for a number of countries. The relationship used in these tables, wherever possible, is that between *net* capital and *net* national product, but in certain cases the gross national product has necessarily been used as a measure of output. Consumers' durables have been excluded from both numerator and denominator.

The difficulties of interpreting these ratios within a single country are stressed by several authors; the drawing of conclusions from comparisons between different countries presents even greater obstacles.