

Australia to-day, 18 Oct 1957. In presenting statistics to the general public statisticians often use maps, graphs and diagrams.

CHAPTER 9

STATISTICS

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THE STATISTICS reading list below aims to put non-specialists in touch with a selection of the basic sources of Australian statistics and to enable them to extend their statistical horizons beyond those basic sources should they wish to do so. We envisage a reader who has worked on the topic reading lists presented elsewhere in the volume and whose interest has been so kindled that he or she decides to follow up an aspect of the topic in a strictly statistical way. For example, the reader may have perused the books suggested in chapter 10, 'Physical geography', and wish to locate some of the hard statistical facts relevant to Australia's rainfall.

Attention must be drawn first of all to *Australians: historical statistics* which forms part of this series *Australians: a historical library*. This volume presents statistical data related to Australian economic and social life, with the addition of quite detailed statistical information about Australian financial matters. These data are largely based on the work of the ABS, but they also rely on other sources, some of which are cited in this essay and bibliography.

There are two types of statistics: 'historical statistics' and 'current statistics'. The distinction is a trifle hazy but useful nevertheless. A body of current statistics is added to year by year or quarter by quarter, or more frequently if desired or appropriate, and therefore represents a continuing statistical collection. A body of historical statistics, on the other hand, is not regularly augmented; it belongs to the past and there is no question of its ever being 'brought up to date'. Thus the distinction between current and historical statistics does not turn on the degree of 'historical content'. A set of current statistics extending back 110 years, as many do, may have more historical content than a set of historical statistics relating, say, to the first decade of the twentieth century. The distinction is rather between a set of statistics which is 'living' (current statistics) and one which is 'dead' (historical statistics). Examples of publications which present current statistics are those issued regularly by the ABS such as *Australian demographic statistics quarterly* and *Australian farming in brief*. Examples of publications containing historical statistics are M.S. Keating *The Australian workforce, 1910-11 to 1960-61* (Canberra, Australian National University, 1973) and R. Mendelsohn *The condition of the people: social welfare in Australia 1900-75* (Sydney, Allen & Unwin, 1979).

All the citations listed under 'General works' are devoted exclusively to historical statistics and in most cases incorporate original work of great interest and significance. Deserving of special attention is the pioneering achievement of T.A. Coghlan, government statistician of New South Wales for many years in the latter part of the last century, who produced the massive work listed

in the bibliography as a 'sideline', so to speak. Coghlan's studies have formed a springboard for much subsequent work in Australian historical statistics, notably that of Butlin (1962, 1964, 1971) and Roland Wilson (1931).

The references listed among the guides to statistical collections include Finlayson (1970) and the two detailed catalogues produced by the ABS. These give access to an enormous range of Australian statistical data, both historical and current. Most of the statistics produced by the ABS are in the economic and social fields and the two ABS catalogues have special relevance, therefore, for the topics that appear in sections X and XI of this volume.

The *Catalogue of publications*, an annotated listing of all the statistical publications emanating from the ABS, appears in an annual edition and is divided into two parts. The first is a numerical list of all currently available ABS publications based on a five-digit numbering system. Details of this system are set out, with examples, in every edition of the ABS *Catalogue*. The second part of the *catalogue* is a detailed alphabetical subject index designed to permit ready identification of those ABS publications in which information on a particular topic can be found. For example, the first entry in the subject index presented in the 1980 catalogue is:

Abalone, 7603.0
 exports
 interstate, 5401.6
 overseas, 5409.0, 5401.6, 5402.6

This identifies publication 7603.0 as one which provides general information on the abalone industry in Australia, and publications 5409.0, 5401.6 and 5402.6 as others which provide information of a more specific kind.

The second of the two listed ABS catalogues is the *Catalogue of 1981 census tables*. Altogether there have been eleven national censuses: in 1911, 1921, 1933, 1947, 1954, 1961, 1966, 1971, 1976, 1981 and 1986. Until the census of 1966 it was the practice to publish the statistical tables generated by the census in a set of bound volumes. In the interests of more rapid publication and because of the vast increase in the volume of data, which, thanks to the computer, can now be extracted from a census, a different practice has been followed since then. Publication in bound volumes has been discontinued; the census tables are now released progressively in four forms: on microfiche, on magnetic tape, on computer printout and in a series of small pamphlet-type publications. The ABS catalogue now under discussion relates to the 1981 census and its purpose is to provide a detailed description of the tables that have been or will be released in connection with that census. By consulting the catalogue, potential users of census information can determine whether or not their needs will be met or, indeed, have already been met by the published tables and, if so, whether or not the relevant tables will be in a form they can use.

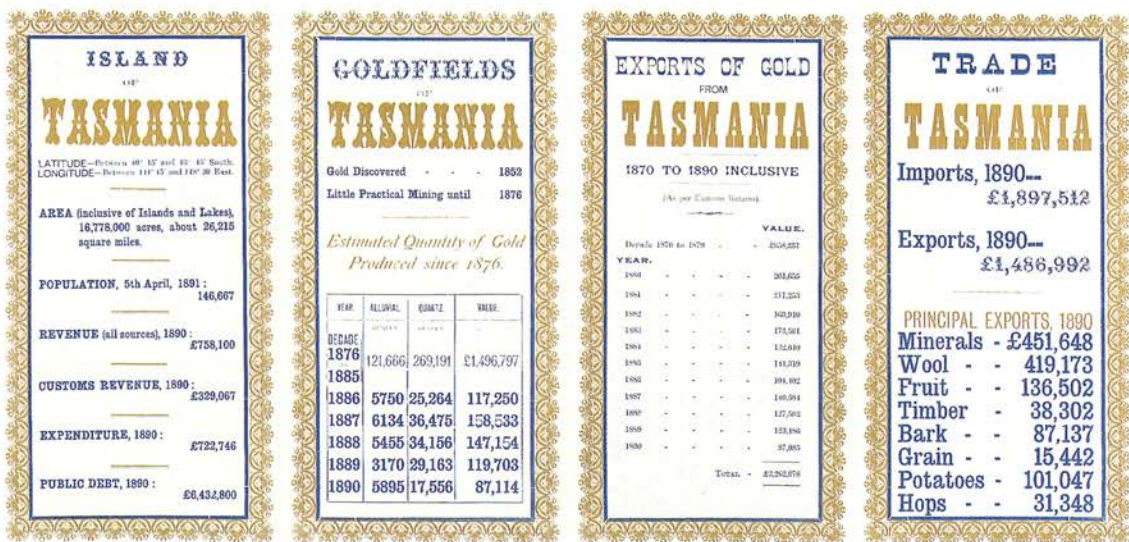
Besides the published data, the ABS collects a large array of statistical information which is not published. In response to public enquiries the co-ordination section of the ABS, Victoria, has compiled and published a *Register of unpublished data*. First issued in 1983, a second edition appeared at the end of 1984. The information is tabulated under broad categories—the data files are listed under ABS division, such as Finance and Distribution Branch, Agriculture, Transport and Construction Branch, and the name, area covered, length of series, form of storage and further data available are cited for each file. This can be a very useful source of statistical records; comparable lists for the other states are under consideration.

Other reference sources by Hagger (1983) and by G. R. Palmer (*A guide to Australian economic statistics*, 2nd edn, Melbourne, Macmillan, 1966), are broad surveys of Australian economic and social statistics, in particular those currently produced by the ABS which constitute by far the major part of the total. Palmer's book is much the more detailed and comprehensive but suffers from being out of date. By using these two books in conjunction with the two ABS catalogues discussed above, the reader can gain relatively easy access to an enormously wide range of Australian statistical material.

The references listed in the third part of this bibliography have been included for the reader who desires a wider statistical horizon and who is ready to move from a study of statistics

themselves to a study of some everyday statistical problems. By a 'statistical problem' in this context we mean one that involves putting a number on an abstract economic or social concept (for example, the general price level) with the help of appropriate statistical data. Five such problems are covered by the references given, namely the problems of measuring inflation, economic growth, the extent of overseas investment, labour productivity and national wealth. All are problems of interest and relevance to the non-specialist.

The references in the last section of the bibliography have been included by way of a reward for perseverance. They are intended for readers who have faced up to the rigours of the first three sections and who now feel, possibly with justification, that they have earned a little light relief. They will find here Arndt's highly readable piece on the legendary Coghlan, some pioneering works in the measurement of national income and private wealth which were much ahead of their time and which have great interest for the modern reader for that reason alone, and a statistical article (1959) written by the formidable nineteenth-century British economist and statistician Stanley Jevons, during a brief stay in Sydney as a young man.



Four posters printed by the Launceston newspaper the Examiner, which until 1900 appeared as the Examiner and Commercial and Agricultural Advertiser. Readers were kept up to date with developments in the goldfields, the value of exports and the balance of trade figures and given useful background statistics on population and area.

QUEEN VICTORIA MUSEUM AND ART GALLERY, LAUNCESTON

GENERAL WORKS

BAILEY, J.D. 'Australian overseas liquidity, 1870-80', *Economic record* 30, November 1954, 232-44.

Provides estimates of Australia's liquid assets and the crises in overseas liquidity in that decade.

BUTLIN, N.G. *Australian domestic product, investment and foreign borrowing, 1861-1938/39*. CUP, 1962. 475 p.

A statistical account of the process of economic growth in Australia.

BUTLIN, N.G. *Investment in Australian economic development, 1861-1900*. CUP, 1964. 477 p, illus, maps.

A narrative account of Australia's growth which focuses on the role of investment and contains numerous original statistical estimates.

BUTLIN, S.J. *et al*, *Australian banking and monetary statistics, 1817-1945*. Sydney, Reserve Bank of Australia, 1971. 562 p. (Reserve Bank of Australia. Occasional paper, 4A.)

Brings together all known statistical data relating to Australian banking. For continuation, see R.C. White (1973).

CLARK, C.G. AND CRAWFORD, J.G. *The national income of Australia*. A & R, 1938. 120 p.

Building on Sutcliffe's work (see below), the authors compiled a continuous series of estimates for the years from Federation to the outbreak of World War II.

COGHLAN, T.A. *A statistical account of the seven colonies of Australasia, 1890-1904*. Sydney, Government Printer, 1890-1904. 11 vols.

In effect a 'yearbook'; presenting information about the economic life of the six Australian colonies and New Zealand. The volumes for 1902-03 and 1903-04 are entitled *A statistical account of Australia and New Zealand*.

COGHLAN, T.A. *The wealth and progress of New South Wales*. Sydney, Government Printer, 1886/87-1900/01. 13 vols. Similar to preceding work but confined to NSW. The later issues contain estimates of the national income and private wealth of NSW on which subsequent work in historical statistics has been built.

HALL, A.R. *The London capital market and Australia, 1870-1914*. Canberra, Australian National University, 1963. 221 p.

Analyses British investment in Australia and presents some useful statistical information in support of the argument.

KNIBBS, G.H. *The private wealth of Australia and its growth as ascertained by various methods, together with a report of the war census of 1915*. Melbourne, McCarron, Bird, 1918. 196 p. Full account of the war census of 30 June 1915 and estimates of national wealth and national income for the census year. Includes earlier estimates and comparisons with USA, UK, France and Germany and describes the three main methods of estimating national wealth: by means of a wealth census, by the use of probate returns and by the inventory method based on miscellaneous statistical and other records.

VAMPLEW, W. *et al*, *South Australian historical statistics*. Sydney, History Project Inc, 1984. 351 p. (Historical statistics monograph, 3.)

Contains tables of economic and social statistics covering SA from its foundation in 1836 to 1981.

WHITE, R.C. *Australian banking and monetary statistics, 1945-1970*. Sydney, Reserve Bank of Australia, 1973. 681 p. (Reserve Bank of Australia. Occasional paper, 4B.) Brings together all known statistical data relating to Australian banking. For earlier data see Butlin *et al* (1971).

WILSON, R. *Capital imports and the terms of trade examined in*

the light of sixty years of Australian borrowings. MUP, 1931. 111 p.

Develops estimates of the net import of foreign capital into Australia for each of the years 1871 to 1930 and uses them to investigate the effects of capital imports on the borrowing country's terms of trade.

YEAR BOOK *Australia*. Canberra, ABS, 1908-

Details of this official yearbook of the commonwealth and its more detailed companion volumes for the states are discussed in chapter 7.

GUIDES TO STATISTICAL COLLECTIONS

AUSTRALIAN BUREAU OF STATISTICS. *Catalogue of 1981 census tables*. Canberra, ABS, 1981. (ABS Cat no 2139.0.) Detailed description of the tables that will be produced from the 1981 census.

AUSTRALIAN BUREAU OF STATISTICS. *Catalogue of publications*. Canberra, ABS, 1967- . 167 p.

A complete annotated list of ABS publications with a title index and a detailed subject index.

FINLAYSON, J.A.S. *Historical statistics of Australia: a select list of official sources*. Canberra, Dept of Economic History, Research School of Social Sciences, Australian National University, 1970. ix, 55 p.

A listing of Australian serial statistical publications, both continuing and discontinued, with starting point on or about the date of self-government of the various colonies.

HAGGER, A.J. *A guide to Australian economic and social statistics*. Sydney, Pergamon, 1983. 116 p.

Provides a brief account of certain statistics (official and other) now available in Australia, with information about access.

MILLER, A.E. ed, *Checklist of nineteenth-century Australian colonial statistical sources: censuses, blue books and statistical registers*. Sydney, History Project Inc, 1983. viii, 69 p.

Lists the sources of statistical data for all colonies.

SPECIFIC STATISTICAL PROBLEMS

AUSTRALIA. Treasury. 'The meaning and measurement of economic growth', *Treasury information bulletin: Supplement* 1964. 20 p.

Focuses on problems of measuring economic growth in Australia.

AUSTRALIA. Treasury. 'Measuring inflation', *Round-up of economic statistics* 63, April 1978, 13-24.

The conceptual problems involved in the measurement of inflation.

AUSTRALIA. Treasury. 'Private overseas investment in Australia', *Treasury information bulletin: supplement*, May 1965. 27 p.

Deals with the measurement of private overseas investment.

AUSTRALIAN BUREAU OF STATISTICS. *Australian national accounts: input-output tables, 1977-78*. Canberra, ABS, 1983. 338 p. (ABS Cat no 5209.0.)

Explains the concepts used in the preparation of Australia's input-output tables and their statistical sources. Published as a series at irregular intervals.

AUSTRALIAN BUREAU OF STATISTICS. *A guide to the consumer price index*. Canberra, ABS, 1982. (ABS Cat no 6440.0.)

This brochure, first issued in 1978, explains in simple language the method used to calculate Australia's consumer price index.

CAMERON, R.J. *Australian national accounts: concepts, sources and methods*. Canberra, ABS, 1981. 207 p, illus.

Explains the concepts used in the preparation of Australia's national accounts tables.

WILSON, R. *Facts and fancies of productivity*. Melbourne, Economic Society of Australia and New Zealand, 1947. 47 p.

Similar in approach to the two papers by the Australian Treasury (see above) except that the author focuses on the problems inherent in measuring labour productivity.

WORKS OF HISTORICAL INTEREST

ARNDT, H.W. 'A pioneer of national income estimates', *Economic J* 59, 1949, 616-25.

Provides an evaluation of the statistical achievements of T.A. Coghlan in the national income field.

AUSTRALIA. Commonwealth Bureau of Census and Statistics. *Official year book of the Commonwealth of Australia containing authoritative statistics for the period 1901-1907 and corrected statistics for the period 1788 to 1900*. Melbourne, McCarron, Bird, 1908. 981 p.

This was the first Australian yearbook; it contains a brief history of official statistics in Australia on pp 1-16.

AUSTRALIA. Commonwealth Bureau of Census and Statistics. *Official year book of the Commonwealth of Australia*. No 19. Melbourne, Government Printer, 1926. 1038 p. Chapter 26 collects early estimates of Australia's private wealth beginning with an estimate for 1813 by T.A. Coghlan.

AUSTRALIA. Commonwealth Bureau of Census and Statistics. *Official year book of the Commonwealth of Australia*. No 21. Melbourne, Government Printer, 1928. 1062 p. Chapter 8, section F, contains an estimate of the private wealth of Australia as at 30 June 1925 and a commentary on earlier estimates.

JEVONS, W.S. 'Some data concerning the climate of Australia and New Zealand', *Australian almanac and country dictionary* 1859, pp 47-98.

These notes are the result of a brief sojourn in Australia of the renowned philosopher, economist and statistician. They are interesting in themselves and a contribution to applied statistics in Australia.

KNIBBS, G.H. 'Census-taking in Australia'. Commonwealth Bureau of Census and Statistics. *Census of the Commonwealth of Australia, 1911*. Vol 1. *Statisticians report*. Melbourne, McCarron, Bird, 1917, 36-56.

History of census-taking in Australia from the first regular census in NSW in 1828 to the first commonwealth census in 1911.

SUTCLIFFE, J.T. *A national dividend: an enquiry into the amount of the national dividend of Australia and the manner of its distribution*. MUP, 1926. x, 70 p.

An attempt to measure Australia's national income for several years after World War II. It established Australia as one of the pioneers in this field.



The number of passengers travelling by steamship between the states declined after World War II, when it became more difficult to maintain ships exclusively for passenger services. By 1961 the last passenger ship had been withdrawn from coastal trade. South Australian homes and gardens, 1 Dec 1938.

III

ENVIRONMENT



When the Victorian government issued commemorative stickers for the Victorian and Melbourne centenary in 1934 it chose to emphasise flora, fauna and the taming of the landscape by aeroplanes, gold diggers, farmers and graziers.

IN PRIVATE POSSESSION