

● This article has been specially written for "Review" by Mr. H. P. Brown, Reader in Economic Statistics at the Australian National University and one of the most enterprising thinkers in Australia on his subject.

Mr. Brown draws attention to some of the main shortcomings in Australian statistical information. He emphasises especially the need to concentrate more on the provision of up-to-the-minute statistics as an aid to wise decisions on business and government policy, rather than on statistics which provide merely an interesting historical record.

Mr. Brown's knowledge of the general organization of statistics in Australia is second to none. From 1941/1950 he was Director of Research in the Commonwealth Bureau of Census and Statistics. He was a member of the National Income Sub-Committee of the League of Nations Committee of Statistical Experts (1945), and he was responsible in Australia for the original planning and preparation of the official national income statistics which accompany the Commonwealth Budget. These national income statistics are now basic background data in the formation of national economic policy and are essential to all those concerned with the economic aspects of public affairs.



AUSTRALIAN STATISTICS — A PROGRAMME

By H. P. BROWN

IN the last decade or so, the range, technique and uses of statistics have been in process of transformation. Up till recently, the most frequent demand for statistics was for straight factual purposes. These demands ranged from information required to settle a bet, for parliamentary and other debating purposes and for newspaper articles to that required for encyclopaedias and general works of information. Statistics in this aspect continue to provide our basic knowledge about the community in which we live. A closely associated function is the historical use in which statistics measure the trends occurring in the community.

But statistics required in economic policy and business decisions are now recognized to be more vital, since these statistics influence the future of the community. Generally speaking, Australian statistics still lay emphasis on the factual

and historical use rather than on the policy use. This arises largely because the statistical framework was laid down at a time when the full significance of statistics as a guide to decisions was not realised. The greatest task of statistical offices all over the world in recent years has been to adapt their existing arrangements more and more towards providing an objective background suitable for those who make decisions.

Organization of Statistics in Australia.

By comparison with most other English-speaking countries, the statistical function in Australia is highly concentrated, in that statisticians have far wider responsibility for organizing all departmental statistics. On the other hand, of course, the collection of statistics as a whole in Australia is decentralised by being in the hands of seven substantially independent

State and Commonwealth offices with no legal requirement to collaborate. It may be added, however, that, under the Constitution, the Commonwealth has power over census and statistics and could, at any time, assume greater responsibility.

Statistical organization in New Zealand is largely along the lines of that of an Australian State with virtually complete centralisation, and similar centralisation occurs in Canada where the few provinces which have statistical offices are responsible for interpretation rather than for collection, and all collection is carried out centrally from Ottawa. In the U.S.A., on the other hand, statistical organization is departmentalised and is only co-ordinated to a minor extent through the control of the Budget Bureau over the issue of statistical questionnaires and the dominating publishing activities of the Department of Commerce. Statistics in the United Kingdom prior to the 1939-45 War were completely departmentalised, but during the war a Central Statistical Office was set up in the Cabinet Office to co-ordinate statistics and issue overall publications. The collection is still in the hands of departments and the Central Statistical Office exercises its control largely through persuasion and by placing its trained officers in the statistical sections of the various departments.

Unlike the three last-mentioned countries, however, Australia obtains very little statistical information from non-governmental institutions. The Commonwealth Bank is the chief contributor in this field with its index of import prices and its analyses of retail sales and company profits. "Newspaper News" publishes figures of newspaper advertising, and various newspapers provide indexes of share prices and analyses of such matters as new capital raisings and company registrations. Apart from these bodies and trade associations, Mr. Colin Clark is virtually the only private person who publishes information of a statistical

nature. This may be contrasted with the substantial amount of work done in the U.K. by such bodies as the London and Cambridge Economic Service, the Oxford Institute of Statistics, and the National Institute of Economic and Social Research; and in the U.S.A. by bodies such as the National Bureau of Economic Research, the Cowles Commission and a host of others.

A large volume of statistics of all sorts is published in the U.S.A. and, to a lesser extent, in the U.K. by trade associations and private firms. This is a relatively minor practice in Australia, some of the main contributors being the Mines & Metals Association, the Retail Traders Association of N.S.W., the Audit Bureau of Circulation (newspaper circulations), the National Council of Wool Selling Brokers, the Electricity Supply Association, the National Gas Association and, until recently, the Society of Motor Manufacturers and Traders. An examination of the thousands of monthly statistical series published in the U.S. "Survey of Current Business" shows that a large proportion of these series result from private enterprise of this sort.

The Australian statistical system is thus marked by a high degree of centralization (decentralised between the Commonwealth and the States) and a marked absence of private co-operation in the task of providing statistics.

The Range of Statistics.

The work of a statistical organization is seen most clearly in the range of statistics which it collects and publishes. The number of different statistical series in a fully comprehensive system is enormous and the adequacy or inadequacy of an existing statistical system can only be indicated by listing some of the more important series which are available for other countries and which are either not available, defective in one way or another, or long delayed in the country under re-



view. A list of some of the statistical series which are defective in one or more of these ways in Australia is set out in very brief form in the appendix. Such a list covers a wide range of interests and includes many items which may seem unimportant from a particular point of view, but there is in fact a substantial demand for each of them. The list would of course, appear very small in relation to the list of series which are available. Nevertheless, even the brief list in the appendix indicates the great volume of statistical work which lies ahead of the Australian system and suggests the many purposes which a statistical system can serve.

Publication of Statistics.

The seven statistical offices each have a fairly uniform pattern of statistical publications. The crown of the edifice is a year book which summarises the available statistical information and contains substantial descriptive matter about the economy and the community as a whole. More detailed statistical information (generally without descriptive matter) is contained in annual printed publications for each of the main fields of statistics, while up-to-date information is provided by printed quarterly and monthly summaries covering the whole range. These printed publications are supplemented by monthly mimeographed publications dealing with relatively narrow fields. The total volume of statistical publications is substantial and partly because of this bulk the statistical publications are very difficult for a layman to put to effective use.

In the first place, there is appreciable duplication between Commonwealth and State publications. Although, generally speaking, each authority sticks to its own geographical sphere, there are State dissections in Commonwealth publications and Commonwealth totals in State publications, and figures published by two

different authorities are not invariably comparable. Moreover, differences in the layout of State and Commonwealth publications tend to conceal the basic uniformity of data and make the use of the publications something of an expert's job.

In the second place, there is no guide book to statistical publications as a whole, so that it is only possible to discover whether certain information is available by ploughing through the whole volume of publications. The year books do, of course, serve some function of this sort but they are not designed with this end in view and are not necessarily a comprehensive guide to what is available. Associated with the need for say a biennial guide book to statistics is the need for a brief weekly outline of statistics published during the week (and possibly in course of publication) so that the user of statistics is kept aware of the latest information available.

Finally, published statistics suffer generally from the defect that there is very little textual matter in any publication other than the year books and that the descriptive matter contained in the year books is more along the lines of telling the story as illustrated by the figures rather than of explaining the methods of collection of the figures, their precise significance, and the extent to which it is safe to use them for wider comparisons with other information. It may be added that Australia publishes virtually no interpretation of basic statistics, either in the form of analysis of significant relationships or of comment on the current situation. The user of statistics is given little more than a mass of figures and no guide is provided on how to interpret their significance. And no objective private institution fills the gap.

Features of an Ideal Statistical System.

The main features of an ideal statistical system seem to be as follows:—

(1) Comprehensive, up-to-the-minute and accurate. The statistical system should give a comprehensive cover of important economic and social magnitudes in the community and every effort should be made to have the information available with the shortest possible time interval. Statistics depreciate in value very rapidly when they lag in publication and a major problem is to reconcile speed of publication with accuracy. The quick approximate figure is often of more use than the delayed accurate figure. This conflict can sometimes be overcome by publishing preliminary figures with subsequent revisions as fuller and more accurate returns become available.

(2) Flexible. The statistical system should not be rigid and conservative but should be capable of modification to meet constantly changing current needs and to incorporate new techniques. Comparability over the long period is important but so is progress.

(3) Stimulating. The statistical system should, by providing up-to-the-minute information, both descriptive and interpretative, act as a stimulant to public discussion on current problems and as a lead to improved methods both of policy formation and administrative and business efficiency.

(4) Confidential Advice. The statistical office should at all times be available to all institutions, enterprises and persons as a confidential and impartial adviser on the factual background to their current problems.

(5) Secrecy of individual information. Every person in the community should have complete confidence that any information relating to his personal affairs which is required by the statistical organization as part of its statistical collection will remain completely confidential and will under no circumstances be made available to any person outside the statistical authority or to any court.

(6) Active informant co-operation. Persons who supply the basic information necessary for the preparation of statistics should be encouraged to understand and take an active interest in the statistics their free co-operation makes possible. The convenience of the informant should be given the same weight as the convenience of the statistical office and every effort should be made to avoid duplication of approach.

Appraisal of the Present Statistical Organization.

An appraisal of the Australian statistical organization must be built around the central fact that the present organization is intimately connected with government administration. Each of the offices is part of a framework of government departments and it is not unusual for the head of a statistical office to act as general economic adviser to the government he serves. Most of the weaknesses and most of the strength of Australian statistics come from this intimate connection with government and it is difficult to envisage any system in which a fairly close relationship does not continue.

Administratively, however, the State and Commonwealth offices are substantially separate from one another and co-operation between them is weaker than one would desire. Moreover, the small staff in some of the State offices makes it difficult for them to ensure reasonable promotion and to undertake vigorous statistical development. But integration is an intricate problem and governments might fear that they would be deprived of the direct advice which they at present receive.

Such a fear might be overcome if the integrated office developed its general services as public interpreter and as confidential adviser to all governments as well as to private businesses and individuals. So long as the statistician has a first responsibility as a policy adviser to

one government this is difficult. Some attitude of aloofness towards other authorities and individuals is a natural concomitant to a special relationship with one authority.

The lack of advice for private enterprises and persons would not be so serious if there were adequate scope for obtaining advice from outside bodies such as is readily available in America. But the long association of statistics with governments has tended to inhibit the development of such bodies. It is apparent that a government statistician is in a better position to obtain information and therefore the tendency has been to bring pressure on him to extend his work rather than to set up private statistical organizations.

The identification of statisticians with governments has also tended to inhibit a vigorous policy of "selling" and interpreting statistics to the private sector of the community and of educating the community in the uses to which statistics can be put. It is natural for a government department to go ahead with the job without attempting to persuade outside people to call on its services. This feature of the organization also has some bearing on problems of finance. It is undoubtedly true that the statistical organization could perform many functions for the business community for which a charge at cost would be cheap. The only present example is a nominal charge for details of overseas trade statistics, but the practice could be extended and, quite apart from the additional finance which would be made available, it would keep the statistical organization more closely in touch with the needs of business. **The primary function of a statistical organization is to serve the community as a whole and not merely to serve the government sector.**

The special position of authority which government statistics have achieved in Australia can also be a source of weakness. If statistics are to be taken as

authoritative and exact, then the statistician naturally feels diffidence about publishing figures in fields where their accuracy must be, at best, approximate. The lack of statistical education in the community coupled with the "authority" of government statistics has led to an attitude of mind in which statistics are regarded as having the same type of accuracy as accounting figures.

A special difficulty of this type is created by the use of the retail price index to vary the wages of the bulk of the community. The statistician is constantly aware of the efforts of industrial advocates and others to discredit not only the retail price index but also the statistician himself, so as to achieve some short-term objective of wage variation. He must also be on the watch for deliberate attempts to bias the prices entering into the index. The atmosphere created in this way is hardly suitable for objective statistical work and there is danger of the statistical organization becoming stodgy and secretive instead of vigorous and willingly open to all enquiries. It is greatly to the credit of those responsible for statistical development in the last few years that the actual trend has been rather in the opposite direction and that the range and vigor of our statistical system has expanded considerably.

Future Lines of Development.

The first problem for the future development of Australian statistics is how to create a modern organization. **A movement into a more independent semi-governmental rather than a purely departmental position seems to be indicated.** Such a semi-governmental position would imply that the statistical organization, rather than being a branch of an active department, would be a self-contained agency connected with a government department only for formal administrative purposes. In this way it may be possible for a closer co-ordination to be developed between the State and Commonwealth

offices on the side of collection of statistics. Moreover, the work of the statistical organization could be greatly facilitated by the creation of a number of advisory committees representing Commonwealth and State government departments and private organizations which would advise on the development of specific fields of statistics. It might also be worthwhile considering the appointment of a top-level committee to consult with the statistician on general statistical development.

Changes of this nature could be gradual and would be associated with the further development of small specialist groups within State governments, the Commonwealth government and some institutions such as the Commonwealth Bank and the Arbitration Court. These groups would receive and interpret for their own institution the basic information collected and made available by the statistical organization. They would collaborate closely with the statistical organization and would have complete access to all statistical records other than those which would reveal details of personal affairs. A more independent statistical organization would also be freer to make interpretative statements on economic trends and analyses of the current situation. These might well be issued without the full authority of the statistical organization and as representing research and analysis carried out by individual officers and groups of officers, and carrying only the implication that they are honest pieces of work and not necessarily authoritative. It should be noted that the U.S. Department of Commerce publishes a great deal of information of this type in its regular monthly statistical publication and that it also makes a monthly analysis of the current economic situation.

At the present time the Australian statistical organization is having considerable difficulty in meeting the growing demand for statistical information and resources are inadequate even for urgent current requirements. To some extent the inadequacy of resources is due to the lack of trained personnel within Australia—and this is a difficulty not confined to Australia itself—but it is also due in part to the old tradition of regarding statistical offices as rather minor bread-and-butter departments from which little political credit can be gained. As a result, expanding government departments have tended to revert to preparing their own statistics and publications with consequent duplication of effort and strain on trained manpower.

The importance of statistics for government and business decisions is only beginning to be recognized. In every country of the world statistical development is in a state of ferment, and every country is facing the difficulty of developing its statistical system to meet current needs. In Australia, the pressures for development have become strong over the last five years and each tentative expansion made by the statisticians has been followed by a vigorous demand for further expansion in the same field. There is a growing recognition that business decisions must be based on adequate knowledge and a growing realization that the information currently available is inadequate. Efficiency in production and administration is of vital importance to Australia's future and efficiency can be greatly assisted by knowledge of statistical analysis. Our first step is to create a modern statistical organization adapted to current needs in which the requirements of all sections of the community are able to be fully expressed, their relative importance weighed and a programme of development planned.

APPENDIX

Some Statistics Requiring Development

Population, health

1. Forecasts of future population.
2. Measurement of differences in fertility.
3. Analysis of infant mortality.
4. Divorce statistics.
5. Morbidity statistics.
6. Industrial accidents.

Employment, hours of work

7. Number of rural employees.
8. Number of self-employed persons.
9. Extent of overtime.

Trade, transport

10. Wholesale sales by commodity classes.
11. Manufacturers' sales and orders.
12. Importers' sales and orders.
13. Retailers' stocks.
14. Retailers' mark-up and costs.
15. Transport costs.
16. Road finance.
17. Overseas travel.

Income, consumption

18. Gross cash income of farmers.
19. Actual income statistics by size of income.
20. Dividend payments.
21. Company profits and capital.
22. Actual hourly earnings.
23. Family budget.
24. Consumer expenditure by commodity classes.

Investment, savings

25. Sources of funds for investment.
26. Changes in government bond holdings.
27. Analysis of bank deposits.

28. Private superannuation funds.

29. Rural debt.

30. Consumer credit.

31. Capital expenditure and depreciation of unincorporated enterprises.

32. Quantity and value of building done in period.

33. Construction and public works.

Price and quantity indexes

34. Index of retail price of all consumer goods.

35. Index of wholesale price of manufactured goods.

36. Index of farm costs.

37. Index of building costs.

38. Index of share prices.

39. Index of shipping freights.

40. Award amounts for penalty rates, annual leave, etc.

41. Difference between actual and award wage rates.

42. Index of industrial production.

43. Quantity index of imports and exports.

Other

44. Forestry statistics.

45. Classification of national income by industry.

46. Nutritional levels.

47. Productivity.

48. Uniform public finance statistics.

49. Commercial accounts for government business undertakings.

50. Production, consumption, etc., of particular goods.

Contributed articles by noted authorities in Australia and overseas dealing with matters of public interest are published from time to time in the I.P.A. Review. This Institute is not necessarily in full agreement with the views expressed in these articles. They are published in order to stimulate free discussion and inquiry.