

Paper delivered at the 10<sup>th</sup> Biennial Conference of the  
*Australian Population Association*  
POPULATION AND GLOBALISATION:  
AUSTRALIA IN THE 21<sup>ST</sup> CENTURY  
Melbourne 28<sup>th</sup> November to 1<sup>st</sup> December 2000  
Melbourne Australia

Developments in ABS regional statistics

Ian Crettenden

*Ian Crettenden, Developments in ABS regional statistics*

## INTRODUCTION

For some time there has been a requirement among policy makers and the community more generally, for statistical information on small areas, and in particular for regions outside the major metropolitan areas. The ABS has sought over time to service this requirement in different ways through sources such as the Census of Population and Housing and a range of censuses and surveys and administrative data

In recent years the requirement for regional data has intensified significantly as Commonwealth, State and local governments give increasing policy attention to rural areas and other regions outside of the capital cities. With the increase in policy interest there has also been a desire on the part of the community to understand what differences there may be in the nature of the different regions of Australia. In particular a number of social and economic issues have been the subject of analysis and investigation at both the Commonwealth and State levels. These include:

the availability of infrastructure and services in rural and regional areas, particularly investigations of specific areas of infrastructure such as telecommunications have highlighted the question of infrastructure provision as an important regional issue.

the economic growth and development of regions. This has been the subject of a number of inquiries, at both Commonwealth and State level, and is closely related to the question of economic assistance and government programs designed to improve the economic well-being of regions. Specific issues such as the level of investment and business activity in regions, income distribution, employment and reliance on government benefits are all important policy issues in this area.

social issues and the provision of social services particularly in areas such as health services, access to education, services for children and young people, and equity issues involving indigenous people.

allied to these issues is the question of measuring the differential effects of government programs and policies on different communities so as to identify those programs which can assist regional communities as well as to identify where there may be regional effects from more global, particularly macro-economic policies.

While there is currently a wide range of information available from the ABS and

other sources which bears on these questions, the ABS is also identifying where new statistical information on regions may be required to investigate these types of issue. In particular, the ABS is working with other government agencies to make available a range of administrative data which can assist in the analysis of regional issues. In addition, the ABS is investigating ways of increasing access to the regional data which is already available.

This paper identifies a number of the more important new initiatives the ABS is undertaking to service regional data requirements. These are:

- the development of new statistics from administrative sources including economic and social regional indicators and new measures of income distribution in regions;
- the 2001 Census of Population and Housing, as the principal source of socio-demographic data about small regions, including a number of new questions;
- new products and services to better disseminate regional statistics;
- the establishment of a National Centre for Rural and Regional Statistics to provide coordination of ABS efforts in this area, and to develop a conceptual framework for rural and regional statistics.

Each of these is discussed in more detail in the following sections.

## NEW ABS INITIATIVES IN REGIONAL STATISTICS

With regard to the range of policy issues outlined above, the ABS has attempted to identify those areas where new statistical information is most required. The ABS has focused on three major areas of development in regional statistics based on an assessment of the needs of policy makers and other researchers. These are:

- creating more frequent indicator data for regions, on both economic and social issues;
- providing new information on income distribution in regional Australia; and
- providing statistical databases and other services to allow policy analysts to measure the differential impacts and outcomes of government policies and programs in regions

### Regional Indicators

Regional indicators are broad measures of the status of a region across different areas of social and economic interest. They allow the comparison of

different regions at a point in time as well as the analysis of the status of a single region over time. Together, they are intended to allow users to build up a picture of a particular region and to indicate where more detailed analysis may be required. They provide a very useful means of assessing a range of economic and social issues.

Over the last two years, the ABS has undertaken a project to identify and make available a range of new regional indicators largely obtained from the administrative information systems maintained by Commonwealth, State and local government authorities. These systems provide considerable potential for expanding the range of information on regions, as they often contain detailed information about persons and businesses which the relevant government agency has obtained to assist in an administrative process. As they generally have information about all persons or businesses of a particular type within a region, they are a useful source of small area data and do not have the limitations inherent in sample surveys. These sources do, however, have limitations of their own, particularly with respect to the scope of the data collection, which may be more restricted than would be ideal for policy analysis purposes. These sources may also be of variable quality in terms of the accuracy and completeness of data. There may also be difficulties in comparing data with other sources. While the ABS is working with agencies to improve the quality and comparability of administrative data, users should nevertheless bear in mind these possible limitations when using data from administrative sources.

Under the administrative data initiative a significant range of new regional information has been obtained. This data is available nationally, or for particular States and Territories, depending on the source of the information, and whether it has been possible to obtain data which is comparable on a national basis. Regional data on important social issues, such as education, crime and health have been obtained together with information on local government expenditure and services and a number of measures of regional economic activity. A considerable range of indicators from over 110 State and Territory Government agencies have been published by the ABS to date in either hard copy or electronic form.

Future directions in this area will concentrate on further expanding the range of data available for regional indicators by using statistical modelling techniques to provide regional estimates from ABS surveys, and through working in partnerships with Commonwealth, State and local government agencies to identify and utilise a greater range of administrative data.

Examples of new work currently under way are:

- studies examining the potential of data from the Australian Taxation Office on individual and company taxpayers and from the Workcover Authority (SA) for measures of regional economic activity;

a study to identify possible regional indicators from a large administrative dataset maintained by the Commonwealth Department of Family and Community Services;

development of a framework of regional indicators of well-being in partnership with a number of State and Territory governments, and identifying data sources from which such well-being indicators could be sourced; and

### The New Tax System

In addition to the projects outlined above, there are significant opportunities for producing new regional statistics from the data which will become available under The New Tax System (TNNTS). The changes to the taxation system, resulting from the GST legislation, and the associated business registration process provide an opportunity to obtain business activity information for regions. Research is currently under way to assess the usefulness of both the data from the business registration process (ABN assignment) and the information from the Business Activity Statement as sources of regional data. Both of these processes are potentially rich sources of information on regional economic activity. The extent to which regional and State and Territory level information can be derived will depend on whether distinct geographical boundaries for businesses can be developed from the data available.

### Measures of income distribution in regions

The second major area of development in new regional statistics is determining the distribution of incomes in different rural and regional areas. This would provide some measure of the relative disadvantage of regions, any seasonal discontinuities in the incomes of individuals in particular regions, as well as the reliance of regions on government benefits as a source of income.

The ABS has undertaken a project examining the usefulness of individual taxpayer data from administrative records maintained by the Australian Taxation Office (ATO) as a measure of income distribution in regions. Following a successful pilot project, the ABS is currently negotiating with the ATO to obtain aggregated data at Statistical Local Area (SLA) level for wage and salary earners. Tables which may potentially be available include occupation by wage and salary income by age and sex; median and mean wage and salary income by Statistical Local Area; and wage and salary income totals by SLA. It is anticipated that if these data can be disseminated, the next step will be to analyse the aggregate tax information together with aggregated data on benefit payments to individuals from the Department of Family and Community Services to derive measures of household disposable income, and measures of benefit dependence in different regions.

## Measuring outcomes of government policies in regions

The third major area on which the ABS is focussing is the differential effects of government policies and programs on different regions. Rather than working to directly measure these effects, the ABS is providing a statistical base to assist other agencies or individuals who are examining these issues. The regional indicators and income distribution measures described above will assist in this measurement by allowing the monitoring of different regions at one point in time and of the same region over a period of time.

In addition, the ABS is working to support agencies who are carrying out assessment of the effects of government policy in regions. This has included support to agencies such as the Productivity Commission, the Commonwealth Department of Transport and Regional Services, ABARE and the Bureau of Rural Sciences, as well as assistance to a range of State government agencies. In all these cases, the ABS has provided statistical data and technical assistance to the agency carrying out an analysis. This has proved to be an effective means of assisting in this important area of policy analysis, as well as helping to identify new areas in which the ABS should seek to obtain and disseminate regional statistics.

## 2001 CENSUS OF POPULATION AND HOUSING AND REGIONAL INFORMATION

As has been outlined in this paper, the main focus of the regional statistics program is to derive and disseminate annual regional indicators for which administrative data are increasingly being utilised. However, the Census of Population and Housing remains the richest source of demographic and social information collected at the small area level. Australia's next Census of Population and Housing will be held on 7th August 2001. Since the first national census in 1911 the content of the censuses has varied depending on the importance of the topic at the time. A set of criteria is used to judge the suitability of topics for a census one of which is a need for data on small groups in the population and/or for small geographic areas. The 2001 Census will contain a new topic on the use of personal computers and the internet, and, while the Journey to Work topic has been included for a number of censuses, the data coverage will be Australia-wide for the first time. There will also be a revision in the coding of usual residence for the population whose usual address is different from their address of enumeration on census night.

### Use of Personal Computers and the Internet

The ABS received a number of submissions requesting inclusion in the 2001 Census for information about the use of personal computers and the internet for small

geographic areas.

There is a requirement by Commonwealth and State Government bodies for these data in order to target a range of policies and programs. The output from questions on the personal use of computers and the internet when cross classified with other data from the census on age, sex, address, qualifications and employment details will provide information on the take-up rates of these technological innovations by various target groups in the population and in small geographic areas. There are a number of access and equity issues associated with both the use of personal computers and the use of the internet, particularly in regional, rural and remote areas of Australia.

The ABS currently collects extensive quarterly data on the number of households with a home computer and associated data on internet access. This information is only available at the State and Territory level. The data collected through the census will reveal the more detailed regional patterns of information technology usage.

#### Journey to Work

Journey to Work data have been produced from censuses since 1971, but for urban areas only. For the 1996 Census there were 8 Journey to Work study areas a few of which covered some major regional centres:

- Sydney/Wollongong/Newcastle
- Melbourne/Geelong/Latrobe Valley/Bendigo/Ballarat
- Brisbane/Gold Coast/Sunshine Coast
- Adelaide
- Perth
- Hobart/Launceston
- Darwin
- Canberra Queanbeyan

Regional analyses from these data has been limited as a consequence.

Information on Journey to Work data are obtained from the response to the census question that asks the address of the employer's workplace for the main job held last week. This address enables coders to allocate destination zone codes within the JTW study areas. Journey to Work data are derived from comparing the origin zone code from the collection district in which the person was enumerated and the destination zone code allocated from the question on the address of the person's workplace. Significantly, for the 2001 Census, Journey to Work data will be extended to provide coverage of all Statistical Local Areas (SLA) and be aligned with ASGC geography.

Traditionally JTW data have been required by transport authorities for the analysis of travel patterns within major metropolitan areas, the modelling of

fuel usage, the forecasting of public transport patronage and the analysis of catchment areas for transport routes. The data also assist policy makers in the planning of transport systems, industrial development and the release of residential and industrial land. Following the 2001 Census, State transport authorities will be approached by the ABS to discuss arrangements for producing data for destination zones smaller than Statistical Local Areas. While the data have been valuable for these purposes within major urban or regional centres, there has been no information available for areas outside of these.

The extension of JTW coverage to all Statistical Local Areas will allow for more comprehensive data analyses than just for transport and associated issues. Patterns of employment mobility in regional and rural areas across Australia will be able to be analysed for the first time. More extensive data on daytime and service populations will be provided. Cross-classification of JTW with occupation and industry data in particular will yield more detailed information on the nature and distribution of employment and associated income levels throughout regional Australia. These data should also assist those undertaking skills analyses or skills audits in non-metropolitan areas.

#### Coding Usual Residence

Testing has also been underway on coding the usual address information to collection districts (CDs) for the 5% of the population whose usual address is different from their address of enumeration on census night. Depending on the detail of address information supplied, these will be attempted to be coded to CDs where possible, rather than merely to Statistical Local Areas (SLA). The feasibility of this is still being considered, however coding of usual residence to CD was successful for urban and peri-urban CDs during the Census dress rehearsal held in July 2000. Some of the most difficult addresses to code to CDs are rural addresses and the processing of these from the census rehearsal is still being tested. If successful, the outcome will be more accurate address coding and hence data output for some rural elements. A final decision on this coding will not be made until January 2001.

#### INCREASING ACCESS TO REGIONAL STATISTICS

In addition to the work specifically directed at providing new statistics on regional and rural areas, the ABS is also seeking to meet the increased need for regional statistics through improving access to existing information. Several specific products and services have been designed to disseminate regional indicators some of which will be familiar while others may not.

The first of these is the The Integrated Regional Database (IRDB), an electronic product which provides a very large range of aggregated regional data from both the ABS and other government sources, together with a mapping facility to allow users to specify regions for analysis. The IRDB has been developed to provide access to regional data using comparable spatial units and also contains time

series information to allow regions to be analysed over time. It is intended that as the ABS obtains a greater range of administrative data relevant to regional issues, the IRDB will become the principal repository for this new information. As such, it is anticipated that the IRDB will become, over time, the most comprehensive source of regional statistics available.

The major source of regional data from the Census of Population and Housing is CDATA, the CD-ROM product developed by the ABS. CDATA has the flexibility to analyse data at CD level which enables it to deliver large volumes of tabulated data on small areas and for these to be mapped.

To make regional indicator data available on an annual basis between Census years, regional profiles have been developed by several ABS State Offices which are proving to be cost-effective products. Regional profiles are special data services which present a statistical summary of key economic and social indicators, tailored to the needs of individual clients. Data are provided in time series, at a range of geographic levels, and can be compared to data on other regions as determined by clients. The profiles are updated on an annual basis and thus provide timely information in intercensal years. The profiles have so far achieved very good penetration with key clients in SA, NSW, WA and the ACT where they are currently available. Profiles are also now available electronically in spreadsheet or pdf formats. Most ABS Offices also publish annual compendiums designed to provide a broad overview of the social and economic status of regions in their relevant state or territory all of which contain non-ABS as well as ABS indicators.

A major step in enhanced dissemination of regional information has also recently been achieved with the establishment of specific regional statistics pages on the ABS Website. The regional statistics site, embedded in the THEMES section, went online on 7th June 2000. Browsers can now access information on the range of products and services available from the Regional Statistics Units (RSU) in all states and territories and read information about current research and data development activities. Links to other relevant parts of the ABS site are provided (IRDB) and contact details given. Some sample indicative data are yet to be added to the site as well as a Directory of Statistical Services in December 2000.

## NATIONAL CENTRE FOR REGIONAL AND RURAL STATISTICS

As a major response to the need for more detailed information on regions, the ABS has now established a National Centre for Rural and Regional Statistics, to bring together the full range of regional data both from the ABS and from outside sources. One of the main tasks of the new Centre will be to develop a more coherent conceptual basis for the distinctions between, urban, rural and remote communities. A second major goal of the new Centre will be to develop a

much richer statistical picture of regions, focusing on the interactions between the economic base, social conditions and the environment.

This new national centre has been established in the Adelaide Office of the ABS and will be fully operational from July 2001. Provision has been made for funding the centre initially through to 2005, however the Centre will seek additional user funding for collaboration on studies which will add to the capacity to better understand the pulse of regional and rural Australia. Work has already commenced on consultation with relevant stakeholders within the ABS and with relevant government and non-government agencies. An advisory board for the centre will be established as soon as practicable. A initial task will be to produce a discussion paper setting out the conceptual framework for regional and rural statistics.

## CONCLUSION

Overall, the ABS has made substantial progress in meeting the increased demand for regional information, through obtaining and making available new statistical measures, and through improving the accessibility of existing regional information. In addition, the work of identifying and working with administrative data from government agencies will, over time, assist agencies to better utilise their own data for regional analysis, to improve the usefulness of their data holdings for statistical purposes, and to improve the comparability of data across different datasets, as well as making more data on regional issues available to policy analysts and members of the public.

The addition of a highly relevant topic in the 2001 Census on technology uptake in regions and the enhanced capacity to analyse Journey to Work information to the SLA level from the Census will add another dimension to our understanding of regional dynamics. Finally, the establishment of the National Centre for Regional and Rural Statistics signals the ABS' commitment to inform the ongoing debate on regional and rural issues by undertaking a leadership role in the development of statistical infrastructure to support policy making in this important area.

Ian Crettenden  
Regional Director, Adelaide Office  
Australian Bureau of Statistics  
GPO Box 2272  
ADELAIDE SA 5001

Email: [Ian.crettenden@abs.gov.au](mailto:Ian.crettenden@abs.gov.au)

-----  
ABS Australian Business Number: 26 331 428 522    ABS Web Site: [www.abs.gov.au](http://www.abs.gov.au)