

**Australian Bureau of Statistics**  
**Submission to the Productivity Commission**  
**Response to the Draft report on Geographic Labour Mobility (December, 2013)**

## **Executive Summary**

The Australian Bureau of Statistics (ABS) provides fundamental data sets on population and labour that underpin analyses of Geographic Labour Mobility. ABS data sources have been used in the Productivity Commission draft report (PC report), providing a sound basis for discussion of the broad policy issues. However, the PC report also highlights a number of limitations and gaps in the availability of regional data, including at the Statistical Area 4 (labour market region) level and for smaller areas.

In this submission, the availability of relevant regional data is examined in relation to:

- Regional population data;
- Regional labour markets;
- Housing supply; and
- Reasons for moving.

For each of these topics, this submission highlights a number of feasible options to improve relevant regional ABS data, such as:

- Production of annual inter-regional migration estimates to support more timely analyses of population mobility;
- Development of a Linked Employer Employee Dataset to permit longitudinal regional analyses of labour mobility; and
- Production of annual dwelling stock estimates to support more timely analyses of housing supply in regional areas.

This submission also discusses some significant regional data gaps, such as service population measures, and measures of labour demand. The fundamental need for more timely regional labour force data is also discussed. The ABS is well positioned to lead development of high quality regional outputs relevant to these needs.

Most of the options to improve regional data highlighted in this paper make use of existing government administrative data sets. This is in keeping with the ABS strategic direction to lead a National Statistics Service that harnesses government information to produce official statistics. While some of the information developments discussed in this submission are outside the scope of the current ABS work program, they offer significant potential to improve the suite of available statistics relevant to analysis of geographic labour mobility.

## Introduction

The Australian Bureau of Statistics (ABS) is Australia's official national statistical agency. The role of the ABS is to assist and encourage informed decision-making, research and discussion within governments and the community by leading a high quality, objective and responsive national statistical service.

Identifying and responding to the needs of government and the community is a high priority of the ABS. Assessment of geographic labour mobility in Australia can be well informed by ABS data.

The Productivity Commission (PC) draft report on Geographic Labour Mobility analyses relevant issues using a range of ABS data and other research. The report highlights some data gaps and interpretive issues in using available data. This submission provides a response to the data issues raised by the report, and outlines the potential for improved analysis and data to better inform governments, businesses and communities.

The ABS has made and is planning to make a number of continuous improvements to its statistical outputs that are relevant to the PC investigation of Geographic Labour Mobility. This submission also flags a number of potential opportunities for significant data enhancements that are beyond the scope of the current ABS work program.

This submissions deals with the evidence in relation to four priority areas of data need:

1. Regional populations;
2. Regional labour markets;
3. Housing supply; and
4. Reasons for moving.

## 1. Regional populations

The ABS provides Australia's official national and regional population estimates used in many areas of government decision making. The ABS has experienced increasing demand for data on *population mobility* and *service population* concepts and measures, which have also been raised in the PC report.

Labour mobility is a more specific concept (see section 2 of this submission), in which people who move residence or commute *for work* are counted as part of a mobile labour market. However, as the PC report notes, most people move residence for reasons other than work (Chapter 8), and the PC report concludes that it is essential to understand broader population movements and how these in turn, impact on regional labour markets.

The flows of people between regions can occur in many different ways. The PC report discusses concepts of residential mobility (Chapter 5), and commuting (Chapter 6). This submission provides information about the underlying population concepts and measures that inform the analysis of these topics, including:

1. Migration – Population Flows; and
2. Service Populations.

## **1.1 Migration – Population Flows**

The ABS and wider statistical and demographic community refer to residential mobility as “migration” statistics – where people move their “usual” address – or as more commonly understood, move house. The numbers of people who migrate into and out of a region provide data on population flows.

The ABS provides regular (quarterly) updates on migration estimates into and out of Australia, and inter-state population flows. While the Census provides some data on internal migration between regions of Australia every five years, there are currently no more frequent estimates.

### Census of Population and Housing

The Census of Population and Housing is a key source of data on population mobility, and has been used in the PC report (pp 67 – 70 and pp 94-105) to understand the number and characteristics of people moving their usual residence. The Census can report not only on the current population characteristics of the region, but also report where those people lived one year ago and 5 years ago by very small areas. It is therefore possible to observe people as they move into an area and understand where they came from (including the socio-demographic profile of the people in the area they have left/gone to). The Census can report on the characteristics of the people who have left a region, and compare them to both the characteristics of those people who have stayed in the region and those who have moved in recently. This type of rich analysis of the Census data can look at a variety of socio-demographic variables, including volunteering, caring, disability etc to help build a view of changing social capital over time, from Census to Census.

### Annual inter-regional migration estimates

Data could be produced on an annual basis, to allow decision makers to track trends in population migration in Australia at small area level. For example, this information would assist planners to understand annual trends in population flows into and out of their communities.

A feasibility study found that administrative data sets could be used to produce regional estimates of internal migration, and an experimental data set was published in [Migration, Australia 2010-11 \(cat. no. 3412.0\)](#). The ABS is currently costing the ongoing production of estimates.

## 1.2 Service Populations

A key finding of the PC report is that:

### DRAFT FINDING 12.1

*There are gaps in the understanding and measurement of geographic mobility, particularly of temporary or service populations. This could be hampering local governments' planning and funding allocations. Although the ABS and other organisations have made some improvements, more can be done, in particular exploring greater use of administrative data.*

### INFORMATION REQUEST 12.1

*The Commission seeks information on:*

- *the different definitions and measures of temporary or service populations*
- *possible solutions to data gaps, such as expanding existing data collections and using alternative data sources.*

As noted by the PC report, “advances in transport and communication technologies have dramatically changed the way in which labour supply and demand adjust across different locations. Instead of permanently relocating, workers now have the option of long-distance commuting or telecommuting” (p. 3). This, in turn, impacts on how people live, with many people choosing to live some of their time at home and some of their time at another residence or in temporary accommodation.

There are a range of different definitions of “service populations” which are outlined in an earlier ABS paper, [Population Concepts \(cat. no. 3107.0.55.006\)](#).

Broadly, a service population counts the number of people in a place at a point in time and who access the “services” located there. It may include permanent or temporary residents of the area. Service populations can include regular and irregular daytime visitors, or overnight or short-term visitors to the area, and can incorporate people based on their place of employment, study and tourist destination. However, there are no consistent statistical definitions or standards for measurement of service populations amongst the international community of statisticians who provide official population statistics.

The ABS demography program is currently preparing to undertake a research and client engagement process to assess what service population measures could be of most use to decision makers. Any measure of a service population is likely to require information about the time spent at a location, the reasons for spending time at that location, and the frequency or patterns of use of services at that location. Some examples of the kinds of measures that could be considered are:

- Day time student or working populations who commute to a region regularly;
- Day time consumers or local shoppers at retail centres;
- Populations commuting to a range of major services, such as hospitals, sporting stadia, major festivals and cultural events;

- Short stay visitors staying overnight up to a few weeks, for business or tourism; and
- Long stay temporary residents, such as FIFO/DIDO workers, tourists, or family visitors.

For some local planning purposes, local surveys or administrative collections from local services may be best suited to estimating the service population for a region (e.g. users of a particular hospital or university, or numbers of tourists to a festival). Such information may be derived from festival ticket sales, university enrolments, or hospital admissions data.

However, the ABS is experiencing a growing demand for *nationally consistent* service population data sets to support government infrastructure and service planning – as noted by the PC report.

The ABS has identified a range of administrative data sets which are fundamental as Essential Statistical Assets for Australia and is also beginning to explore the potential to utilise transactional data sets in the production of official statistics. Taken together, some of these sources could be harnessed in future to support development of nationally consistent regional service population estimates. However, this is a significant task that is beyond the capacity of the current ABS work program.

The ABS Census Program is currently testing the suitability of asking all Australians about the use of a second residence in the 12 months prior to Census. If the testing indicates that this question is feasible, this could add valuable information to our understanding of where Australia's population spends its time. While this would provide an important improvement to available data, Census second residence data will not, on its own, deliver complete regional service population estimates.

## 2. Regional Labour Markets

The PC report highlights the need to know where labour supply and demand are “not matched” and why (p. 52). This requires a range of regional labour market data, including:

- 2.1 Labour demand information (e.g. job vacancies and skill requirements)
- 2.2 Labour supply information (e.g. labour force participation, unemployment, labour underutilisation, labour force characteristics, labour skills)
- 2.3 Labour mobility (commuting practices, change in jobs, change in place of work)

Other relevant labour market data issues are also discussed:

- 2.3 Business level practices; and
- 2.4 Linked Employer Employee data set

## 2.1 Labour Demand Information

Detailed information about labour demand across the economy is limited, particularly at a regional level. While there are a number of indicators of job vacancies and job advertisements, in addition to the ABS Job Vacancy survey, the depth of information available is limited. The quarterly ABS Job Vacancy survey has information on the number of vacancies by industry, by sector and state/territory, but does not have information about the occupation of the vacancy or skills required, the location of the vacancy below the state/territory level, nor the duration, or length of time, that the position has been vacant.

While there is not currently the capacity to collect these additional items from the ABS Job Vacancy survey, the ABS Labour Statistics Program is about to undertake an assessment of the information needs for labour statistics that are best provided through business surveys targeted at the human resources and/or payroll areas of businesses. This information, including the relative priorities, will be used to shape the future directions of the ABS labour employer surveys (LES) program. The assessment of information needs is likely to highlight the job vacancy data gaps described above. Any significant expansion to the overall content of the LES program is beyond the capacity of the current ABS work program.

## 2.2 Labour supply

### The Labour Force Survey (LFS)

The ABS produces monthly labour force data from the LFS. From mid-February 2014 regional labour force data will be at the Statistical Area 4 (SA4) region level. These SA4 regions are designed to represent a labour force region and the LFS outputs will include backcast data on an SA4 basis back to 1998. As LFS data are compiled for a person's place of usual residence, regional data will not reflect the entire labour supply being utilised by employers in a region, since some SA4 regions will source labour from residents of other regions. The LFS also provides quarterly standard outputs of occupation for SA4 regions, which can go some way to understand skills of the labour market. Educational attainment is being planned to be collected on the LFS from July 2014, with the first outputs from mid 2015.

### Small Area Labour Force estimates

The Department of Employment currently produces regional estimates of unemployment at a smaller scale (i.e: approximately 1400 Statistical Local Areas) than the ABS in its quarterly [Small Area Labour Markets](#) publication. The Department of Employment plans to migrate this product to the ASGS structures (SA2 level) as soon as practical after the ABS LFS data are released on an ASGS (SA4) basis. They also plan to backcast as far as the LFS data will allow. The ABS has explored the potential for the ABS to produce small area labour force estimates (Unemployment and Labour Force Participation). There is potential to improve the methodology of these estimates with ABS access to its unit record Labour Force Survey data and Census data. However, the ABS would also require access to timely unit record or fine level aggregate administrative data, which is currently not available. With access to the relevant data, the ABS could progress the methodological development and produce the

new estimates on an ongoing basis. However, this is not within the scope of the current ABS work program.

#### Data on non-standard employment arrangements

The ABS collects information about other aspects of people's employment arrangements, including non-standard employment arrangements, casual work and independent contractors. These data have been collected in the annual Forms of Employment survey (ABS cat. no. 6359.0) and many of these data items will be incorporated into the new annual Characteristics of Employment survey. Content for this new survey is being finalised, with some content available annually, and other content biennially. It is planned that information on casual employment (those employees without paid leave entitlements) will be collected in the LFS on a quarterly basis from August 2014. Historical data from Forms of Employment are available at the Labour Force Region level, with future data from the Characteristics of Employment survey to be available at the SA4 level. These data can help in presenting a picture of the nature of work in a particular region.

The ABS is planning further conceptual development work to provide a more comprehensive framework to define and characterise different employment arrangements.

#### Regional estimates of labour under-utilisation

In addition to the unemployment rate, the LFS also provides estimates of people who are "underemployed", that is those who work part time and who want to and are available to work more hours, and those who are employed full time but worked part time hours in the survey reference week for economic reasons (e.g. stood down). Estimates of labour under-utilisation are available for Australia, the states and territories in standard outputs. Regional underemployment data are not currently in ABS standard outputs but can be made available on request. The ABS is currently considering changes to standard outputs from the LFS, which may include regional underemployment.

Local populations may also include people who are not in the labour force and who could be targeted by local employment drives to lift the levels of labour supply and participation. Extended concepts of labour under-utilisation also includes "discouraged jobseekers" (p. 130, PC submission ) - people who are not in the labour force as they are not looking for work due to labour market reasons, such as they believe there are no jobs available. Regardless of the reasons that people are not in the labour force, it is important to know the characteristics and skills of people who are not in the labour force, which can be analysed with Census data. In addition, the annual Persons Not in the Labour Force survey (6220.0) collects information on reasons why people not in the labour force are not looking for work, including labour market reasons such as 'no jobs available in locality or line of work'.

### **2.3 Labour Mobility**

There are a number of current, or future, ABS collections which can provide relevant information about geographic labour mobility, long-distance commuting, tele-working and

the relationship between location of residence and location of work. There are some potential opportunities to enhance existing or future collections, and these are outlined below.

### Labour Mobility Survey

The ABS Labour Mobility survey provides information on people aged 15 years and over who, in the last 12 months, either had a change of employer/business in their main job, or had some change in work with their current employer/business, and for whom they had worked for one year or more. The survey has been conducted biennially in February as a supplement to the ABS monthly Labour Force Survey (LFS), most recently in February 2013. While the survey collects information regarding changes in employment arrangements and details of previous work, it does not collect enough data to inform on changes in work location or usual residence.

From February 2015, key elements of the Labour Mobility survey will be incorporated into the new Participation, Job Search and Mobility survey. While the labour mobility content will largely be consistent between the two surveys, the new survey will provide some information on geographic labour mobility by including data items on whether selected groups would be prepared to move interstate or intrastate if offered a job.

While currently out of scope of the ABS labour statistics work program, additional questions could be asked on this survey (or in a supplementary survey in a different month) about a range of topics related to geographic mobility, including regional and interstate changes in work location, long distance commuting, and reasons for changing work locations or commuting long distances.

There are some limitations with data from household surveys, for example while it may be possible to know how many people changed their work location inter-regionally within a state a territory, and the reasons for doing so, the sample size is unlikely to support data on which regions they moved from or to.

### Labour Force Survey - place of work

Information about a person's employer is collected quarterly in the LFS, but information about the location of work is not currently collected. There is potential to collect place of work on the LFS, but this is not in the scope of the current ABS work program. This would allow for compilation of the regional labour market based on where labour is being utilised. It should be noted, however that the sample size for the survey would limit the place of work outputs to the Statistical Area 4 (SA4) region (under the Australian Statistical Geography Standard (ASGS)). Many people would live and work in the same SA4 as these are quite large regions and SA4s have been designed to provide data for relatively self-contained labour markets. Where people live and work in different regions may provide an indicator of long distance commuting, although consideration of the implications for adjacent regions will be needed.

### Information on tele-working and working from home



The draft report notes information from the 2006 ABS Time Use Survey on tele-working. This item was planned to be included in the 2013 Work, Life and Family Survey, which was unfortunately cancelled. When development commences for the next Work, Life and Family Survey there may be an opportunity to further develop the concept of tele-working and appropriate survey questions, to produce a better and more meaningful measure.

The Locations of Work Survey (last run in November 2008) included items on whether a person usually works from home and the main reason for working from home. These items are planned to be included in the Characteristics of Employment survey on a 2-yearly basis (from August 2015), and there is the potential to revisit the reason categories to better capture tele-working arrangements.

## **2.4 Business level practices**

Currently, there is very little information available from ABS Labour Employer Surveys (LES) to inform on business practices in relation to long-distance commuting and recruitment practices of firms. However, as mentioned earlier, the ABS Labour Statistics Program is about to undertake an assessment of the information needs for labour statistics that are best provided through business surveys, targeted at human resources and payroll areas of businesses. This assessment could identify information needs around firm level practices related to recruitment and retention particularly in discrete locations, use of long distance commuting practices, amounts paid for employee travel and accommodation. Feedback will be sought from stakeholders on their information needs and their relative priority to other statistics, such as earnings and hours, job vacancies etc. to contribute to the future directions of the ABS LES program.

### Example - long distance commuting information

Further investigation is required as to whether sufficient detail can be gathered from employer surveys to provide an indication of workers who may be using long distance commuting practices. A number of options could be explored, for example this could be done with a new series of questions on existing employer/business surveys about workforce practices or by collecting financial information from employers on amounts paid to employees as a subsidy for long distance commuting arrangements. Generally, the lowest level of geographic information available from employer surveys is the state/territory level, unless a specially designed survey were conducted for this purpose (at greater expense). The level of detail able to be released would depend on data quality and confidentiality considerations.

## **2.5 Linked Employer Employee Dataset (LEED)**

Datasets that link business and employee information are a known data gap in labour statistics. There are a number of approaches to creating such a dataset including a tailored collection (such as the Australian Workplace Relations Study being conducted by the Fair Work Commission) or through integrating existing administrative and/or survey datasets.

The ABS has outlined the potential of a longitudinal Linked Employer Employee Dataset (LEED) through integrating Australian Taxation Office data from personal income tax (PIT) returns, employer payment summaries and employer tax returns. This would enable a wealth of statistical information to be produced about regional labour markets, including personal earnings, occupation and industry of employment, and changes in jobs for individuals over time.

If the LEED included geocoding of both the place of residence of the employee (from the PIT data) and place of work (from the employer data sets), this would provide an extensive national data set relevant to geographic labour mobility. Early indications suggest that unit record PIT address data can be successfully geocoded, and significant investment is currently also being made in the geocoding of business data (with the Australian Business Register (ABR) currently working on spatially enabling the ABR). There is likely to be some complexity to accurately link individuals to the correct location within large businesses, which will require investigation into the best methods. Longitudinal analysis of change in work place and/or residence may be feasible using these data, along with analyses of changes in employment characteristics (occupation and industry, as well as personal income). The LEED would be the ideal data set for analysis of geographic labour mobility, but would require significant work to establish the data set and develop the outputs.

### **3. Housing Supply**

There is a clear relationship between population flows associated with geographic labour mobility and the demand for housing and accommodation. The PC report finds that changes in accommodation, such as purchasing a home, generate significant *transactional costs* which may impede geographic labour mobility (p.153). To plan for and manage increased demand for housing, decision makers need information about housing stock and costs.

#### **3.1 Housing stock**

The Census provides regional housing stock data every 5 years. Approvals for new dwellings can also be monitored at regional levels, through the ABS Building Approvals published monthly as a main economic indicator. However, the ABS does not currently publish data on demolitions or net housing stock. To improve the availability of data for measuring housing supply, the ABS has investigated the feasibility of producing more frequent (annual) regional dwelling stock estimates. While it could be feasible to produce annual dwelling stock estimates for regions, this is a significant new statistical series which is not within the scope of current ABS work program.

#### **3.2 Housing cost**

The ABS measures housing costs in a number of ways. Regional data on mortgage and rental costs are available from the Census every five years. The Survey of Income and Housing provides detailed housing cost data, including mortgage and rental costs at the capital city / balance of state level every two years. Housing costs for home owners with a mortgage are also available for those that have recently purchased property, including changeover buyers and first home buyers. The ABS report on *Residential Property Price Indexes: Eight Capital*

*Cities (6416.0)* also provides quarterly estimates of the median sale price of dwellings and the number of sales for capital cities and balance of state areas.

Commercial providers of regional house sales and market prices utilise information from Valuer Generals data sets and from Real Estate sources. These sources can provide information on sales and market prices for small areas of Australia. However, statistical measures like the Residential Property Price Index (RPPI) produced by the ABS provide a standardised measure of the change in house prices based on assessment of the value of housing of comparable quality. The production of an RPPI for smaller regions of Australia (below the Greater Capital City Statistical Area level) is beyond the scope of the current ABS work program. Development of indexes covering areas outside the Capital Cities is being investigated by the ABS. As administrative data is supplied by each state/territory separately, the level of detail and type of information provided varies and there is limited national data available on property characteristics beyond the price, address and type of property.

## **4. Reasons for moving**

The PC report utilises a range of research studies to understand why people move. In addition to understanding the characteristics of regional populations and labour markets, the ABS provides some data sets that could be used to analyse why people move, including:

1. Australian Census Longitudinal Dataset (ACLD)
2. Survey of Income and Housing
3. General Social Survey

### **4.1 Australian Census Longitudinal Dataset (ACLD)**

In the first release of the Australian Census Longitudinal Dataset (ACLD) in December 2013, a 5% random sample from the 2006 Census has been brought together with corresponding records from the 2011 Census using data linkage techniques which will then be extended to future Censuses. This will provide an additional dimension to understanding geographic labour mobility and its effects on people and the communities in which they live. Analysis of this dataset could be used to understand how people's housing or employment circumstances have changed over time. For example changes in occupation or industry and place of work may be analysed, as could changes in, housing tenure, costs and size of dwelling over time. It is likely that regional analysis will be feasible for larger regions such as SA4s.

### **4.2 Survey of Income and Housing**

The Survey of Income and Housing (SIH) collects detailed housing information every two years which can be used to inform geographic labour mobility, including the living arrangements, economic resources and housing costs of households and affordability

analysis by capital city/balance of state. However, sample size restricts the availability of regional data.

The SIH collects detailed tenure data for the household and each person in the household as well as information about ownership of other residential property. Further analysis of data from the SIH could inform on the number of households in which people are currently renting or living rent free but own residential property elsewhere, which can help inform on changing tenure patterns, across Australia and over time.

The SIH also collects additional housing topics on housing mobility (last collected in 2007-08) and is currently being collected in the SIH 2013-14 which is expected to be released in mid-2015. The SIH 2013-14 sample has increased from approximately 9,000 households in 2007-08 to approximately 15,000 households which will support further regional disaggregation of this data than previously possible. The sample is designed to provide estimates by state, by capital city/balance of state. The relevant topics included in the SIH 2013-14 include:

- Number of years lived in current and previous dwelling
- Number of times moved in the last 5 years
- Structure of previous dwelling
- Location of previous dwelling
- Tenure and landlord type of previous dwelling
- Reasons for last move (including employment reasons)
- Likelihood of moving in the next 12 months
- Barriers to moving

#### **4.3 General Social Survey**

The General Social Survey (GSS) collects data on mobility of people including tenure of previous dwelling, reasons for moving and location of previous dwelling and this data could be analysed in combination with other wellbeing data collected in the GSS including social and community participation, life satisfaction, health status, access to services etc. This data has been collected in the 2006 and 2010 GSS and will be collected in the 2014 GSS. Data is available at national, state and territory level, for capital cities and rest of state, but not for smaller regions Australia.