



Australian Government
Productivity Commission

Geographic Labour Mobility

Productivity Commission
Issues Paper

July 2013

The Issues Paper

The Commission has released this issues paper to assist individuals and organisations to prepare submissions to the study. It contains and outlines:

- the scope of the study
- the Commission's procedures
- matters about which the Commission is seeking comment and information, and
- how to make a submission.

Participants should not feel that they are restricted to comment only on matters raised in the issues paper. The Commission wishes to receive information and comment on issues which participants consider relevant to the study's terms of reference.

Key study dates

Receipt of terms of reference	21 May 2013
Due date for submissions	21 August 2013
Release of draft report	December 2013
Final report to Government	21 May 2014

Submissions can be made:

By email:	labour.mobility@pc.gov.au	By fax:	+61 3 9653 2199
By post:	Geographic labour mobility study Productivity Commission Locked Bag 2, Collins Street East Melbourne VIC 8003		

Contacts

Administrative matters:	Yvette Goss	Ph: +61 3 9653 2253
Other matters:	Anthea Long	Ph: +61 3 9653 2162
Freecall number for regional areas:	1800 020 083	

Website www.pc.gov.au

The Productivity Commission

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long-term interest of the Australian community.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Further information on the Productivity Commission can be obtained from the Commission's website (www.pc.gov.au) or by contacting Media and Publications on (03) 9653 2244 or email: maps@pc.gov.au

Contents

1	What this study is about	1
	The Commission's approach	1
	How you can contribute to this study	2
2	What is geographic labour mobility?	3
3	Patterns of geographic labour mobility	5
4	Effects of geographic labour mobility	9
	Effects on individuals and their families	10
	Effects on businesses	11
	Effects on communities	12
	Effects on governments	13
	Effects on the broader economy	14
5	What are the determinants of geographic labour mobility?	14
	Implications of technological, structural and demographic developments	17
6	What role for governments?	19
	Attachment A: Terms of reference	22
	Attachment B: How to make a submission	24
	References	26

1 What this study is about

The Australian Government has asked the Commission to assess geographic labour mobility within Australia and its role in a well-functioning labour market (attachment A). Matters on which the Commission has been asked to report include:

- patterns of geographic labour mobility in Australia, the implications of structural, demographic and technological developments and key determinants of mobility
- impediments and enablers of mobility and their effect on the ability to meet Australia's continually changing workforce and employment needs
- the economy-wide impacts of reducing any impediments
- existing strategies by governments and businesses that affect geographic labour mobility and possible options to enable further mobility.

Geographic labour mobility is one element of a flexible labour market. It is an important mechanism for adjusting to labour demand shocks (such as factory closures), seasonal variations in labour supply, and to broader structural changes in the economy. By enabling labour to move to its best use across different regions of Australia (including outer metropolitan and non-metropolitan locations), it can alleviate labour shortages and regional disparities in labour market conditions, such as high levels of unemployment, and increase skills utilisation, earnings and community wellbeing.

At a basic theoretical level, shifts in regional labour supply or labour demand will lead to changes in wages and employment, which will affect an individual's incentives to work in a given region versus another. Yet, it is not just economic incentives that determine regional labour supply. In deciding where to live and work, people weigh up a complex range of costs and benefits. These costs and benefits are affected by a person's individual characteristics and circumstances (such as age and family considerations), a range of environmental, economic and social factors, and the actions of businesses and governments.

Geographic labour mobility is changing with advances in transport and communication technologies, and demographic and structural changes are also influencing where, how and when we work.

The Commission's approach

In assessing geographic labour mobility within Australia, the Commission will take account of the welfare of the community as a whole. The Commission seeks public

input into the study and will consult widely with stakeholders, drawing on input from participants through consultations, written submissions and roundtables.

The study will cover mobility of both those in jobs and those looking for work, including Indigenous Australians. It will consider movements of labour across regions of Australia, including outer metropolitan and non-metropolitan locations. It will also cover the mobility of jobs, firms and economic activity, to the extent that they affect the demand for labour and the way that labour demand and supply interact to send market signals to workers.

The terms of reference request the Commission to assess geographic labour mobility *within* Australia. Therefore, this study will not explicitly look at international migration apart from considering its effects on domestic regional labour supply and demand.

In conducting the study, the Commission will examine the available data on geographic labour mobility, and explore the potential for using economic modelling to inform its analysis.

The Commission will also take into account other relevant inquiries and reviews, such as the Standing Committee on Regional Australia's recently released report on 'fly-in, fly-out' (FIFO) workforce practices (HRSCRA 2013), relevant work conducted by the RBA (Connolly and Lewis 2010; Debelle and Vickery 1998; Lawson and Dwyer 2002) and past Commission work in the area including reports on Impediments to Regional Adjustment (IC 1993) and Aspects of Structural Change in Australia (PC 1998), and analysis contained in the 2012 Annual Report (PC 2012).

How you can contribute to this study

The Commission is seeking feedback from a wide and representative range of stakeholders. It has commenced an informal consultation process and is inviting submissions from organisations and individuals with an interest in geographic labour mobility. (Attachment B outlines how you can make a submission.) Some particular areas where the Commission would appreciate input are highlighted in the subsequent sections of this issues paper. The Commission is seeking initial submissions by 21 August 2013. Wherever possible, submissions should be supported by evidence.

Drawing on the input it receives, and on its own analysis, the Commission will produce a draft report in December 2013. This will detail the Commission's preliminary conclusions and draft recommendations, and will provide a further

opportunity for participants to express their views before a final report is submitted to Government by 21 May 2014.

2 What is geographic labour mobility?

Geographic labour mobility is a specific aspect of labour mobility. Labour mobility generally refers to the movement of people from one job to another. Geographic labour mobility provides a locational perspective on labour mobility.

Geographic labour mobility is not defined in the terms of reference for this study, and there are many possible meanings. For example, it could include long-distance commuting and telecommuting, or be limited to permanent residential moves. It could be restricted to movements specifically for employment reasons (such as moves to take up a new job, or look for a new job), or include all moves that affect the supply of labour in regional labour markets (box 1). It could also encompass employers moving their operations to access a greater pool of workers or workers who are more appropriate for their business.

Box 1 Regional labour markets

A regional labour market is the geographical area within which employers search for employees and workers search for jobs. It is affected by distance, travel time and convenience between possible workplaces and a job seeker's residence. What constitutes a regional labour market is likely to vary by occupation, among other things. For example, a financial analyst who moves from the inner suburbs to an outer metropolitan area of a city for lifestyle reasons might be expected to remain in their CBD job. Thus, the inner metropolitan and outer metropolitan areas as a whole could be considered one regional labour market for financial analysts. For another occupation where job opportunities are more geographically dispersed, such as gardeners, this might not hold and the inner and outer metropolitan areas might be considered separate regional labour markets.

The question of how to define a regional labour market will have practical relevance in that it will determine how movement is estimated across boundaries. In practice, researchers tend not to define 'regional labour markets' but rather assume that moves over a certain distance would necessitate a change in job. Thus, efforts to analyse labour mobility between regional labour markets often focus on administratively defined areas. For example, some studies have analysed moves between postcodes (Bill and Mitchell 2006). Others have focused on moves between statistical local areas (Mitchell 2008a) or states (IC 1993). An alternative approach develops 'functional' labour market areas based on analyses of economic behaviour, for example the commuting patterns of workers (OECD 2000).

The Commission is particularly interested in understanding geographic labour mobility in terms of the flexibility it provides for matching workers and jobs across locations. At this stage, the Commission's preliminary view is that geographic labour mobility entails people's work relocation (including permanent, temporary and virtual relocation) and could include all of the items listed in box 2.

While considering all of these possibilities, the Commission's analysis may focus on a subset of 'moves' depending on the policy question addressed and the data available.

Box 2 What could be considered part of geographic labour mobility?

Labour supply and demand in a particular area could increase or decrease for a range of reasons, including where people:

- relocate their usual residence to an area to look for a new job, or to start a new job, or to set up a new business
- relocate their usual residence because their existing job has been relocated
- relocate their usual residence for reasons other than employment, but change jobs as a result
- commute into an area for job purposes
- fly in and out (or use other forms of transport) of an area for a job (take up temporary/part-time residence)
- telecommute
- work from home.

A very broad definition of geographic labour mobility could incorporate all of these activities, whereas a narrow definition might focus only on movement of people into an area to start a new job.

- *What role does geographic labour mobility play in a well-functioning labour market?*
 - *Why is it important?*
 - *Has this role changed over time?*
- *What are the possible elements of geographic labour mobility?*
 - *What are the advantages and disadvantages of different interpretations of geographic labour mobility? What are the practicalities involved?*
 - *How should long-distance commuting and telecommuting be treated? What about commutes from outer metropolitan to inner metropolitan areas?*

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- *How might structural, demographic and/or technological developments change how we interpret geographic labour mobility now and in the future?*
 - *What might constitute a regional labour market? How could this be defined from a practical perspective?*
 - *How can geographic labour mobility be measured in practice given the data available?*

3 Patterns of geographic labour mobility

The terms of reference ask the Commission to examine patterns and trends in geographic labour mobility (including by state/region, industry, occupation, skill level, form of employment and demographic characteristics). Box 3 outlines some of the data sources that can be used to look at different aspects of geographic labour mobility (as discussed in section 2).

The Commission is anticipating undertaking various analyses to understand the patterns of geographic labour mobility. The Commission will consider general trends in population movement across Australia. For example, this could highlight evolving trends of population movement towards high-employment states such as Queensland and Western Australia (D'Arcy et al. 2012) and movement from capital cities to coastal and near-city areas, and from regional inland areas to regional coastal areas (BITRE 2011b; Hugo and Harris 2011). These trends in regional and interstate movements appear to be reflected in trends in regional population growth (figure 1).

The Commission anticipates also analysing available data to better understand the characteristics of those who move and change jobs, how far they move and why (whether for employment or other reasons). Data from the ABS and the *Household Income and Labour Dynamics in Australia* (HILDA) survey indicate that about 16 per cent of the population¹ move residence each year (Hugo 2012; Watson 2011). This rate has not changed much over recent decades (Bell 1996; Hugo 2012).

¹ HILDA data refer to adult employees not studying full time.

Box 3 **Possible data sources**

There are a number of potential data sources that could be used in this study. These include the *Census of Population and Housing* (Census) and the *Household, Income and Labour Dynamics in Australia* (HILDA) survey.

Census

The Census is a national survey undertaken every five years, most recently in 2011. Individuals are asked where they usually lived one year and five years prior to the survey. Individuals are also asked questions about their education, employment, income, family and family background. It does not include questions about motivation for moving.

HILDA

The HILDA survey is an annual survey of about 20 000 people undertaken since 2001. It includes longitudinal data on individuals who have moved residence, the distance they moved, when they moved, and their motivations for moving. Individuals are also asked questions related to education, employment, income, family and family background. However, the sample of individuals who move for employment reasons is very small, which restricts detailed analysis.

Other

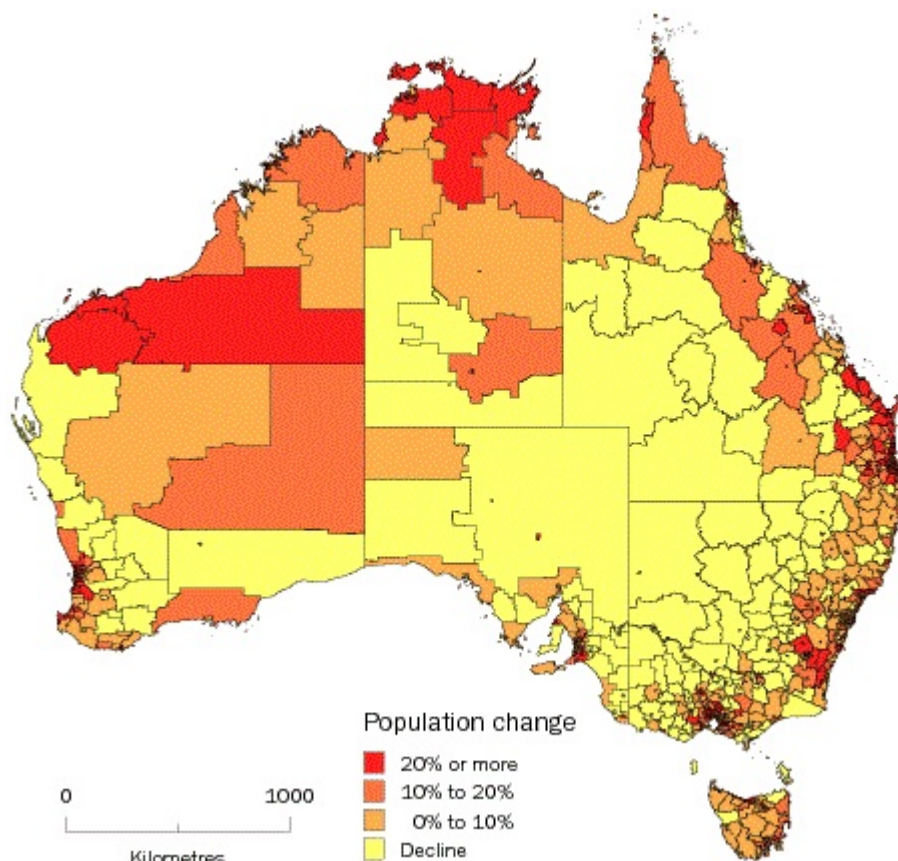
There are a number of ABS data sources that also provide information on geographic labour mobility, including:

- *Migration, Australia* — an annual survey that includes overseas, interstate and experimental regional migration estimates
- *Survey of Income and Housing* — the 2007-08 survey includes data on residential moves
- *Longitudinal Labour Force* — contains longitudinal labour data from the monthly labour force survey for 2008–2010
- *Labour mobility, Australia* — a biennial survey containing detailed job change data.

Other relevant data include the Department of Education, Employment and Workplace Relations Labour Market Information Portal, Department of Immigration and Citizenship overseas migration data, Bureau of Infrastructure, Transport and Regional Economics data on air travel and commuting, and Australia Post change of address data.

Sources: ABS (2009a, 2009b, 2012a, 2012b, 2012c); Australia Post (2013); BITRE (2011a, 2013); DEEWR (2013c); DIAC (2013); Summerfield et al. (2012).

Figure 1 **Population growth by Statistical Areas Level 2, 2001–2011**

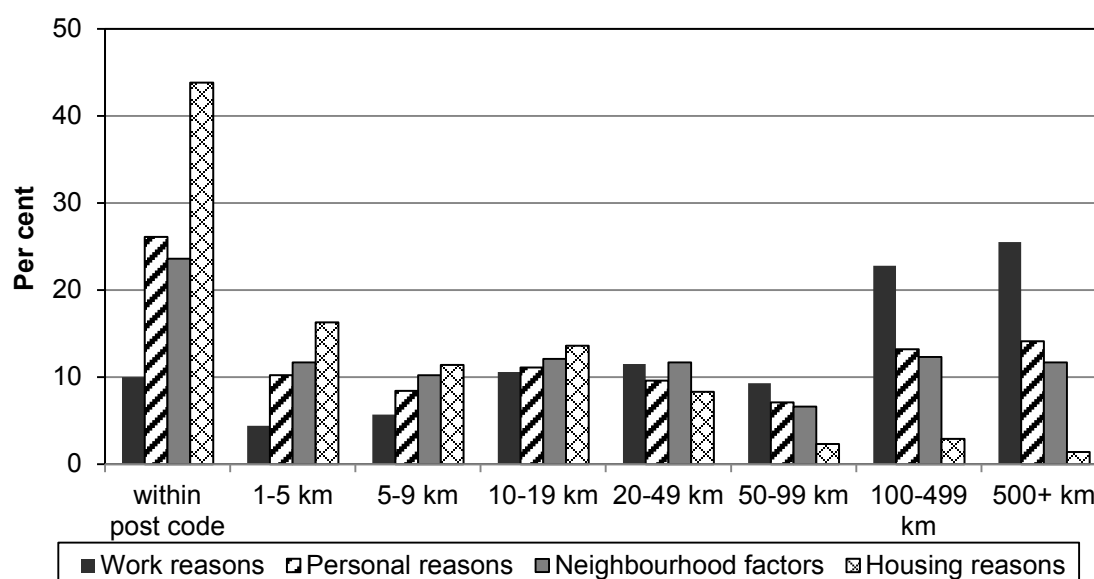


Source: ABS (2012d).

Available data also show that most residential moves are over short distances — about two thirds of all moves are less than 10 kilometres (Clark 2012) — indicating that people generally move within cities or regions, rather than between them (BITRE 2011b).

An initial assessment of the literature suggests most people do not move for employment-related reasons. The most common reasons for moving relate to housing and family. Housing-related reasons are cited by about 50 per cent of people who move residence, and family reasons are cited by about 30 per cent (ABS 2010; Watson 2011). In contrast, employment reasons are only cited by between 10 and 17 per cent of residential movers, depending on the data source used (ABS 2010; Watson 2011). However, people moving for work reasons are more likely to move longer distances (figure 2).

Figure 2 Reasons for moving by distance 2002–2004^a



^a Reasons for moving not included in this graph are spouse/family reasons and other reasons.

Source: Bill and Mitchell (2006).

Young people are much more likely to move; 25–29 year olds are twice as likely to make residential moves as the overall working-age population (ABS 2010). Other individual characteristics that are associated with an increased propensity to move are discussed in box 4.

- *What are the important trends in geographic labour mobility in Australia?*
- *What is the relative contribution of these trends to regional labour supply?*
- *What data sources and studies on trends in geographic labour mobility (including long-distance commuting, telecommuting and working from home) should the Commission draw on in undertaking this study?*
 - *What are the advantages and disadvantages of different data sources?*
 - *What are the limitations of the data sources and studies on geographic labour mobility?*
- *Are there data sources that would enable Australian geographic labour mobility to be benchmarked against other developed countries?*

Box 4 **Characteristics of movers**

Age

Young adults are much more likely to move compared to the overall adult population (ABS 2010). Young adults also have different patterns of movement. While the general population has tended to move towards coastal regional areas, young adults are moving out of regional areas and into urban locations (BITRE 2011b).

Indigenous status

Using *Household, Income and Labour Dynamics in Australia* (HILDA) survey data, Bill and Mitchell (2006) found that Indigenous Australians have higher rates of mobility than the rest of the working-age population.

Family composition

Survey of Income and Housing (SIH) data indicate that people in young households without children and single parents with dependent children are more mobile than the general working-age population (ABS 2010).

Housing status

SIH and HILDA survey data show that private renters are more likely to move residence than public renters or those who own their house or are currently paying off a mortgage (ABS 2010; Bill and Mitchell 2006).

Skills

Mitchell (2008b), using HILDA data, found that higher-skilled individuals move residence more frequently than individuals with lower skill levels.

Employment status

Census, HILDA and SIH data indicate that unemployed people are more likely to move than those who are employed and those not in the labour force (ABS 2010; Bill and Mitchell 2006).

4 Effects of geographic labour mobility

The decision to relocate can have far-reaching effects on the worker and their families. And more broadly, changes in the location of workers can affect businesses, communities and the entire economy.

Why we should be concerned about where people live and work

Individuals' choice of residential location can have important implications for their wellbeing, through its effects on job prospects, financial security and social inclusion. Geographic labour mobility — whether it encompasses permanent, temporary or virtual moves by workers or firms — allows individuals to make the most of their skills by accessing the most appropriate job. It also benefits employers by allowing them to access the widest and most appropriate pool of workers. But long commutes and separation from family and friends may adversely affect the wellbeing of the individual, their family and community.

Mobility trends can determine the social, cultural and economic circumstances of regions, and either promote growth or further entrench disadvantage (Dufty-Jones 2012). Across the economy, geographic labour mobility can support communities in adjusting to structural change and reduce regional disparities.

Effects on individuals and their families

The effects of mobility on individuals depend on their personal circumstances, their motivations for moving and the type of move undertaken. A permanent move to a new place of residence will have different effects compared with a temporary relocation for work purposes, such as taking up a FIFO position.

Existing evidence on the labour market outcomes for those who move permanently (whether they move for employment or other reasons) is mixed. Past research has found that unemployed people are more likely to be employed following a move, while employed people are less likely to have a job in the short term after relocating. However, these results depend on the destination of the move — those who move into a stronger labour market tend to have better outcomes (Sweet 2011). For low-skilled workers, moving may lead to an improvement in wages (Mitchell 2008b). On average, moving has been found to have a negative effect on the labour market outcomes of Indigenous people (Biddle 2010).

Permanent relocations over substantial distances can have significant effects. In the short term, individuals may have fewer personal contacts and social networks (Sweet 2011). When the entire household moves, relocation may entail a spouse changing jobs and children changing schools. Relocation, however, often has positive effects on the overall wellbeing of the household — moving to a bigger or better home was the most common reason cited by recent movers (ABS 2010). It can also improve access to amenities, such as better schools.

The effects of temporary moves, and in particular FIFO, can differ substantially. In recent times, FIFO moves have been associated with highly paid jobs in construction and mining or related industries. Unions and other bodies have reported that these jobs can take a significant toll on the individual and their family, including health problems, drug use and relationship breakdowns (HRSCRA 2013). In other cases, however, these roles can be better suited to individual circumstances, and allow workers to maintain access to amenities and infrastructure, or create a better work-life balance (de Silva, Johnson and Wade 2011). Long-distance commuting also has the potential to spread the benefits of the growth in mining industries more broadly (HRSCRA 2013).

While moving has inherent risks, a lack of mobility can also have a detrimental effect on individuals in disadvantaged areas. Research has found that individuals who remain in disadvantaged regions tend to be those with lower educational attainment and lower incomes than those who move away from those regions, and may find it increasingly difficult to mitigate the effects of locational disadvantage (Ryan and Whelan 2010).

- *How can the effects of geographic labour mobility on individuals and families be quantified?*
- *What evidence is there on how geographic labour mobility affects individuals and their families?*
 - *How do these effects differ by circumstance and region?*
 - *Are these effects temporary or do they tend to persist?*
 - *How do these effects differ between those who move temporarily and permanently?*
 - *How important are the education and skill levels of individuals in terms of these effects?*
 - *How have these effects changed over time?*

Effects on businesses

Individuals' decisions to move will be partly influenced by the actions of businesses (section 5). In turn, businesses will respond to geographic labour mobility trends by expanding in areas of emerging demand and moving out of regions that are experiencing a decline in population (Krugman 1990).

The effects of mobility will differ across businesses. Businesses that need to locate in particular areas, such as those in mining, are more likely to depend on a

geographically mobile workforce. For businesses that locate close to markets (either the final market for their product or a skilled labour market) (section 5), the effects of geographic labour mobility will generally depend on whether a region's population is increasing or decreasing. An influx of population will have a positive effect on the demand for goods and services, and the pool of labour and skills available. The opposite applies for regions that people leave (Ottaviano and Thisse 2004).

Declining transportation costs and technological advances have allowed businesses to broaden their geographic scope, and operate across larger labour markets. For such businesses, particular locations are becoming less relevant. As infrastructure and technology improves, businesses are expected to create more telecommuting jobs across a range of industries (Colmar Brunton Research and Deloitte Access Economics 2012).

- *How does geographic labour mobility affect businesses?*
 - *How do these effects differ by industry, region, and/or business structure and size?*
 - *How have these effects changed over time?*
 - *How have these effects changed as a result of technological advances?*
- *How can the effects of geographic labour mobility on businesses be measured?*

Effects on communities

Where geographic labour mobility leads to permanent residential moves, certain areas will experience relative population growth, while others will see their populations decline in relative terms.

In areas of population growth, community-wide costs may include congestion, and demand pressures on the local natural environment, and on urban and social amenity. Community-wide benefits may include increased economic activity, enhanced diversity, and improved infrastructure (Arnott 2011).

Population decline may cause shifts in regional population composition (for example, an increase in the proportion of older residents as the younger population moves away), while the decline in demand can lead to closures of essential services. This can pose substantial risks to the ongoing viability of communities (Beer 2012).

Temporary moves can have complex effects on communities. For example, while FIFO work practices can increase demand for certain goods and services,

submissions to the Standing Committee on Regional Australia's inquiry into the use of FIFO work practices have reported substantial increases in living costs, safety concerns and erosion of existing social capital in some regional communities (HRSCRA 2013).

- *What is the evidence on how geographic labour mobility affects regions and communities?*
 - *How have these effects changed over time?*
 - *How do the effects differ by community or region?*
- *Do temporary moves impose particular challenges for communities? Do these differ between the community where workers reside, and where they are employed?*
- *What is the overall impact of geographic labour mobility on specific regions?*

Effects on governments

Geographic labour mobility can have important effects on all levels of government, as they need to contend with demographic changes and their impacts on government budgets (via changes to tax revenue and demand for transfers) and changing demand for government services.

Local governments' income is affected by changes in their population levels. Changes in population can affect financial assistance grants as well as local governments' own revenue base. However, rate pegging may affect the speed at which the rate base adjusts to increases in population. In addition, demand for the community services provided by local governments may change as workers relocate. When geographic labour movements are temporary, local governments may face challenges when demand for local services increases but is not matched by an increase in income (HRSCRA 2013).

As population flows change, state and territory governments also need to adjust housing, infrastructure, health and education policies accordingly.

For the Australian Government, an increase in employment facilitated by geographic labour mobility can reduce demand for some government payments, while at the same time increasing tax revenue.

- *How does geographic labour mobility affect governments?*
 - *How have these effects changed over time?*
 - *How do these effects differ by level of government?*

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- *How have governments responded to these effects? Have the existing governance and planning processes been adequate in dealing with the effects of mobility?*
 - *How can the effects of geographic labour mobility on the different levels of government be measured?*

Effects on the broader economy

Geographic labour mobility plays an important part in a flexible, well-functioning national labour market, which is able to adapt to shocks and address disparities in unemployment across regions (OECD 2005).

In a well-functioning market, geographic labour mobility allows for a better matching of skills and job opportunities. By doing this, it can enhance employment and productivity, and reduce disparities in unemployment and incomes across regions. An increase in employment can reduce demand for government support payments, while at the same time increasing total tax revenue. Conversely, a lack of mobility can lead to persistent disparities in regional labour market performance and increased inequality in income and social conditions, which pose challenges to policy makers (OECD 2005).

However, mobility also carries risks for individuals and communities. Excessive levels of labour mobility have the potential to inhibit social cohesion and the building of community capacity (Shah et al. 2012).

- *How does geographic labour mobility affect the broader economy?*
 - *How have these effects changed over time?*
 - *What are the economic variables most affected by geographic labour mobility (for example, unemployment, participation, economic growth)?*
- *How can the effects of geographic labour mobility on the economy be measured? Could economic modelling be useful in measuring these effects?*

5 What are the determinants of geographic labour mobility?

The terms of reference ask the Commission to identify the key determinants and drivers of mobility, and any differences in these between groups (such as employed and unemployed people), and to assess the effectiveness of market signals, such as wages.

The relocation decisions of individuals will be affected by an assessment of the expected net benefits over time of two courses of action: moving or remaining in their current location. These net benefits are influenced by a range of interacting and, at times, competing factors, some of which will encourage people to ‘go’, and others which will encourage people to ‘stay’. The Commission is interested in understanding the operation of these factors in more detail, particularly those that act as impediments to geographic labour mobility.

Some of the factors that affect relocation decisions relate to the personal characteristics of the individual, such as age, education, marital status, employment status, Indigenous status, the nature and level of skills, housing status and risk aversion (section 3). For example, younger people might be more inclined to relocate than older people as they have fewer ties in their existing location, and people who are more risk averse might be more inclined to stay to avoid the uncertainty associated with moving to a new location. Evidence shows that those with a higher level of skills, and/or skills that are less firm-specific, are also likely to be more mobile (Mitchell 2008b; Ryan and Whelan 2010).

Economic factors also play a role in relocation decisions. Market signals such as the relative availability of work, wages and costs of living are key determinants. The value of other pecuniary and non-pecuniary benefits associated with employment — such as the provision of residential accommodation, the nature of the job, leave entitlements and other work entitlements — are also important.

As noted in section 1, as well as the level of unemployment and number of vacancies in a particular region, differences in wages across regional labour markets will affect the total net benefits of supplying labour in a given region versus another. So an increase in wages in a particular region will, all else equal, encourage the movement of workers from other regions with lower wages. Labour demand plays an important role in sending these signals and, therefore, as a determinant of geographic labour mobility (box 5).

Other relevant economic factors include the transaction costs of moving, including physical relocation costs, housing costs, and information costs associated with researching the new location. Housing costs and availability may be especially important. The Commission is particularly interested in evidence about the role of housing tenure and cost in influencing geographic labour mobility.

Social and environmental factors also affect an individual’s decision to move, and can be significant. Some of these are location specific, and include climate, geographic proximity to other locations, safety, infrastructure availability and other lifestyle factors.

Box 5 Labour demand

People move for a variety of reasons, but their decisions are influenced by where jobs are located. Employers will choose where to locate by balancing proximity to factors of production such as natural resources, and proximity to markets (Ottaviano and Thisse 2004).

- For some firms, such as mining companies and agricultural businesses, proximity to a physical resource is the most important determinant of location. Such businesses depend on a geographically mobile and/or seasonal workforce.
- In other industries, however, proximity to markets — either the final market for their product or a skilled labour market — will be the key determinant in business location decisions. When firms choose where to locate based on the available labour supply, firm mobility can substitute for geographic labour mobility.

Others arise (to varying degrees) irrespective of the specific location in question, and include:

- family — considerations include employment opportunities for other family members, carer obligations to elderly or ill relatives, and arrangements for young children, including formal and informal childcare and school enrolments
- social networks — considerations include links with the local community, friends and other networks.

The actions of governments, businesses and other organisations can also influence location decisions. For example:

- Businesses might offer incentives to workers to encourage them to relocate, such as assistance with moving costs, temporary accommodation or permanent family housing in the new location, and sign-on bonuses. Businesses may also provide greater opportunities to work from home or FIFO arrangements.
- There may be limitations on where workers can live. For example, the Commission has been advised of requirements for workers to have a permanent residence within a set distance of a mine.
- Governments might also offer incentives to workers to relocate, such as grants and tax concessions for people working in rural or remote areas. Other government policies might encourage people to stay in their present location, such as different occupational licensing schemes across regions, or the provision of public housing in specific locations (Dufty-Jones 2012; IC 1993) (section 6).
 - Taxation policies can also impact geographic labour mobility, including the differential treatment of owner-occupied and rental housing, stamp duties on house purchases and the fringe benefits tax treatment of employer provided

or subsidised accommodation (HRSCRA 2013; IC 1993; OECD 2005; Sánchez and Andrews 2011; Storey 2001).

- *What is the most useful way of defining and classifying the determinants of geographic labour mobility?*
- *What evidence is available on the factors determining a worker's decision about whether or not to relocate?*
 - *How have these factors affected the decisions of Australian workers?*
 - *Which factors have had the largest effect and why?*
 - *How have these factors changed over time?*
 - *How are they expected to affect decisions in the future?*
- *What are the key impediments to geographic labour mobility and how are they changing over time?*
- *What actions do governments and businesses take that influence geographic labour mobility? What evidence exists on their impact?*
 - *Is there a role for businesses to promote geographic labour mobility? How can they go about it?*
- *What are the factors that influence the location of economic activity and, in turn, the regional demand for labour?*

Implications of technological, structural and demographic developments

The terms of reference ask the Commission to examine the implications of technological, structural and demographic developments on patterns of geographic labour mobility. These developments are changing — and are likely to continue to change — the way that people work, and the decisions they make about relocating.

Technological developments

Technology is changing the way people work and commute to work. Advances in technology are making it easier for people in some industries to work from home or at a location away from their employer. Therefore, it is no longer necessary for people in some industries to relocate to where the jobs are — the jobs themselves are becoming more mobile.

Information on job vacancies in other locations is also easier to come by due to advances in communications. This can enable jobs to be filled from a much broader geographic area.

Advances in transportation are also opening up more opportunities for people to commute to work over long distances, especially in industries where jobs are not mobile, such as mining and construction. For example, cheaper and faster air travel has made FIFO increasingly feasible.

Structural developments

Changes to the structure of the economy could impact on geographic labour mobility. For example, the increasing share of services in the economy relative to manufacturing could lead to fewer people needing to relocate for work. Many jobs in the services sector are located close to residential areas, and with increases in technology many jobs in the professional services industry can be performed at home or away from the location of the employer. On the other hand, the increase in mining activity in some regions, and decline in manufacturing in others, is likely to be influencing where people move for jobs. Changes in business size and structure (for example, sub-contracting and independent consultants) could also be influencing how and where people work.

Demographic developments

Population ageing could affect the extent and type of population movements. For example, older workers might be less inclined to move, or might tend to move to locations where they plan to retire. Changes in household composition could also affect the nature of relocations. For example, smaller household sizes and fewer dependants might make people more mobile. However, the increased prevalence of households with two incomes could make relocation decisions more complex given the need to account for the effect of moving on the other income earner.

Changes in international migration patterns also play a role. Overseas workers can overcome short- to medium-term labour shortages or act as a substitute for using local workers. This will affect the demand for domestic workers and, in turn, their location decision. Moreover, recently arrived migrants may have a different tendency to relocate within Australia relative to the rest of the population.

- *What are the implications of technological, structural and demographic developments on patterns of geographic labour mobility?*
 - *How have these factors affected the decisions of Australian workers to date?*

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- *How are they expected to affect decisions in the future?*
 - *Which factors have had the largest effect and why?*
 - *What effect does international migration have on geographic labour mobility in Australia?*

6 What role for governments?

Geographic labour mobility can have far-reaching impacts on individuals, communities and the entire economy. As discussed in section 4, these impacts can be both positive and negative. In this context, is there a role for governments to influence geographic labour mobility where this can improve the wellbeing of the community as a whole?

In general, competitive markets efficiently allocate resources (including labour) through the decisions and interactions of businesses and households. However, in certain circumstances, markets may fail to allocate resources efficiently (market failures) and government intervention could therefore improve community wellbeing. Governments may also wish to intervene to address equity issues related to geographic labour mobility.

Governments can influence the negative and positive impacts of geographic labour mobility by:

- removing impediments to geographic labour mobility
- introducing policies that encourage geographic labour mobility
- introducing policies that address any undesirable effects of geographic labour mobility.

Many government policies are already in place that directly or indirectly influence geographic labour mobility (box 6), and Australian governments have a long history of seeking to affect geographic labour mobility. The Commission invites submissions on the effectiveness of these policies.

In some cases, policies designed to influence mobility may do so ineffectively or inefficiently. In other cases, policies and regulations designed for other purposes may have unintended consequences for geographic labour mobility. There may be scope to amend or remove such policies and regulations, improving geographic labour mobility and community wellbeing overall.

In making assessments about the desirability of policy approaches, or the effectiveness of existing policy approaches, the costs and benefits of addressing the policy problem (including no government action) need to be assessed.

Box 6 Examples of policies directed at influencing geographic labour mobility

Some policies are aimed directly at providing incentives for people to relocate for work:

- **Grants for relocation**

- The *Regional Relocation Grant* (NSW) offers grants to people who relocate from metropolitan NSW to regional NSW.
- The *Connecting People with Jobs* program (Cmwlth) provides grants to unemployed job seekers to cover the costs of relocating to start work in a new region. Their employers may also be eligible for subsidies.

- **Tax concessions for people living in remote areas**

- The *Remote Zone Tax Offset* (Cmwlth) provides an income tax offset for people living in designated remote areas.

- **Tax concessions and grants for regional job creation**

- The *Putting Locals First* grants program (Vic.) includes grants for local governments and businesses that create jobs or support local economic development.

- **Occupation-specific policies**

- The *General Practice Rural Incentives Program* (Cmwlth) offers a range of payments to general practitioners and registrars who choose to practice in rural areas.
- The *HECS-HELP Benefit for early childhood education teachers* (Cmwlth) provides a reduction in debt accrued under the Higher Education Loans Program for teachers who teach in ‘areas of high need’ including any area of rural or remote Australia.

General policies, such as regional development, procurement and decentralisation policies, can indirectly encourage a higher level of geographic labour mobility. Some taxation policies, such as the fringe benefits tax treatment of employer provided or subsidised accommodation, can also affect the type of geographic labour mobility.

Some policies may indirectly impede geographic labour mobility. Examples include policies that prevent the recognition of differential occupational licensing schemes across regions, stamp duty on house purchases, differences in tax treatment of owner-occupied housing and private rentals, and policies related to affordable housing, including the location of public housing and price and assistance for private rental accommodation.

Sources: ATO (2012); DEEWR (2013a, 2013b); Dufty-Jones (2012); HRSCRA (2013); IC (1993); NSW Office of State Revenue (2013); OECD (2005); RDV (2013); RRHA (2013); Sánchez and Andrews (2011) and Storey (2001).

Policies that indirectly influence geographic labour mobility are likely to be more difficult to evaluate. In these cases, consideration must be given to whether any indirect costs are greater than the benefits achieved through addressing the primary policy objective. Further, the costs of any unintended consequences on geographic labour mobility may not be easy to quantify.

- *Is there a role for governments to influence geographic labour mobility?*
 - *If so, what might this role involve?*
- *What existing regulations or policies either directly or indirectly affect geographic labour mobility?*
 - *How have these regulations or policies affected geographic labour mobility?*
 - *Have those regulations or policies designed to influence geographic labour mobility been effective/appropriate? Have outcomes matched expectations?*
 - *Has there been any policy evaluation of these regulations or policies?*
 - *How could these regulations or policies be improved?*
 - *Is there a case for removing some of these regulations or policies?*
 - *Do these regulations or policies have any unintended consequences? Alternatively, would removing or amending these regulations or policies have any unintended consequences?*
- *What past policies aimed at influencing geographic labour mobility have proven to be effective?*
- *What other policy options are available to governments to affect geographic labour mobility?*
 - *What would be the costs and benefits of these policy options for workers and their families, businesses, local communities and governments?*
- *What are the best ways to manage the effects of geographic labour mobility so that it has an overall positive effect on community wellbeing?*
 - *Is there a role for governments to address any undesirable effects of geographic labour mobility?*
 - *If so, what might this role involve? What policy options are available?*
 - *How would these policies work? What would be the costs and benefits of these policy options for workers and their families, businesses, local communities and governments?*
- *What lessons can be drawn from overseas experience in the area of geographic labour mobility?*

Attachment A

Terms of reference

GEOGRAPHIC LABOUR MOBILITY

I, David Bradbury, Assistant Treasurer and Minister Assisting for Deregulation, pursuant to Parts 2 and 4 of the *Productivity Commission Act 1998*, hereby request that the Productivity Commission undertake a research study assessing geographic labour mobility within Australia and its role in a well-functioning labour market.

The principal objective of the study will be to examine patterns of mobility, impediments and enablers, and their effect on the ability to meet Australia's continually changing workforce and employment needs.

While the different types of labour mobility are related, the primary focus of this study is to be on geographic mobility, given regional variations in the demand for workers by occupation and supply capacity, including seasonal variations.

Geographic mobility is especially valuable in an evolving and multi speed economy, helping people to adapt and connect with the job opportunities available in different regions of Australia, including outer metropolitan and non-metropolitan locations. Enabling geographic mobility can help to relieve labour shortages, increase skills utilisation and improve earnings.

People weigh up a complex range of costs and benefits when deciding where to live and work (including economic, social and environmental factors) and they can face diverse barriers (from the availability of affordable housing to information deficiencies, transport connections, difficulties in skills recognition and transaction costs). A comparative understanding of these issues and underlying causes will help different stakeholders to best support geographic mobility.

In undertaking this study, the Commission is to:

1. examine patterns and trends in geographic mobility (including by state/region, industry, occupation, skill level, form of employment and demographic characteristics), their relative contribution to regional labour supply, and the implications of structural, demographic and technological developments;
2. identify the key determinants and drivers of mobility, including the costs and benefits from the perspectives of businesses, individuals, their families and governments (indicating the composition of costs faced and potential benefits in a range of representative circumstances and regions), any differences in the

determinants and drivers of mobility between groups (such as employed and unemployed people), and an assessment of the effectiveness of market signals, such as wages;

3. identify the major impediments to geographic mobility to support economic adjustment, employment and productivity outcomes;
4. assess the current strategies used by employers and governments that affect geographic mobility, and discuss possible options to enable further mobility; and
5. estimate the prospective economy-wide impacts of reducing impediments to geographic mobility.

In undertaking the study, the Commission is to consult with governments and other interested groups; and take into consideration any recent work relevant to the study (including key international findings).

The Commission is to provide both a draft and a final report, with the final report due within twelve months of receipt of the Terms of Reference. The reports will be published. To assist in future policy formulation, the Commission should also publish any modelling underpinning its analysis.

David Bradbury
Assistant Treasurer

[Received 21 May 2013]

Attachment B

HOW TO MAKE A SUBMISSION

The Commission invites interested people and organisations to make a written submission.

Each submission, except for any information supplied in confidence (see below), will be published on the Commission's website shortly after receipt, and will remain there indefinitely as a public document. Copyright in submissions sent to the Commission resides with the author(s), not with the Commission.

How to prepare a submission

Submissions may range from a short letter outlining your views on a particular topic to a much more substantial document covering a range of issues. Where possible, you should provide evidence, such as relevant data and documentation, to support your views.

This is a public review and all submissions should be provided as public documents that can be placed on the Commission's website for others to read and comment on. However, under certain circumstances the Commission can accept sensitive material in confidence, for example, if it was of a personal or commercial nature, and publishing the material would be potentially damaging. You are encouraged to contact the Commission for further information and advice before submitting such material. Material supplied in confidence should be provided under separate cover and clearly marked 'IN CONFIDENCE'.

How to submit a submission

Each submission should be accompanied by a submission cover sheet. The submission cover sheet is available on the study webpage. For submissions received from individuals, all personal details (for example, home and email address, phone and fax number) will be removed before it is published on the website for privacy reasons.

The Commission prefers to receive submissions as a Word (.doc) file attachment to an email (see address below). PDF files are acceptable. To ensure your PDF is as electronically readable as possible, the Commission recommends that it is derived from word processing software (for example, Microsoft Word or Lotus notes) and not from a scanner, fax or photocopying machine.

Track changes, editing marks, hidden text and internal links should be removed from submissions before sending to the Commission. To ensure hyperlinks work in your submission, the Commission recommends that you type the full web address (for example, <http://www.referred-website.com/folder/file-name.html>).

Submissions can also be accepted by fax or post (see address below).

By email*: labour.mobility@pc.gov.au

By fax: (03) 9653 2199

By post: Geographic Labour Mobility
 Productivity Commission
 LB2 Collins Street East
 Melbourne Vic 8003

* If you do not receive notification of receipt of an email message you have sent to the Commission within two working days of sending, please contact the Administrative Officer.

Due date for submissions

Please send submissions to the Commission by **21 August 2013**.

References

- ABS (Australian Bureau of Statistics) 2009a, *Census Dictionary, 2011*, Cat. no. 2901.0, Canberra, <http://www.abs.gov.au/ausstats/abs@.nsf/mf/2901.0> (accessed 21 June 2013).
- 2009b, *Survey of Income and Housing, 2007-08, Paper Questionnaire*, Cat. no. 6553.0, Canberra.
- 2010, *Australia Social Trends, December 2010, Moving House*, Cat. no. 4102, Canberra.
- 2012a, *Labour Mobility, Australia, February 2012*, Cat. no. 6209.0, Canberra.
- 2012b, *Microdata: Longitudinal Labour Force, Australia, 2008-10*, Cat. no. 6602.0, Canberra.
- 2012c, *Migration, Australia, 2010-11*, Cat. no. 3412.0, Canberra.
- 2012d, *Regional Population Growth, Australia, 2011*, Cat. no. 3218.0, Canberra.
- Arnott 2011, 'Planning sustainable cities in the 21st century', *Productivity Commission, A 'Sustainable' Population? — Key Policy Issues, Roundtable Proceedings*, Canberra.
- ATO (Australian Tax Office) 2012, *Guide to tax offsets*, <http://www.ato.gov.au/individuals/content.aspx?doc=/content/00251172.htm&page=14> (accessed 15 April 2013).
- Australia Post 2013, *Data and insights*, <http://auspost.com.au/parcels-mail/data-and-insights.html> (accessed 28 June 2013).
- Beer, A. 2012, 'The economic geography of Australia and its analysis: from industrial to post-industrial regions', *Geographical Research*, vol. 50, no. 3, pp. 269–281.
- Bell, M. 1996, 'How Often Do Australians Move? Alternative Measures of Population Mobility', *Journal of the Australian Population Association*, vol. 13, no. 2, pp. 101–124.
- Biddle, N. 2010, 'Indigenous migration and the labour market: A cautionary tale', *Australian Journal of Labour Economics*, vol. 13, no. 3, pp. 313–330.
- Bill, A. and Mitchell, W.F. 2006, *Great Expectations: migration and labour market outcomes in Australia*, Working Paper, No. 06-08, Centre of Full Employment and Equity, University of Newcastle, Newcastle, <http://e1.newcastle.edu.au/coffee/pubs/wp/2006/06-08.pdf> (accessed 5 April 2013).

-
- BITRE (Bureau of Infrastructure, Transport and Regional Economics) 2011a, *Population growth, jobs growth and commuting flows in Melbourne*, 125, Bureau of Infrastructure, Transport and Regional Economics, Canberra.
- 2011b, *Spatial trends in Australian population growth and movement*, 122, Bureau of Infrastructure, Transport and Regional Economics, Canberra.
- 2013, *Aviation Statistics*, <http://www.bitre.gov.au/statistics/aviation> (accessed 21 June 2013).
- Clark, W.A.. 2012, 'Life Course Events and Residential Change: Unpacking Age Effects on the Probability of Moving', <http://papers.ccpr.ucla.edu/papers/PWP-CCPR-2012-018/PWP-CCPR-2012-018.pdf> (accessed 1 May 2013).
- Colmar Brunton Research and Deloitte Access Economics 2012, *NBN enabled telework: The economic and social impact on labour force participation*, Department of Broadband, Communications and the Digital Economy.
- Connolly, E. and Lewis, C. 2010, 'Structural Change in the Australian Economy', *RBA Bulletin*, September quarter, pp. 1–9.
- D'Arcy, P., Gustafsson, L., Lewis, C. and Wiltshire, T. 2012, 'Labour Market Turnover and Mobility', *RBA Bulletin*, December quarter, pp. 1–12.
- Debelle, G. and Vickery, J. 1998, *Labour market adjustment: evidence on interstate labour mobility*, Reserve Bank of Australia.
- DEEWR (Department of Education, Employment and Workplace Relations) 2013a, *Connecting People with Jobs*, <http://deewr.gov.au/connecting-people-jobs> (accessed 15 April 2013).
- 2013b, *HECS-HELP Benefit for early childhood education teachers*, <http://deewr.gov.au/hecs-help-benefit-early-childhood-education-teachers> (accessed 11 April 2013).
- 2013c, *LMIP | Labour Market Information Portal*, <http://lmip.gov.au/> (accessed 21 June 2013).
- DIAC (Department of Immigration and Citizenship) 2013, *Statistics - Publications, Research & Statistics*, <http://www.immi.gov.au/media/statistics/> (accessed 21 June 2013).
- Dufty-Jones, R. 2012, *Moving home: conceptual and policy implications of the housing-mobility nexus*, AHURI Final Report No. 189, Australasian Housing and Urban Research Institute.
- HRSCRA (House of Representatives Standing Committee on Regional Australia) 2013, *Cancer of the bush or salvation for our cities? - fly-in, fly-out and drive-in, drive-out workforce practices in Regional Australia*, February,

-
- Commonwealth of Australia, Canberra, http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=ra/fifodido/index.htm (accessed 10 April 2013).
- Hugo, G. 2012, 'Population distribution and internal migration', in Pincus, J. and Hugo, G. (eds), *A Greater Australia: Population, Policies and Governance*, Committee for Economic Development of Australia, <http://www.ceda.com.au/research-and-policy/other-research/population> (accessed 4 April 2013).
- Hugo, G. and Harris, K. 2011, *Population distribution effects of migration in Australia*, Report for the Department of Immigration and Citizenship, University of Adelaide, Adelaide.
- IC (Industry Commission) 1993, *Impediments to regional industry adjustment*, Report no. 35, Canberra.
- Krugman, P. 1990, *Increasing Returns and Economic Geography*, Working Paper, March, 3275, National Bureau of Economic Research, <http://www.nber.org/papers/w3275> (accessed 4 April 2013).
- Lawson, J. and Dwyer, J. 2002, *Labour market adjustment in regional Australia*, Reserve Bank of Australia.
- Mitchell, W. 2008a, *Labour mobility and low-paid workers*, Research report commissioned by the Australian Fair Pay Commission, No. 5/09, Centre of Full Employment and Equity, University of Newcastle, Newcastle.
- 2008b, *Migration and labour market outcomes by skill in Australia*, No. 08-02, Centre of Full Employment and Equity, University of Newcastle, Newcastle.
- NSW Office of State Revenue 2013, *Regional Relocation Grant*, <http://www.osr.nsw.gov.au/benefits/rrg/> (accessed 15 April 2013).
- OECD (Organisation for Economic Co-operation and Development) 2000, 'Disparities in Regional Labour Markets', *OECD Employment Outlook*.
- 2005, 'How Persistent are Regional Disparities in Employment? The Role of Geographic Mobility', *OECD Employment Outlook*.
- Ottaviano, G. and Thisse, J.-F. 2004, 'Agglomeration and economic geography', in Henderson, J.V. and Thisse, J.-F. (eds), *Handbook of Regional and Urban Economics*, vol 4, Elsevier, pp. 2563–2608.
- PC (Productivity Commission) 1998, *Aspects of Structural Change in Australia*, Reserach Report, Canberra.
- 2012, *Annual Report 2011-12*, Annual Report Series, Canberra.

-
- RDV (Regional Development Victoria) 2013, *Putting Locals First Program - Regional Community Programs - Regional Development Victoria*, <http://www.rdv.vic.gov.au/community-programs/putting-locals-first> (accessed 15 April 2013).
- RRHA (Rural and Regional Health Australia) 2013, *General Practice Rural Incentives Program*, http://www.ruralhealthaustralia.gov.au/internet/rha/publishing.nsf/Content/General_Practice_Rural_Incentives_Program (accessed 15 April 2013).
- Ryan, C. and Whelan, S. 2010, *Locational disadvantage, socio-economic status and mobility behavior-evidence from Australia*, Research School of Economics, Australian National University, http://melbourneinstitute.com/downloads/hilda/Bibliography/Conference_Papers/Whelan_ACE10.pdf (accessed 24 June 2013).
- Sánchez, A.C. and Andrews, D. 2011, *To move or not to move: what drives residential mobility rates in the OECD?*, 846, Economics Department Working Papers, OECD.
- Shah, C., Webb, S., Nicholas, A., Beale, D., Devos, A. and Faine, M. 2012, *Geographical dimensions of social inclusion and VET in Australia: an overview*, National Vocational Education and Training Research and Evaluation Program Occasional Paper.
- De Silva, Johnson and Wade 2011, 'Long distance commuters in Australia: A socio-economic and demographic profile', presented at Australasian Transport Research Forum 2011, Adelaide, September.
- Storey, K. 2001, 'Fly-in/Fly-out and Fly-over: mining and regional development in Western Australia', *Australian Geographer*, vol. 32, no. 2, pp. 133–148.
- Summerfield, M., Freidin, S., Hahn, M., Ittak, P., Li, N., Macalalad, N., Watson, N., Wilkins, R. and Wooden, M. 2012, *HILDA User Manual - Release 11*, Melbourne.
- Sweet, R. 2011, *The mobile worker: concepts, issues, implications*, National Centre for Vocational Education Research, Adelaide.
- Watson, I. 2011, *Does changing your job leave you better off?: a study of labour mobility in Australia, 2002 to 2008*, National Centre for Vocational Education Research, Adelaide, <http://www.voced.edu.au/content/ngv45728> (accessed 5 April 2013).