



Australian Government
Productivity Commission

Geographic Labour Mobility

Productivity Commission
Research Report
Overview

April 2014

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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.

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Foreword

Geographic labour mobility is an important element of a well-functioning labour market. By improving matches between employers and workers, geographic labour mobility can contribute to economic efficiency and community wellbeing.

Australia's geography, demography and economy are the big forces that shape where people live and where jobs are located. These forces will continue to affect labour demand and supply in Australia into the future, reflected in near term developments such as the maturing of the resources boom and the closure of car manufacturing in Australia, as well as longer-term developments such as globalisation, population ageing, participation in work and education and technological advancements. Geographic labour mobility can help the economy adjust to these changes.

The Commission has been asked to assess geographic labour mobility within Australia and its role in a well-functioning labour market. Our study has found that geographic labour mobility is helping the economy adjust to major structural change, and has enabled wealth to be spread across the country. However, the study also highlights some signs that the labour market is not adjusting efficiently in all cases and concludes that there is room for improvement.

The study was undertaken by a team in the Commission's Melbourne office, led by Mary Cavar. The study benefited from discussions and submissions from a variety of stakeholders in the government, non-government and business sectors. The Commission acknowledges the valuable contribution of all those who participated.

Alison McClelland
Commissioner

April 2014

Terms of reference

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

21 May 2013

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The full report is available at www.pc.gov.au

Acknowledgments

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The Commission acknowledges the support of the Department of Employment in relation to the access and use of data from the Department's Research and Evaluation Database. The research findings and views expressed by the Commission in relation to the data are those of the Commission and are not the findings or views of the Department of Employment.

OVERVIEW

Key points

- Geographic labour mobility is an important element of a well-functioning labour market. By improving matches between employers and workers, geographic labour mobility can contribute to economic efficiency and community wellbeing.
- Advances in transport and communication technologies have broadened the scope of geographic labour mobility. This mobility can take the form of residential moves, long-distance commuting and telecommuting.
- Geographic labour mobility has been an important mechanism for adjusting to the demographic, structural and technological forces shaping the Australian economy. It has accommodated differences in the pace of economic activity across Australia and enabled wealth to be more widely distributed across the country.
- Labour appears to be responding to market signals and moving to areas with better employment and income prospects. These movements, together with the increase in long-distance commuting and temporary immigration, have assisted in meeting labour demand in many parts of the country.
- Gravity (a region's size), distance and economic opportunities are the main determinants of geographic labour mobility at an *aggregate* level.
- At the *individual* level, personal and locational factors interact to influence whether and where people move. Life events and family circumstances appear to be the most important factors in such decisions, but factors related to housing, employment, local infrastructure and a person's level of education also play a prominent role.
- Areas of high unemployment and disadvantage vary in their mobility — some have high rates of mobility, while others have low rates of mobility.
- While geographic labour mobility is assisting labour market adjustment, high unemployment is persisting in some regions, and there is room for improvement.
- There are no simple levers to affect geographic labour mobility. Many policies aiming to influence where people live and work in regional and remote areas have had limited effectiveness. Policies will be more effective if they are highly targeted.
- In addition to geographic labour mobility, a flexible, accessible and quality education and training system is important for meeting Australia's continually changing workforce and employment needs.
- The negative consequences of some poorly designed policies, such as taxation, housing and occupational licensing, include reduced geographic labour mobility. Reform in these areas would lessen impediments to geographic labour mobility, and also have broader benefits.
 - The community has been poorly served by the lack of progress in occupational licencing and action should be expedited.
- Improved access to administrative data would assist better understanding of geographic labour mobility in Australia.

Overview

Geographic labour mobility is one element of a flexible labour market, and is important for broader economic efficiency. By enabling labour to move to its best use across different regions of Australia, geographic labour mobility can alleviate labour shortages and regional disparities in labour market conditions, and increase skills utilisation and incomes. In doing so, geographic labour mobility can improve community wellbeing.

The Australian Government has asked the Commission to assess geographic labour mobility within Australia and its role in a well-functioning labour market. The main objectives of the study are to: examine patterns of mobility; assess the key determinants of mobility including the effectiveness of market signals; and, identify the major impediments to geographic labour mobility.

Geographic labour mobility is a dynamic process, and there is a range of underlying forces — structural, technological and demographic changes — that affect where people choose to live and work and the way in which adjustments to changes in labour demand and supply occur across different geographic locations.

The Commission’s approach to geographic labour mobility

Labour mobility refers to the movement of people between jobs. Geographic labour mobility provides a locational perspective on labour mobility.

Advances in transport and communication technologies have dramatically changed the way in which labour demand and supply can adjust across different geographic locations. Instead of permanently relocating, workers now have the option of long-distance commuting or telecommuting. This has fundamental implications for how we think about and define geographic labour mobility.

Accordingly, the Commission has adopted a very broad interpretation of geographic labour mobility as referring to people’s work relocation, that is, the shift of labour supply from one regional labour market to another (including residential moves, long-distance commuting and telecommuting). This approach captures any movement that alters labour supply in a region (box 1). The Commission has

focused its empirical work on people in the labour force, because mobility by people who are not in the labour force is less likely to influence labour supply.

Box 1 Scope of geographic labour mobility

The Commission interprets geographic labour mobility as any movement that shifts labour supply from one regional labour market to another. This includes where people:

- relocate their usual residence to another area to look for a new job, 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
- maintain their usual residence and commute to another area for work
- fly in and out or use other forms of long-distance transport for a job in another region, taking up temporary/part-time residence in the region
- telecommute
- work from home.

The Commission has examined geographic labour mobility in terms of its contribution to economic efficiency and impact on community wellbeing. Geographic labour mobility can improve efficiency and wellbeing where it enables workers to move to the locations where they are most productive and highly valued. This can increase employment and incomes, and facilitate the distribution of higher incomes more broadly across Australia. Conversely, a lack of mobility can lead to persistent disparities in regional labour market performance and increased inequality in income and social conditions.

While geographic labour mobility can contribute to efficiency and community wellbeing, this does not necessarily mean that more geographic labour mobility is always desirable — there can be negative impacts. Very high rates of mobility can lead to costly levels of staff turnover and entail economic and social costs for individuals and their families, as well as for the broader community.

In areas of population growth, community-wide costs may include congestion, pressures on the natural environment and on urban and social amenity. But there can also be positive impacts. Community-wide benefits may include increased economic activity, enhanced diversity and improved infrastructure.

Geographic labour mobility can interact with population ageing to exacerbate population decline in certain regions, for example, through an increase in the proportion of older residents as younger people move away for work or education

opportunities. This can pose substantial risks to the ongoing viability of communities, as can be seen in parts of Tasmania. It can also affect the provision of essential services.

It is difficult to identify an optimal rate of geographic labour mobility, and to do so would have limited utility. Geographic labour mobility is only one form of labour mobility, and job, occupational and industrial mobility are also important in allocating labour to its efficient use. It is also very difficult to benchmark current patterns of mobility in Australia against other countries to determine whether geographic labour mobility is too high or low, given Australia's economy and unique geography and demography. Therefore, in this study, the Commission has assessed current rates and patterns of geographic labour mobility according to the following considerations:

- Whether workers are responding to market signals and moving to areas of high labour demand and away from areas of high unemployment.
- Whether there are impediments to mobility that are distortions, and amenable to change.
- Whether geographic labour mobility is leading to negative impacts on communities.

The Commission has based its assessments on information gathered from submissions and consultations, current research and academic literature and empirical work undertaken for this study. The Commission has conducted econometric work on regional migration patterns in order to provide insight into the factors that influence *aggregate* people movements, and discrete choice modelling on the factors that influence the decision to move at an *individual* level.

A range of government policies can affect geographic labour mobility. The concern of policy should be to ensure that geographic labour mobility is as seamless as possible and there are no significant distortions. The challenge for policy makers is to identify the policies that are creating the largest distortions, and where change could reasonably be expected to be effective in leading to efficient labour market adjustment and increased community wellbeing.

Setting the scene

Australia's geography, demography and economy are the big forces that shape where people live and where jobs are located. Economic models of *aggregate* people movements typically emphasise the importance of gravity (a region's size, in terms of population or economic activity), distance and economic opportunities.

Australia's pattern of settlement reflects the influence of gravity, distance and opportunity including factors such as climate, arable land, rivers and ports, industry and resources. And while the geographic distribution of Australia's population has remained fairly stable over time, there have been some changes, many of which are part of longstanding trends:

- Australia's population is growing faster and is on average younger than the populations of most other developed countries.
- Since Federation, population growth rates across states and territories have tended to move together, but have been considerably higher in Western Australia and Queensland, and lower in Tasmania and South Australia.
- The proportion of Australians living in urban areas has increased since Federation (box 2). This increase was particularly pronounced in the period after World War II. Since the 1970s, the proportion of people living in capital cities has been relatively stable.
- Net overseas migration has generally contributed about as much to population growth as natural increases. 'The population of no other medium sized or large country in the world is as influenced by international migration as Australia' (CEDA 2012, p. 7).
- Historically, most immigrants have settled in large 'gateway' cities, such as Sydney and Melbourne.

Box 2 The role of cities and conurbations

The proportion of Australians living in cities has increased over the past century, particularly in capital cities. This trend is noticeable worldwide. Cities can play an important role in the efficient matching of workers and employers. Deep labour markets benefit both workers and employers. If one business fails, an employee has a better chance of finding an alternative job nearby. Equally, if an employer loses staff, or wants to expand production, a deep labour market makes recruiting easier. Other benefits of cities, or more precisely agglomeration, include economies of scale and information spillovers. As such, agglomeration can reduce the need for geographic labour mobility and is likely to reduce the incentive for labour to move to regional and remote areas. This matters for Australia because our natural resources are often located away from the major cities.

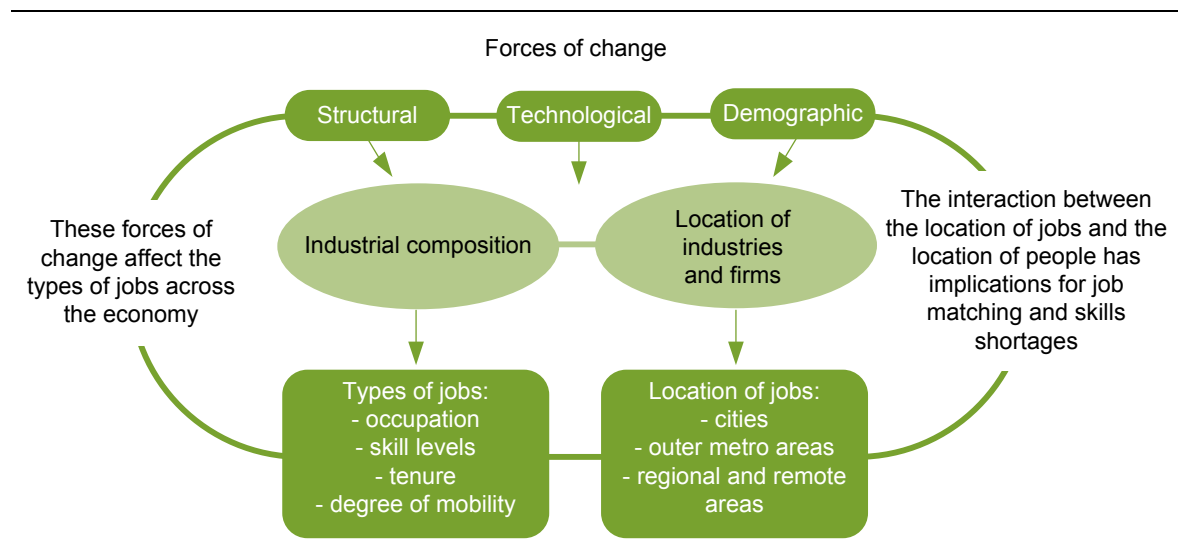
The extent of agglomeration varies by industry and occupation. For example, population-serving occupations such as nurses, teachers and mechanics are needed wherever people live, and cannot be concentrated solely in big cities.

Economic change, labour demand and supply

Australia has been subject to the longer-term patterns of structural change experienced worldwide, such as the relative decline of agriculture and manufacturing, and the rise of the services sector. In the last decade, Australia has also experienced a resources boom, which has contributed to the process of structural change.

These structural forces have influenced the geographic distribution of economic activity, and therefore labour demand (figure 1). The geographic concentration of Australia's mineral wealth has led to much stronger economic and employment growth in Western Australia, Queensland and the Northern Territory. The decline of manufacturing has particularly affected New South Wales, Victoria, South Australia and Tasmania. The recent rates of structural change observed among states and territories have been unprecedented in the last 50 years; and yet the economic and social policies adopted have allowed Australia to cope well on most indicators.

Figure 1 **Impacts of structural, technological and demographic changes**



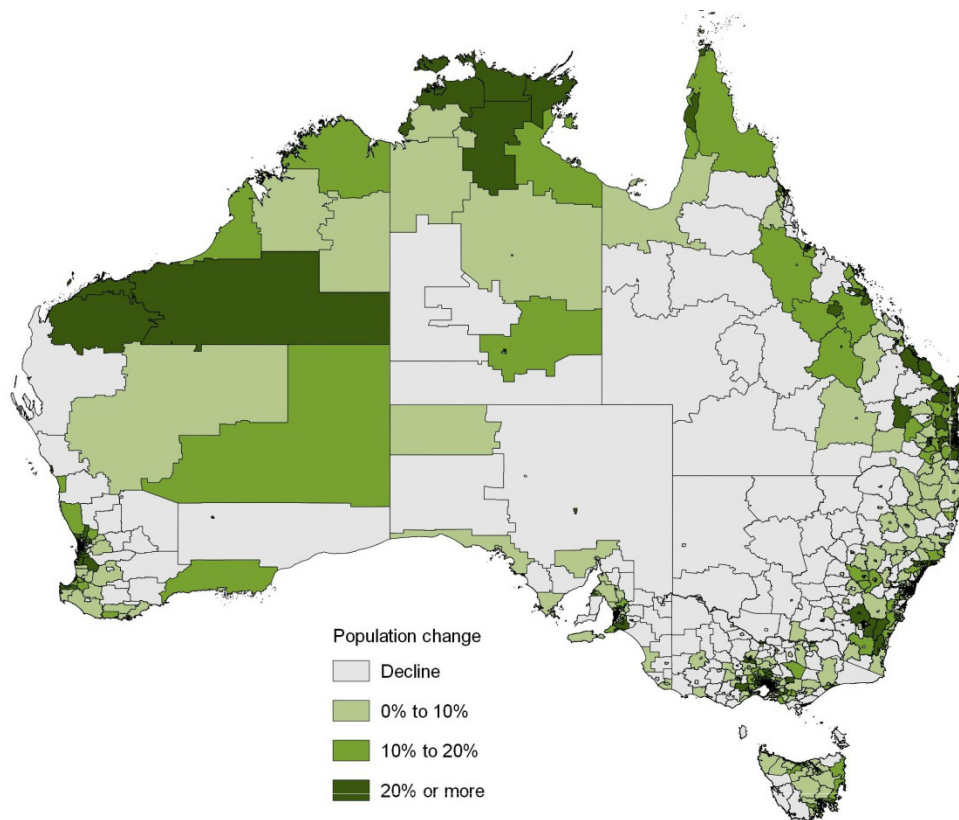
Structural change affects the nature of labour demand. Advances in technology can make existing jobs obsolete and lead to the creation of new jobs. Overall, there has been an increase in higher-skilled jobs, which are particularly prevalent in service industries. The nature of the work and cultural norms in some service industries make them more open to flexible working arrangements, such as telecommuting.

Labour supply has adjusted to meet these changes in labour demand. Over the past decade there has been continuing net interstate migration into Queensland, and, to a lesser extent, Western Australia. The share of net overseas migrants going to New South Wales has fallen steeply, offset by the rising share taken by other states,

particularly Western Australia. In contrast to Queensland, Western Australia has relied much more on overseas migration to meet the labour demands of its strong economy. This could be pointing to the formidable role of distance.

Over the same period, population growth has generally been higher in capital cities and surrounding regions, and coastal regions, with declines or slow growth in many inland and sparsely populated regions, except for those remote regions with mining activity (figure 2). International migrants have increasingly settled in regional and rural areas in the past decade and in some regions, immigrants have been important in offsetting the decline in the Australian-born population.

Figure 2 Population growth, 2001–2011



Structural change will continue to affect labour demand, reflecting near-term developments such as the maturing of the resources boom and the closure of car manufacturing in Australia, as well as longer-term trends such as globalisation, population ageing, participation in work and education, technological advancements and changes in preferences. Labour supply will also be affected by these changes. Of these, our ageing population is arguably the greatest structural risk affecting labour supply in the medium to long term with associated workforce and fiscal challenges. Geographic labour mobility can help the economy adjust to these

changes, including, for example, through higher net international migration to Australia which can boost labour supply and ameliorate to some extent the fiscal challenges from an ageing population, at least in the medium term.

How does efficient job matching take place?

The process of matching workers to jobs takes place through employers deciding where to locate their activities (labour demand) and individuals deciding where to live and work (labour supply). To arrive at an efficient outcome, each side of the market — employers and workers — weigh up the relevant costs and benefits of the different options. To do this, they need timely, accurate and transparent market signals. Figure 3 summarises the potential ways in which labour demand and supply can be matched when a job vacancy arises in a given regional labour market. The Commission’s focus is on matching that entails an element of geographic mobility.

Influences on labour demand

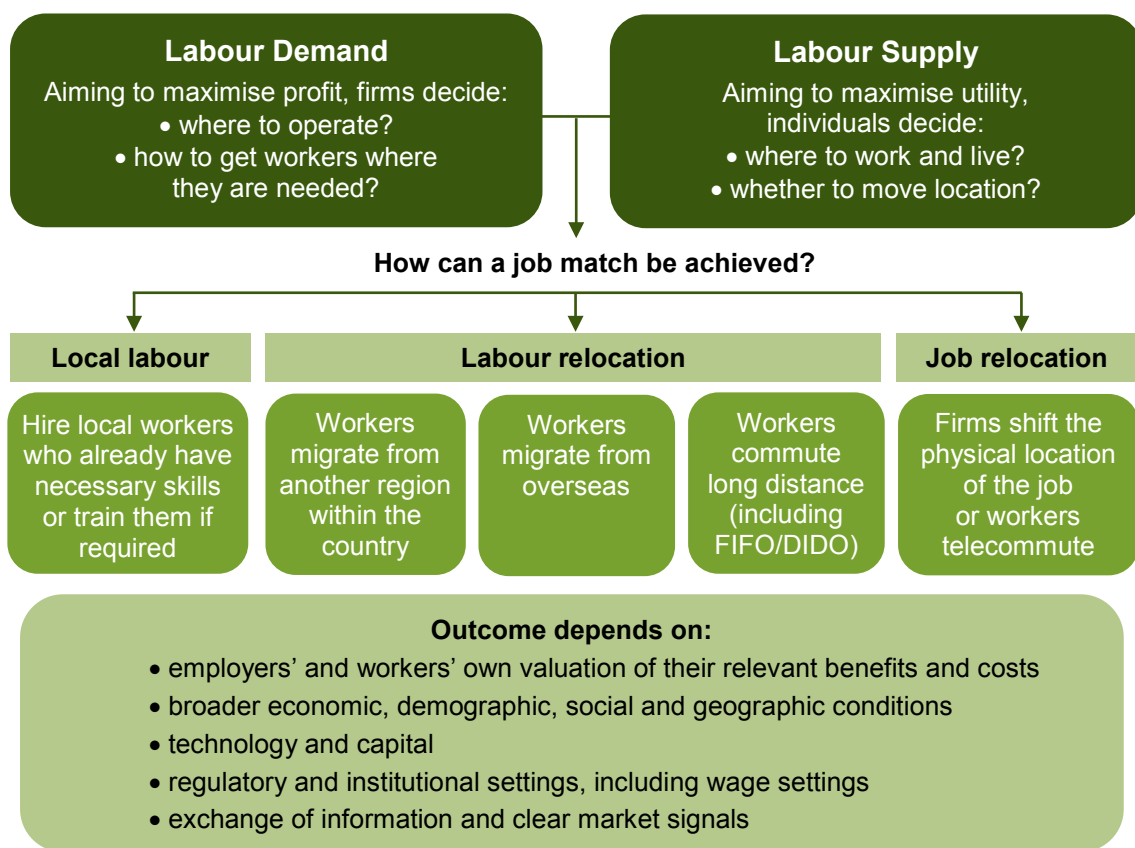
The location of jobs will influence the geographic mobility decisions of people in the labour force. When deciding where to locate their business, firms need to consider not only their proximity to the consumer market for their goods and services, but also their proximity to the inputs required for production. These inputs include labour, which is relatively mobile. Other inputs may be fixed in location (such as land or mineral deposits) or might be costly to move or re-establish in new locations (such as infrastructure and other large-scale capital inputs).

A firm’s proximity to other business operations will also be a factor in its location decisions, if there is potential for it to benefit from economies of scale, information spillovers, and being close to other firms that provide inputs and services. The agglomeration of firms in a given location can also mean larger labour markets for firms to draw upon. The benefits of agglomeration, however, need to be balanced against some costs, such as congestion.

Determinants of an individual’s mobility decision

Individuals (and their families) assess the costs and benefits of moving (and of different types of moves) according to a range of factors. The Commission’s analysis broadly groups these factors as: personal factors (the characteristics and circumstances of the individual), locational factors (the characteristics of the regions where the person is considering moving from and to) and transitional factors (the one-off costs and benefits arising from the act of moving).

Figure 3 **Matching labour demand and supply**



Personal factors

The Commission's analysis indicates that personal factors are significant determinants of an individual's geographic labour mobility.

- Age is strongly correlated with mobility patterns. Younger people are more likely to move. This may be due to the role of human capital — younger people have a longer time period over which to receive the economic benefits from moving. But age can also reflect 'life events' — major events that impact the course of a person's life. Life events that often coincide with a change of location include completing formal education, getting married, having a child, becoming separated and getting divorced.
- Life events often have dual effects on mobility — most events act as enablers of geographic mobility in the immediate term, but in the longer term, these events can either be enablers or impediments depending on whether they tend to strengthen or weaken ties to a given location. For example, while the event of having a child can be an enabler of mobility, the ongoing presence of children generally reduces geographic labour mobility.

-
- Rising female labour force participation and accompanying changes in family dynamics are also important. The increase in dual-income households means that decisions about where to live and work often need to take into account the employment prospects of both partners. Available evidence suggests that this can act as an impediment to geographic labour mobility, particularly where it involves a change of usual residence.
 - Education enables geographic labour mobility. This is because more educated workers tend to be more highly skilled, and the returns to migration are larger for highly skilled workers.

Locational factors

Locational factors distinguish one regional labour market from another, and also influence people's geographic labour mobility decisions.

While surveys have consistently shown that most residential moves are made for reasons other than employment, having a job is crucial to long-distance moves — few long-distance moves are undertaken unless secure employment is expected at the destination region. Employment is usually a necessary but not sufficient reason for residential mobility.

Housing and living costs are also found to be determinants of where people choose to live and work. As some labour markets with good employment prospects and high wages also have above average living costs, the high cost of living can act as an impediment to attracting people to the area, particularly workers in low-wage industries. This may at least partly offset the enabling effect of higher wages.

The quality and availability of economic and social infrastructure — such as education facilities, health services, communications services and transport — also influence where people live and work. The importance of social and economic infrastructure featured heavily in responses from study participants. Such locational factors are subjective in their impacts, and become influential when they interact with personal factors. For example, proximity to good schools is likely to be more important for people with school-aged children.

Transitional factors

Transitional factors relate to the one-off costs and benefits associated with the act of moving, and include search costs, adjustment costs, and legal and administrative costs. Study participants, household surveys and academic research suggest that legal and administrative costs (together with other transitional costs) play a

significant role in making people reluctant to move. One of the most significant transitional costs to changing one's residential location relates to buying and selling one's home.

In summary, at the individual level, personal and locational factors interact to influence whether and where people move. Life events and family circumstances appear to be the most important factors in mobility decisions, and governments are limited in their ability to influence them. Factors related to housing, employment, local infrastructure and a person's level of education also play a prominent role and can be affected by broader policy settings.

Patterns and trends in geographic labour mobility

The Commission was asked to identify the patterns and trends in geographic labour mobility in Australia and considered three different types of moves in this study:

- *Residential labour mobility* — where people in the labour force relocate their usual residence to another regional labour market.
- *Long-distance commuting* — regular commutes from a person's place of usual residence to their workplace which exceed a time or distance threshold.
- *Telecommuting* — working from a distance, in any location other than the usual workplace. In essence, telecommuting involves moving the job to the worker.

Residential mobility

About 16 per cent of the labour force changes residence each year (table 1). This is high by international standards. Only a fraction of people move primarily for work purposes (estimated to range between 10 and 17 per cent of residential moves). Many move for family, housing or other personal reasons. Most of these moves are over short distances and are unlikely to significantly affect labour supply across different regional labour markets. Two-thirds of these residential moves are less than 10 km, indicating that people generally move within cities or regions, rather than between them.

The rate of movement of people in the labour force between regional labour markets is lower than all residential moves, at 3.3 per cent.¹ For interstate moves it is 1.7 per cent. Gross interstate migration has declined over the past decade, from about 2 per

¹ It is difficult to evaluate the rate of residential mobility across regional labour markets in Australia relative to other countries due to data limitations and Australia's unique geography.

cent of the population through the 1990s, to about 1.5 per cent of the population more recently. Over the same period, there has been an increase in long-distance commuting and international mobility. Interstate mobility has also declined in the United States and Canada.

Table 1 Proportion of people who moved residence in the year prior to the Census
Per cent

	<i>All moves</i>	<i>Labour market moves</i>	<i>Interstate moves</i>
Population	14.6	3.0	1.5
People in the labour force	16.4	3.3	1.7
People aged 15 years and over	14.5	3.1	1.5
People aged 15–64 years	16.3	3.5	1.7

Who moves across regional labour markets?

In Australia, younger people, unemployed people, Indigenous Australians, recent overseas migrants, single people, people without children, more highly educated and skilled people, and people working in the mining industry all have a higher propensity to move residence between labour markets than do other cohorts. This is consistent with overseas evidence.

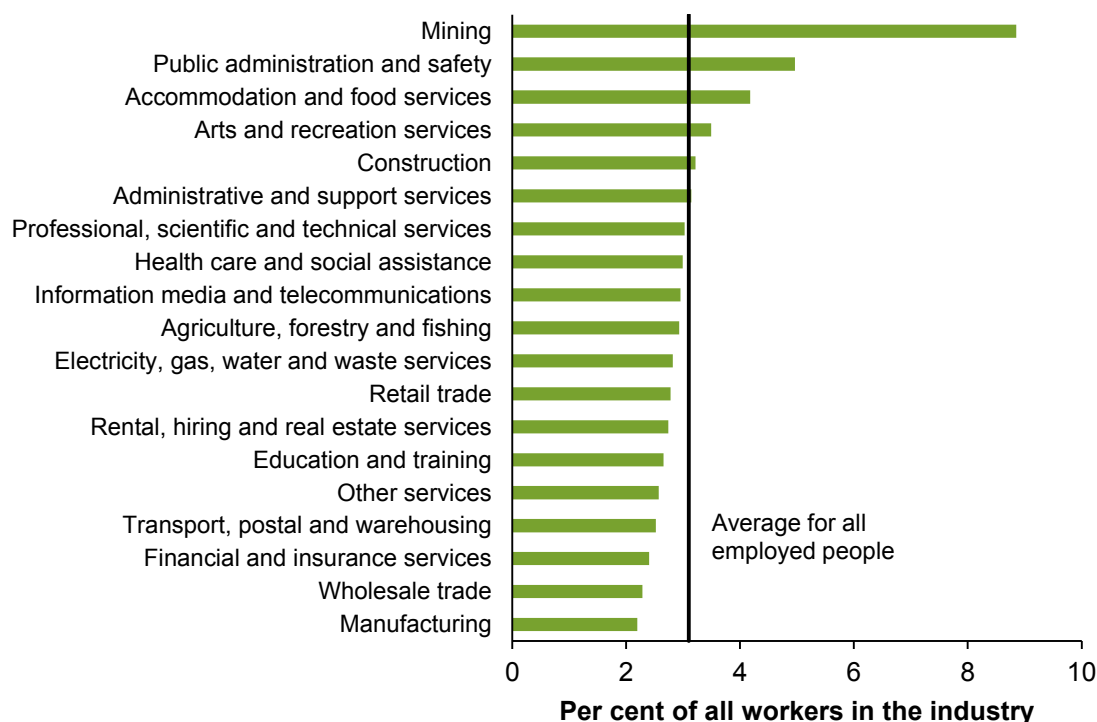
In 2011, workers in industries with high growth in employment and high vacancy rates were more likely to have moved residence within the past year compared to those in other industries. Some of the industries that have the highest proportion of workers moving residence across regional labour markets are mining, construction and the accommodation and food services sector. Workers in these industries may be more geographically mobile because of the inherent project-based or seasonal nature of the work (figure 4).

Overall, in comparison to the broader population, people in the labour force are more likely to be moving to areas with better job prospects, namely capital cities and mining regions. Young people generally move out of regional areas and into capital cities. This has been attributed to them seeking education and employment opportunities. In contrast, older people, who are less likely to be in the labour force, are more likely to move out of capital cities and into regional areas. These moves have been attributed to the amenities of many coastal areas, such as mild weather, low crime rates and higher concentrations of other older people.

Housing tenure is related to mobility. People who rent privately are more likely to move residence than home owners, and ABS data show that renters are more likely

to move for employment reasons than home owners. People in public housing have the lowest rates of residential mobility.

Figure 4 Residential mobility by industry of worker
Per cent moved in the previous year, 2011



Mobility and unemployment

People who struggle to find work are of particular concern in relation to geographic labour mobility. Long periods of joblessness impose costs on individuals, their families and the wider community.

In Australia, unemployed people are more likely to move between labour markets than those who are employed or not in the workforce. There is strong evidence that unemployed people who do move between labour markets leave unemployment benefits sooner, but this appears to be due to differences in the underlying characteristics of movers and non-movers. The mobility patterns of the very long-term unemployed are complex, with high residential mobility, but mainly across short distances. This may be suggestive of involuntary moves associated with insecure housing tenure, which are unlikely to be helpful to employment prospects.

The Commission's analysis indicates that in some high unemployment areas people frequently move in and out, while in other areas there is little movement. Further, the evidence is mixed as to whether unemployed people are more inclined to move to areas with strong employment prospects or to areas with low living costs (but not necessarily good employment prospects).

Unemployment, particularly of an extended duration, is a complex problem. Aggregate unemployment is an outcome that predominantly reflects macroeconomic factors such as economic growth and the flexibility of the labour market. Skill deficits and mismatches, industry structural change and incentives and assistance for job searching also play a role, particularly in influencing the duration and pattern of unemployment. Thus, even where opportunities for employment are available, and moving for work is financially feasible, low levels of education and skills, fear about losing public housing or a place on the waiting list, poor health and reliance on family networks for support may sometimes limit the capacity of unemployed people to relocate and take advantage of these opportunities. It is unlikely that small incentive payments or penalties will increase their mobility.

While geographic labour mobility is not a comprehensive solution, reducing impediments to mobility may help to prevent some individuals from becoming long-term unemployed. However, addressing the challenges of long-term unemployment requires a broader approach, with economic growth and labour market flexibility at the core, complemented by targeted policy responses across the spectrum of welfare, education and training, health and housing, focused on increasing the employability of the individual.

Long-distance commuting

Long-distance commuting can be a substitute for permanent residential moves. The number of people undertaking long-distance commuting is increasing, although it is still a small proportion of the workforce. KPMG has estimated that 2.1 per cent of the workforce undertook a long-distance commute at the time of the 2011 Census, up from 1.7 per cent in 2006. Long-distance commuting occurs in many sectors, but there has been a significant increase in the resource sector (box 3), in part reflecting growth in the sector itself. 'Fly-in, fly-out' (FIFO) workers constitute a significant part of the workforce in certain mining regions, such as the Pilbara.

Box 3 **The growth of FIFO**

One increasingly utilised source of labour supply is fly-in, fly-out (FIFO) workers. While not uniformly regarded as a positive development by stakeholders, it appears that FIFO has been instrumental in attracting sufficient mining and construction workers to mining areas during the resources boom, and spreading the benefits of the boom across the economy more broadly. FIFO has also dulled the boom–bust cycle that mining towns might otherwise experience if all workers had to be residential.

The increasing use of FIFO practices, particularly in the mining and construction industries, can be attributed to a number of factors, including:

- the high cost of living in regional and remote areas
- a lack of accommodation and facilities in regional and remote areas
- worker preferences for living in metropolitan or coastal areas
- the shift away from the traditional 8-hour working day to 12-hour shifts
- the short term nature of construction projects
- more widely available flights to regional areas
- intense competition for workers with particular skills, such as engineers and project managers
- newer mines increasingly located in more remote areas.

While FIFO is more common in the mining and construction industries, it is also used in a number of service industries. For example, FIFO practices have been used by police services to overcome difficulties in attracting and retaining police officers in regional and remote areas of Australia. FIFO practices are also used in the education and health industries to provide services in small remote communities where there is no adequate supply of relevant professionals.

FIFO practices have also been adopted in other countries, particularly in remote mining regions such as Scottish and Norwegian oil fields, the Canadian mineral sands regions and parts of Africa. FIFO policing models are used by the Royal Canadian Mounted Police.

Capital cities and mining regions appear to be the most common destinations for long-distance commuters, and the most common route in 2011 was from Perth to the Pilbara. Many of the other most common commuting routes to mining regions were from regional areas, suggesting that the benefits of the resources boom are spread widely.

Intra- and intercity commutes are important for geographic labour mobility and efficient job matching. There have been concerns expressed by participants about people in outer metropolitan areas needing to commute long distances to work, with negative impacts on productivity and participation. However, others have suggested that commuting does not always result in a reduction in wellbeing. While there will

be considerable variation, average commute times for people in outer suburban areas are only slightly longer than for people in inner suburban areas, and average commuting times have increased only moderately in the past decade. Most people who live in outer suburban areas also work in outer suburban areas. Further, between 2001 and 2011, outer suburban areas of capital cities generally recorded larger increases in employment than inner city areas, although the industry composition of employment growth differed across inner and outer city areas.

Telecommuting

The number of formal telecommuters is small, at around 6–7 per cent of employees. However, the actual number of telecommuters is likely to be larger because many telecommuters may have informal arrangements. Available data do not point to an increased prevalence of telecommuting in Australia.

Telecommuting offers flexibility and potentially opens up a job opportunity to a greater pool of workers. It can help overcome skills shortages in regional and remote areas by making the job available to any worker with the adequate skills, irrespective of their location. While telecommuting is currently used in industries like technology and professional services, it is less suited to industries characterised by highly location-specific jobs such as construction and mining, and customer service-centric industries, such as accommodation and food services.

Telecommuting also has potential downsides. These include the risk of loneliness from not interacting with co-workers, lower productivity due to lack of motivation or distractions at home, and costs involved in setting up adequate occupational health and safety arrangements. These issues suggest that the greatest challenge to the uptake of telecommuting may not necessarily be technology, but rather management practices and cultural norms in workplaces.

Actions by employers

Employers use a range of strategies to encourage workers to relocate from other regions or undertake long-distance commuting (box 4). Some employers are sourcing workers from a very wide geography, including interstate and overseas, if they are unable to employ suitably qualified local people.

Box 4 **Employer strategies to attract workers**

A range of strategies (often in combination) is used by employers to attract workers.

Relocation incentives aim to increase the benefits of moving, and can include additional pay, professional development opportunities and training, and free or subsidised accommodation. Benefits are sometimes provided to the broader household, such as spouse employment support and training. Other incentives are used to reduce the costs of moving, such as removal and storage costs, the costs of selling or buying a house, and temporary accommodation expenses.

Return of service obligations involve a person being provided training or other benefits such as a scholarship, and then being required to work for the employer for a certain period of time in certain locations.

FIFO work practices generally involve a choice of rosters and free accommodation, extended recreation leave, shift leave and commuting allowances. FIFO work can be arduous. Resource sector employers use strategies to promote wellbeing and mitigate any negative effects of FIFO on workers and their families, such as induction programs, employee assistance programs and the facilitation of networks for families.

Some resource companies have actively **targeted underutilised labour** in Indigenous communities to undertake FIFO work. For example, Rio Tinto recruits FIFO workers out of Meekatharra, Western Australia, for the Hope Downs mine. Many Indigenous people in Meekatharra were unemployed before the opportunity to undertake FIFO work arose.

Training to facilitate relocation — for example, Shell has re-trained employees displaced by the winding down of its operations at a New South Wales oil refining plant to work at a liquefied natural gas project in north-west Western Australia.

Telecommuting is being used by employers as a strategy to attract and retain workers. For example, telecommuting is being used by Medibank in response to difficulties recruiting health care professionals, with over 1600 health care professionals delivering services from their homes.

International migration strategies are also used when suitable local workers are difficult to source. State and territory governments often employ international medical professionals to work in regional and remote areas. The agriculture and tourism industries, where work can be seasonal, are heavily reliant on temporary migration, such as the Working Holiday Maker program.

Is geographic labour mobility working in Australia?

The Commission's econometric modelling and its analysis of trends and patterns in labour mobility in Australia lead to the broad conclusion that geographic labour mobility has been an important mechanism for adjusting to the demographic, structural and technological forces shaping the Australian economy. It has

accommodated differences in the pace of economic activity across Australia and enabled wealth to be more widely distributed across the country.

This conclusion is supported by the following:

- Australians move residence relatively frequently. They may also be willing to undertake significant commuting to access jobs while maintaining a certain lifestyle.
- People who are more likely to move to another regional labour market — young people, single people, recent overseas migrants, unemployed people and more highly educated and skilled people — are those who are likely to gain the most from moving.
- Employers are using a range of labour sources to find the skills they require and are hiring workers from a much wider geography than in the past. The increased use of FIFO practices and temporary immigration, such as 457 and working holiday visas, has been critical to meeting labour demand for some positions in many parts of the country.
- Labour appears to be moving to areas with better job and income opportunities; that is, workers seem to be responding to market signals and there do not appear to be *significant* impediments that are distorting decisions.
- The dominance of cities in Australia contributes to efficient job matching. The deep labour markets of cities enable high levels of labour mobility without the need for geographic mobility.

There is room for improvement

While the Commission's findings indicate that geographic labour mobility is assisting labour market adjustment in Australia, there is room for improvement.

- There are some areas of ongoing skills shortages in regional and remote areas. These are largely essential service, government jobs where wage flexibility has been limited.
- There are also regions of high and persistent unemployment, such as Tasmania, western Sydney, parts of coastal Queensland and regions with a high proportion of Indigenous residents.
- Much of current policy action to directly influence geographic labour mobility appears to have had limited effectiveness, particularly in relation to regional development policies.

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- The negative consequences of some poorly designed policies can create impediments that distort labour market efficiency and decrease community wellbeing.
 - Governments may have a role in addressing some of the negative impacts associated with high mobility and in improving the data available to understand and respond to geographic labour mobility.

While geographic labour mobility is important for meeting Australia's continually changing workforce and employment needs, the complementary roles of education, skills and overseas migration should be acknowledged. Governments should ensure the benefits of temporary migration are maximised by maintaining flexible arrangements and avoiding excessive regulatory burden while at the same time ensuring that arrangements have integrity, and investment in education and training is well-directed.

Overseas migration has assisted in addressing skills shortages in hard-to-fill regions and occupations. In the health sector, the contribution of international migration is substantial. The mining industry contends that it would not have been able to respond to increased demand without temporary skilled migrants. On the other hand, unions have warned that increased use of temporary migrants can erode local investment in skills and education. Temporary migration programs are subject to a range of checks and balances, which are currently being reviewed.

Education is one of the enablers of mobility that may be amenable to government policy influence, although the impacts are less immediate. As well as being an enabler of geographic labour mobility (and a pull factor for migration to certain regions), a high quality education and training system is critical for improving the productivity and earnings of the local workforce and generating broader community benefits. Where skills development lags, this can lead to lower productivity and entrenched unemployment and disadvantage. While education and skills development have been the focus of significant policy and program reform effort in recent years, there remain concerns about educational disadvantage, inconsistent quality and low completion rates, particularly in some areas with high unemployment. Employer groups have also voiced the need for skills taught to be relevant to industry needs, including skill sets rather than full qualifications.

Policies aimed at geographic labour mobility

Where persistent skills shortages exist (box 5), for example essential services employees in regional and remote areas, governments have responded with financial and non-financial incentives to encourage relocation (although wage flexibility is constrained in some government workforces). The use of financial incentives is likely to be effective only when tightly targeted at a group who will clearly benefit — for example, those who are more budget constrained and/or have an inclination to relocate, such as students faced with high education costs or recently arrived immigrants in particular occupational categories trying to settle in a new country. Financial incentives may need to be accompanied by other support, such as professional development and information provision, to better address the various impediments to relocation.

Box 5 Skills shortages

Study participants have reported that skills shortages are common in Australia. Some occupations are in shortage nationwide (for example, sonographers) while others are in shortage only, or more severely, in regional and remote areas. These include many public sector workers such as health professionals, community services employees, emergency services employees, police officers, and teachers. The Commission has previously examined workforce trends in some of these occupations.

In 2012, the Commission found that there were shortages of mathematics and science teachers, and shortages of teachers more generally in rural and remote communities. The reasons behind these shortages include:

- teachers having access to fewer educational and personal amenities
- restricted access to support networks and professional development.

The Commission recommended that the Australian, state and territory governments should encourage the trialling of measures that enable principals to use remuneration-based incentives to fill hard-to-staff positions, among other suggestions directed at improved targeting of assistance.

A 2006 Commission inquiry into the health workforce found that shortages exist across several health professions, particularly in remote areas. These include general practitioners, medical specialists and some allied professionals. The factors contributing to this regional shortage of health workers are varied and include:

- generally lower remuneration levels than in metropolitan areas
- longer working hours than in cities and a heavier workload
- inadequate community infrastructure, supporting health care infrastructure and access to other health professionals
- limited professional development opportunities and career pathways.

In attempting to influence the regional supply of, and demand for labour, government policies can target the decisions of individuals (for example through relocation grants), or they can target a specific region to increase its attractiveness to both employers and workers. Australian governments have a long history of trying to influence where people live and work, as part of regional development policies.

There is an ongoing policy debate about the goal of regional development policies, including the circumstances in which resource allocation should favour regional areas (if at all), and the most appropriate way to design and target the assistance offered. Regional development policy is often intertwined with industry policy and structural adjustment support, and can consequently lack a clear rationale. Research suggests that overall, investment in regional economic development and structural adjustment packages has not been effective in achieving its objectives. Goal clarity, consideration of the potential for resource misallocation, improvements in policy design and implementation, and a substantially stronger commitment to project evaluation would be beneficial in this area. The structural adjustment that will take place in response to the closure of car manufacturing in coming years would benefit from well-focused evaluation of outcomes.

Realistic expectations are also required; governments cannot reverse the continual process of agglomeration nor delay necessary structural adjustment. To do so is costly and ineffective. Benefits are likely to be higher if policies focus on creating an economic climate conducive to growth across *all* regions and *all* industries.

Addressing impediments from broader policy settings

The Commission has identified a number of key areas where it considers policy review is warranted. These areas relate to broader government policies that are poorly designed and have been found to indirectly affect individuals' and firms' geographic mobility decisions. These either distort the costs and benefits of living and working in various locations, or impose unnecessary and distortionary transitional costs.

Housing

The most common impediments to geographic labour mobility raised by stakeholders are insufficient housing supply and a lack of affordable housing. Housing affordability is of particular importance in communities experiencing an influx of population, where demand for housing has outstripped supply, and where substantial increases in both rents and house prices have been experienced. This can

have important implications for the community, as low-to-middle income earners may no longer be able to afford local housing. Affordability has also been identified as a problem in Australia's larger cities, where some workers are unable to live close to jobs, particularly those offering higher wages.

A number of existing government policies, such as taxation and land-use planning, are contributing to distorted housing costs, which impact on rental and purchase decisions and can impede geographic labour mobility. Two areas that have been frequently raised in this study are also areas that the Commission has examined in previous work:

- Inefficient land-use planning processes and the delayed release of land for residential development can limit housing availability.
- Conveyancing duty (stamp duty) imposes additional costs on property transactions and leads to a lower level of property exchanges than would occur in the absence of the tax.

The availability of affordable rental housing is particularly important for the geographic labour mobility of low-income workers and job seekers, but supply has been in long-term decline. It is important that governments review the effectiveness of policies affecting the supply of affordable rental housing, such as the National Rental Affordability Scheme — a relatively recent program directed towards improving the supply of affordable rental accommodation. Such a review will need to take into account broader policies — such as taxation, superannuation, income support — that can affect the demand for and supply of housing, and whether these policies are distorting investment in rental housing as well as the tenure and price of housing generally.

Income and housing support

Governments provide people on low incomes with income and housing support, including Commonwealth rent assistance and public housing. The eligibility requirements and design of these programs may impede geographic labour mobility where they inadvertently discourage labour force participation and geographic relocation for work. The recently-announced welfare review may examine some of these issues, although this is yet to be confirmed.

- One identified problem is that mobility can be impeded for people on the waiting list for public housing in order to retain eligibility. Another is that the way rents are set can discourage labour force participation. The Henry tax review recommended changes to the structure of public housing and the way rents are set to support an improvement in workforce participation of residents.

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- Commonwealth rent assistance is provided to eligible renters who receive income support payments. The regulatory arrangements around rent assistance are highly complex. Further, the impact that rent assistance has on affordability varies significantly across the country. There would be merit in reviewing the level, indexation and eligibility criteria for rent assistance to ensure it does not act as a disincentive to workforce participation and geographic labour mobility.

Employment services

Different government services and programs for job seekers and people without employment can affect their geographic labour mobility decisions. According to employment services providers, there are significant barriers to successful relocations of job seekers. Some of these relate to the characteristics of unemployed individuals. However, some of the barriers are inherent to the design of these employment services, particularly in terms of the limited opportunities for job seekers to link with potential employment opportunities in other locations. An emphasis by employment services providers on proactive engagement with employers, including those outside the local labour market, could promote geographic labour mobility, and improve outcomes for unemployed people more generally.

Cross-jurisdictional differences

Stakeholders have raised concerns about the effects of jurisdictional differences on the ease of mobility within Australia. Different school starting ages and school curricula have been cited as impediments to geographic labour mobility. Some of these are being addressed, for example the development of a national curriculum.

A large number of occupations in some sectors of the Australian economy are governed by jurisdictional occupational licensing, which may create a barrier for individuals who are considering working interstate. COAG had been working on a national licensing system, but in December 2013 decided to cease the implementation of this reform, as state governments had concerns about the proposed model and its potential costs. Instead, state governments agreed to work together via the Council for the Australian Federation ‘to develop alternative options for minimising licensing impediments to improving labour mobility’ (COAG 2013, p. 5). Enhancing skills recognition across jurisdictions is likely to improve geographic labour mobility and, in response to the COAG decision, participants have reaffirmed the need for action in this area. The Commission considers that these workers, their clients and their employers have been poorly served by the lack of progress in producing consistent occupational licensing across

jurisdictions. Action to remove occupational licencing impediments to mobility should therefore be expedited, noting the lessons learnt from the failed national occupational licensing reforms, especially the difficulties associated with complex governance arrangements.

Mitigating the negative impacts of geographic labour mobility

Geographic labour mobility, and broader demographic and structural change, can sometimes have negative impacts on individuals and communities. Managing these impacts is sometimes the purview of employers. Mining companies invest in power plants, water treatment facilities and airport infrastructure in predominantly mining towns, and sometimes also in soft infrastructure. For example, BHP Billiton and Xtrata spend 1 per cent of their pre-tax profit on local community development projects, such as education and health.

In cases where these impacts are imposing external costs on communities, such as congestion, government action has the potential to improve community wellbeing. A lack of planning for population growth and insufficient provision of infrastructure could also be resulting in outcomes that are not socially optimal. This study has heard of lags in planning and delivery of physical and social infrastructure in growth areas, which can significantly affect the local community. Some have suggested that more of current government spending on regional services needs to be redirected to fast-growing regions.

Local governments face capacity constraints in relation to the broad range of areas in which they have regulatory and service provision responsibilities. Nonetheless, some specific constraints have been identified that are limiting councils' ability to manage population mobility. Their financial capacity to respond to these challenges may be impeded by rate capping and the distribution of financial assistance grants. Further, increases in council rates revenue are likely to lag population influx, creating a discontinuity between community expectations of service provision and councils' financial capability. In areas undergoing rapid population growth, funding systems from other levels of government should have the flexibility to respond. Another capacity constraint may be a lack of professional and technical expertise, particularly in regional and remote areas.

Greater recognition and understanding of the capacity constraints in rural and remote councils is required, particularly in the development of policy and initiatives that may address and encourage greater labour mobility to these areas. (LGAQ, sub. 5, p. 11)

This study has also heard cases of local governments not being meaningfully consulted on developments within their area, for example approvals for large mining projects.

The Commission considers that local governments should be consulted early as part of state government planning and approval processes and have related restrictions on their capacity to raise their own revenue removed.

The need for better data and policy evaluation

The ability to plan for and manage the impacts of population growth requires a timely and adequate evidence base. There are opportunities to improve data on geographic labour mobility, which is part of a broader need for better data on temporary or service populations. Where local governments have a large number of temporary residents (called ‘service populations’) who are not captured in the resident population statistics, local governments have argued that they are receiving insufficient funding. The Australian Government should investigate the effects of service populations on service delivery by local governments and their implications for funding allocations. The review could be undertaken by the Commonwealth Grants Commission, in consultation with its state counterparts. Some jurisdictions have already made some progress in incorporating the effects of non-resident populations on intrastate grant allocation.

The concept of a service population is difficult to clearly define. There are numerous challenges, such as deciding on the type of services people need to access in order to be counted as part of a service population and the different time frames that could apply. For example, a region may service daytime visitors, overnight visitors, FIFO workers who reside there every second week, or holiday home owners who only reside there seasonally. These different groups will access services in that region differently. Given these differences, service population definitions (and estimates) need to be fit-for-purpose; that is, they need to correspond to the use of a particular service by different service populations.

While there is growing demand for nationally-consistent estimates of service populations, the development of such data sets is highly complex and has numerous challenges. The utility of national estimates is not clear, and regional, rather than national, estimates may be more viable.

There are other more feasible and less costly data improvements that can be pursued in the near term, which would improve our understanding of geographic labour mobility and population change. In particular, there is potential to augment existing

statistical collections and make better use of administrative data, such as taxation statistics. Lack of access to administrative data is a serious impediment to social policy and planning in Australia (see PC Annual Report 2012-13).

The need for better data should be accompanied by improved evaluation of government actions to influence where people live and work, including through structural adjustment and regional development policies. Policy outcomes should be monitored and evaluated in order to assess overall efficiency and effectiveness. This study has found numerous instances where the strategies designed to influence the location of economic activity have not been evaluated.

Recommendations and findings

FINDING 8.1

At the individual level, personal and locational factors interact to influence whether and where people move. Life events and family circumstances appear to be the most important factors in mobility decisions, but factors related to housing, employment, local infrastructure and a person's level of education also play a prominent role.

FINDING 10.1

Where governments need to attract essential services employees to specific areas of skills shortages, they need to use highly targeted approaches. Programs targeting students, international migrants and those with return of service obligations seem to be most effective.

RECOMMENDATION 10.1

All governments, when developing structural adjustment programs, should have clear objectives and ensure that they are properly evaluated, including how they affect geographic labour mobility.

This should apply to the programs announced by the Australian and State Governments in response to the closures of car assembly plants in Victoria and South Australia.

A longitudinal study of the retrenched workers in these regions would be particularly beneficial in understanding the long-term impacts of structural adjustment and its implications for geographic labour mobility.

FINDING 10.2

Education is one of the enablers of mobility that is amenable to policy influence. Improving the quality, flexibility and accessibility of education and training, particularly for disadvantaged groups and regions, will support geographic labour mobility and have broader efficiency and wellbeing benefits.

FINDING 11.1

Geographic labour mobility has been an important mechanism for adjusting to the demographic, structural and technological forces shaping the Australian economy. It has been assisted by the considerable flexibility shown by employers and employees in overcoming the effects of impediments to mobility. The increase in long-distance commuting and temporary immigration has been particularly important.

FINDING 11.2

The negative consequences of poorly designed policies, in areas such as taxation, housing, and occupational licensing, include damage to efficient geographic labour mobility. Reforming these areas would lessen impediments to geographic labour mobility, and have broader benefits.

RECOMMENDATION 12.1

The Australian Government should make changes to employment services (including Job Services Australia, Disability Employment Services and the Remote Jobs and Communities Program) so that employment service providers have incentives to work directly with employers to identify work opportunities for job seekers, including opportunities outside their immediate labour market region where relevant.

RECOMMENDATION 12.2

State and Territory Governments should remove or significantly reduce housing-related stamp duties, and increase reliance on more efficient taxes, such as broad based land taxes.

RECOMMENDATION 12.3

State and Territory Governments should facilitate a responsive housing supply through efficient planning and flexible land release. In its benchmarking study on planning, zoning and development assessments, the Commission identified a number of leading practices that can significantly improve the governance, transparency, accountability and efficiency of these processes. Where this is not already occurring, State and Territory Governments should implement these leading practices.

RECOMMENDATION 12.4

The Australian Government should review policies that affect the demand for and supply of affordable rental properties, to ensure they are not hindering workforce participation and mobility, and that assistance is targeted to those in most significant housing need. This would include:

- *reviewing the level, indexation and eligibility for Commonwealth Rent Assistance in light of recommendations from the Henry tax review*
- *reviewing the effectiveness of policies affecting the supply of affordable rental properties including the National Rental Affordability Scheme.*

FINDING 12.1

The failure to progress occupational licensing reforms has negative consequences for geographic labour mobility, and community wellbeing more broadly. Policy development and implementation so far has been hampered by complex governance arrangements and significant delay.

RECOMMENDATION 12.5

State and Territory Governments should urgently progress action to reduce occupational licensing barriers to mobility. To avoid the difficulties that led to COAG ceasing the implementation of national occupational licensing, governments must specifically emphasise efficient communication and cooperation between regulators in different jurisdictions.

RECOMMENDATION 12.6

State Governments should:

- *review the restrictions imposed on local governments' capacity to raise own-source revenue*
- *emphasise early local consultation as part of their planning and approval processes for major projects and land release and use.*

RECOMMENDATION 12.7

The Australian Government via the Commonwealth Grants Commission should investigate the effects of temporary or service populations on service delivery by local governments and the implications for funding allocations.

RECOMMENDATION 12.8

All governments should make holdings of administrative data accessible for research and evaluation of programs, including those relevant to understanding geographic labour mobility. Further expansion of the data collected by the ABS will also be beneficial in improving the understanding of mobility trends.