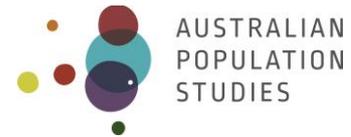


International migration and employment growth in Australia, 2011–2016



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Abstract

Background

Immigration to Australia pre 1995 was largely low skilled. Recessions led to competition between low-skilled domestic workers and new immigrants and subsequent cuts in migration intakes. Historical changes in birth rates, increased participation in tertiary education, increasing numbers retiring and the relatively rapid restructuring of the skill level of labour demand combined to produce a skilled labour supply crisis in Australia from the mid-1990s. The permanent and temporary skilled migration policies established by the Australian Government from 1995 played an important role in meeting that labour demand, especially in the boom years of the first decade of the 21st century.

Aims

This paper examines the impact of immigration on employment in Australia subsequent to the global financial crisis (GFC) for the five-year period from July 2011 to July 2016.

Data and methods

Data for the paper are sourced from the Australian Bureau of Statistics. The paper uses survival methods to decompose the growth in employment in Australia in the five-year period from 2011 to 2016: (1) change in age and sex distribution in the absence of migration; (2) changes in employment participation rates by age and sex; (3) net migration by age and sex.

Results

Immigration in response to strong labour demand has continued post GFC. From July 2011 to July 2016, employment in Australia increased by 738,800. Immigrants accounted for 613,400 of the total increase, population growth 98,900 and changes in employment participation only 26,500. Migration has had a very large effect on the age structure of employment with most new immigrant workers (595,300) being under 55 years.

Conclusions

Research indicates that immigration provides major benefits to the Australian economy. However, as strong labour demand is likely to sustain migration at relatively high levels in coming years, it is incumbent upon governments to plan for the effects of rapid population growth on infrastructure and resources.

Key words

Australia; labour demand; skilled migration; components of employment growth; global financial crisis (GFC).

1. Introduction

This paper makes use of data from the ABS Labour Force Surveys for July 2011 (ABS 2011) and July 2016 (ABS 2016a) to examine changes in employment by age and sex in Australia. The aim is to decompose changes in total employment in Australia in this five-year period into three components:

1. Change in the age and sex distribution in the absence of migration.
2. Changes in employment participation rates by age and sex.
3. Net migration by age and sex for the period 2011–2016.

The study concludes that the third component, net migration, was clearly the largest of these three components. As this is a relatively new phenomenon, it is important to provide the historical context that has led up to this outcome. The purpose of the analysis is to provide a demographic accounting of changes in employment in the five-year period. As such, the analysis focuses on the supply of employment rather than demand. Other methodologies such as computable general equilibrium (CGE) modelling would be required to examine the demand side. Also, though near to impossible to quantify, it should be remembered that the needs of new immigrants for goods and services creates labour demand that, in the absence of the migrants, would not have been apparent. The results provided are not net of this effect.

2. Background

The post-war migration program created in the late 1940s in Australia had two main objectives: to provide workers for the expansion of Australian industry, especially the manufacturing and construction industries; to increase the size of the Australian population under the imperative of 'populate or perish'. Little attention was given to the skill level or English competency of the immigrants upon arrival because the labour demand was primarily for workers with low skills. As the various migrant groups established themselves in Australia, the emphasis of migration shifted to the entry of family members of the prior immigrants. These family members, like their sponsors, were primarily people with low skills.

As a consequence of these migration settings, whenever there was a downturn in the Australian economy and an increase in unemployment (1961–1962, 1974–1975, 1983–1984 and 1991–1993), the migration program was wound back (Figure 1). This was appropriate as the migrants competed very directly with low-skilled Australians for the available jobs. This competition was heightened by the continuing expansion of the domestic labour force, which resulted both from the entry into the labour force of the baby-boom generation and the relatively low skills of the domestic population. With Australia's baby boom continuing into the early 1970s and small numbers of older workers retiring from the labour force, this situation of strong natural growth of the domestic labour force continued into the 1980s.

From the 1980s onwards economic restructuring, especially the winding back of the manufacturing industry, led to the rapid decline of low-skilled jobs and a commensurate high demand for jobs requiring tertiary education and training. Participation in tertiary education began to expand rapidly. In 1995 only 15 per cent of 25–29 year-old Australians had a university degree. This had jumped to 37 per cent by 2015 (Norton 2016, p. 68). As increasingly higher proportions of young Australians

pursued tertiary education and training, correspondingly, the number of young people employed in full-time jobs fell rapidly. For example, the number of 15–19 year olds employed full time fell from 463,000 in July 1989 to 240,000 in July 1993 and has continued to fall since then (ABS 2016a).

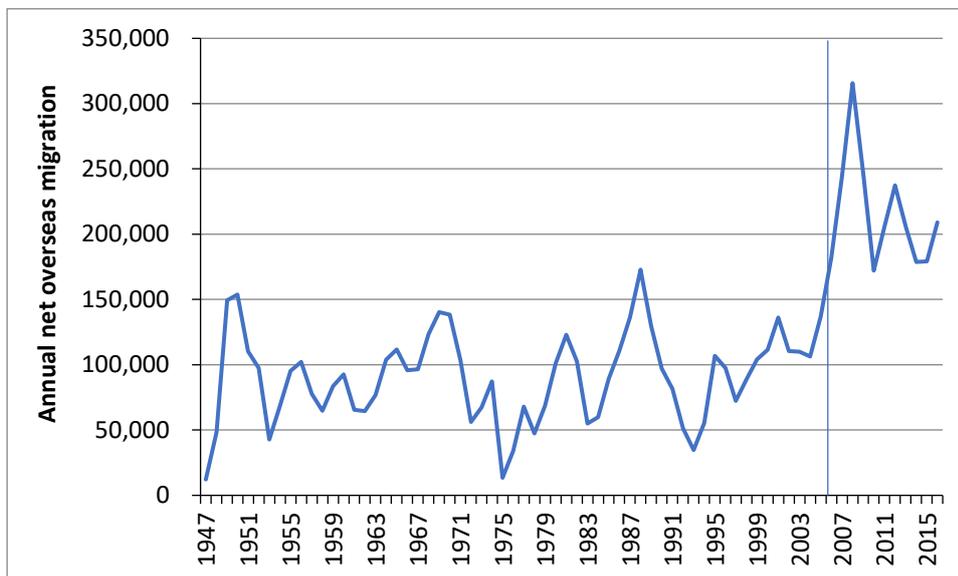


Figure 1: Net overseas migration, Australia, 1947–2016⁽¹⁾

Notes: (1) From 1 July 2006 (vertical line), the definition of net overseas migration was changed by the ABS. The new definition made it more likely that temporary residents such as international students and temporary skilled workers would be counted into the population and coincided with a surge in these types of immigrants immediately after the definitional change. While net overseas migration is somewhat higher under the new definition compared with the old (especially in 2008), the average in recent years of around 200,000 per annum provides a reasonable comparison with the years prior to the definitional change.

At the same time, demographic change in Australia was putting an end to the natural growth of the domestic labour force. This is indicated starkly by the numbers in Table 1. While in 1996 the population aged 25–29 was only 71 per cent of the size of the population aged 15–19, by 2016 the population aged 25–29 was 123 per cent of the population aged 15–19. Finally, as evident also from Table 1, the ratio of the near retirement age population (60–64 years) was just 41 per cent of the population aged 15–19 in 1966 but 83 per cent in 2016. To bring this situation into even sharper focus, the number of full-time workers aged 15–19 in 1978 was three times the number of full-time workers aged 60–64. In contrast, in 2016 the number of full-time workers aged 15–19 was just 39 per cent of the number aged 60–64.

Table 1: Relative size of age groups in Australia, 1966 and 2016

Age group	Relative size of age group (%) (15–19 = 100%)	
	1966	2016
15–19	100	100
20–24	81	115
25–29	71	123
60–64	41	83

Source: ABS (2014).

The long-term demographic shift resulting from historical changes in the birth rate combined with rapid restructuring of the skill level of labour demand, a hiatus of new entrants into the labour force

(associated with increased participation in tertiary education) and increasing numbers retiring compounded to produce a skilled labour supply challenge in Australia from the mid-1990s. This was exacerbated in the early 2000s by the onset of the mining boom and its associated spin-offs into other industries. Somewhat presciently, the Australian Government in 1995 had shifted its permanent migration program away from family migration to points-tested skilled migration and introduced an uncapped temporary skilled worker visa (the 457 visa). These well-timed changes in policy meant that as labour demand expanded in the 2000s, skilled migration could be ramped up effectively to meet the demand.

The demand in the early 2000s was so strong that the Australian Government extended the right to apply for permanent residence to temporary residents onshore through employer sponsorship. This two-step process where migrants entered Australia on a temporary visa, established themselves through employment with an employer and then applied for permanent residence as an employer-sponsored applicant had become the dominant pathway to permanent residence by the second decade of the 21st century. The story of these developments is told by Gregory (2014) and McDonald (2015). Both authors argue that the two-step process is very effective because of the guaranteed employment of the migrant as opposed to the potentially long job search that needs to be undertaken by an independent skilled applicant.

There were also substantial increases in migrants via the 'Family Stream' and 'Working Holiday Maker' visa subclasses and numbers of international students. The latter two groups also have relatively high levels of employment. Finally, the high Australian dollar and strong labour demand led also to very large numbers of New Zealand citizens taking up employment in Australia under the open labour market policy of the two countries which had been established in the early 1980s (ABS 2010). When the economic recession hit at the end of 2008, for the first time in Australian history the Australian Government did not cut the immigration program. Breunig, Deutscher and To (2017) claim that there is no evidence to suggest that this approach had negative impacts on the labour market outcomes of domestic Australian workers.

With this background, the purpose of this paper is to examine post-global financial crisis (GFC) employment outcomes in Australia and the ways in which immigrants have contributed to those outcomes.

3. Data and methods

The input data for the study were:

- estimated resident population (ERP) of Australia by five-year age group and sex for 30 June 2011 and 30 June 2016. The ERP values used were those estimated prior to the results of the 2016 Census.
- number of employed persons by five-year age group and sex from the July 2011 and July 2016 Labour Force Surveys published by the Australian Bureau of Statistics (ABS 2011, 2016a).
- five-year age group and sex-specific employment to population ratios from the same surveys
- five-year life table survival ratios by age and sex calculated from the Australian Life Tables for 2013–2015 published by the Australian Bureau of Statistics (ABS 2016b).

Step 1 in the method was to project the resident Australian population in 2016 by five-year age groups and sex in July 2011 forward to July 2016 using the Life Table survival ratios. At the oldest

ages, the population aged 85 and over was survived to 90 and over. This produced the estimated age and sex distribution of the population in 2016 in the absence of migration.

In Step 2 the employment to population ratios from 2011 were applied to the projected 2016 population. At the oldest ages, the published data required the use of age group 65 and over for this purpose. This step calculates the number of people who would have been employed in Australia in 2016 in the absence of migration and under the assumption that there was no change in the employment to population ratios between 2011 and 2016. This yields the first component:

1. Changes in numbers employed due to population growth resulting from the existing 2011 age distribution and mortality in the five-year period (referred to in the paper as 'population growth').

Step 3 applied the 2016 employment to population ratios to the 2016 projected population in the absence of migration. This calculates the number of people who would have been employed in 2016 in the absence of migration but using the actual 2016 employment to population ratios. The difference between the results of Step 3 and Step 2 produces the second component:

2. Changes in employment numbers due to the change in the employment to population ratios.

Step 4, the final stage, compared the actual numbers by age and sex employed in 2016 with the result from Step 3. The difference between the two, the residual, shows the effect of adding in migration along with any errors (sampling error in the two surveys; errors in the ERP used to blow-up the survey results; errors in the assumed levels of mortality). This provides an estimate of the third component:

3. The effect of net migration in the period 2011–2016 on the total number of people employed in 2016.

In relation to the errors, the sampling errors in the Labour Force Survey are small and any error deriving from the survival ratios would be negligible as most of the calculations relate to younger ages. Error deriving from errors in the ERP are potentially larger, but the changes made to the ERP following the results of the 2016 Census are small by historical standards (ABS 2017). It should also be noted that the 2016 census-adjusted ERP was larger than the pre-census estimate, implying that the residual (the third component) would have been larger than estimated here if the 2016 Census-adjusted ERP had been used to adjust the 2016 Labour Force Survey results. In the end, it is impossible to gauge the combined effect of these potential sources of error but it can be confidently concluded that any error in component 3 would be small and would be in the direction of increasing this component. While error can also apply to the estimation of components 1 and 2, the net effect of the errors would have been very small in relation to these components.

There are implicit assumptions in the method that the new migrants had the same age-sex-specific employment to population ratios in 2016 as the domestic population, and that the employment to population ratios of the non-migrant population would not have changed in the absence of migration. As the age and sex distributions of both the migrant and non-migrant populations are taken into account in the calculations, and as the new migrants in 2016 constituted only 5 per cent of total employment, the effects of any errors in these implicit assumptions will be marginal.

4. Results

Figure 2 shows the results for three age groups: 15–24; 25–54 (the prime working ages); and 55 and over. Total employment is also shown. Looking first at the five-year change in total employment (738,800), the largest change was in the prime working ages (431,300) followed by the older ages (286,000), with only a very small positive impact evident for ages 15–24 (21,500). To provide some perspective for these numbers, the total number of employed persons in Australia in July 2011 was 10,890,700. This means that employment increased by 6.8 per cent in the five years to July 2016.

4.1 Youth employment

The small net change at ages 15–24 was the result of a large negative component (-137,900) due to population change and a smaller negative amount (-40,100) due to falls in employment to population ratios for this age group, offset by a large gain (199,500) due to the third component, international migration. In other words, without migration, numbers employed in the age group 15–24 would have fallen substantially.

Employed recent migrants aged 15–19 are primarily international students and working holiday makers employed very largely in part-time shift work in the hospitality and retail industries. The other group employed in this way in the same industries, even larger in number than the migrant group, is Australian students. Along with the Netherlands, students in Australia are much more likely to be employed than students in any other OECD country (Quintini 2015). In industries with very distinct peaks and troughs in demand, in terms both of the time of day and time of year, the availability of a large group willing to work under these conditions is highly beneficial to employers. Furthermore, Australian and international students and working holiday makers are usually much more highly skilled than the jobs require, meaning that productivity is enhanced.

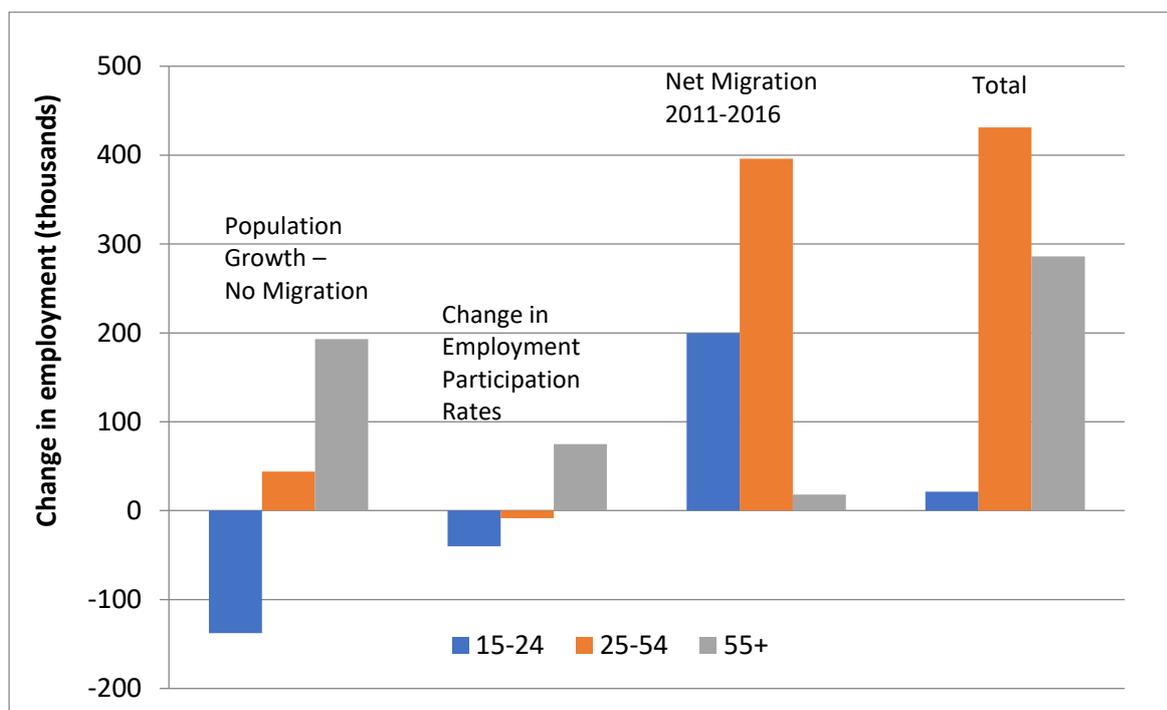


Figure 2: Decomposition of the change in the total number of people employed in Australia between June 2011 and June 2016, ages 15–24, 25–54 and 55 and over

Given that youth unemployment in Australia is a serious issue, the counterfactual question arises: had there been zero migration at these ages, would Australian employers have opted to employ unemployed non-migrants aged 15–24 to a much greater extent, or would total employment have been lower?

In addressing this counterfactual question, it needs to be remembered that unemployed domestic job-seekers receiving the Newstart allowance effectively need to find longer-term, full-time work. Otherwise, they are in and out of the Centrelink office every time they take a new job or their hours change and, in this situation, there is a strong chance that they will lose benefits for some periods. Given the structure of the labour market at these ages, such jobs are hard to find. As the skills requirements of the Australian labour market have shifted upwards, skilled workers are rarely aged under 20, or even in their early twenties, and the opportunities for low-skilled, full-time work at these ages have fallen dramatically.

Thus, while recent temporary migrants at this age may be in competition for jobs with full-time Australian students, their absence from the Australian labour market generally would not open opportunities for young Australians receiving Newstart payments. Young unemployed Australians have a low-skills problem in a skilled labour market and the social security system makes it difficult for them to take part-time, short-term jobs. While there may be some instances of displacement, the broad story is that they are not pushed out of jobs by migrants.

4.2 Prime working ages

Employment in the prime working ages (25–54 years) in the five-year period rose a little through population growth but declined by a small amount due to changes in employment participation. The small decline related to participation was the result of an increase for women of 31,700 fully offset by a fall for men of 40,100. Consequently, almost all of the substantial net growth in employment at these ages was due to migration (395,800 out of a total of 431,300, or 92 per cent). Total unemployment in this age group in 2016, excluding unemployed recent immigrants, was 321,000.

Thus the job growth that was achieved could not have been achieved without migration, even in the extremely unlikely situation that unemployment in the domestic population at these ages had fallen to zero. For long-term unemployed Australians in this age group, the issue once more was primarily inadequate skills and not competition from migrants. This is not to say that there is no competition from migrants for jobs that might be filled by domestic workers. As the 2014 independent review of the integrity of the 457 visa subclass for the Australian Government noted, it is important that the list of occupations open to temporary skilled workers is continuously monitored (Azarias et al. 2014).

4.3 Older ages

Migration had very little impact on the relatively substantial growth in employment at ages 55 and above. Here, the main source of growth (192,900) was population growth as the baby-boom and subsequent large generations replaced the earlier smaller generations. Employment participation also increased at these ages adding 75,000 additional employed persons. Virtually all of these (73,600) were older women. While employment participation rates rose sharply for men at older ages in the decade 2000–2010, there was little change after 2010. For older women, the continued increase in employment participation rates through to 2016 is largely the result of cohort changes.

Each successive cohort of women has increased its participation at younger ages and these higher rates at younger ages have flowed on to higher rates at older ages for each successive cohort.

4.4 The age of the labour force

Because migrants are young, migration dramatically changes the age structure of employment in Australia (Table 2). Without migration, employment at ages under 55 years would have fallen by 143,000 in the five-year period. Instead, with migration, employment at these ages increased by 452,000, a total turnaround of 595,000. At the same time, employment would have increased at older ages without migration by 268,000 and hardly increases when migration is included. In an age where young people are the assimilators of new technology, this impact of migration on the age structure of the labour force is likely to be highly beneficial to the economy. In addition, there is a growing argument that older and younger workers are complementary rather than substitutes for each other: younger workers have the technical skills, while older workers have the experience of how these skills might be utilised.

Table 2: Change in numbers employed by broad age group with and without migration, 2011–2016

Age group	Without migration	With migration
<55 years	-143,000	452,000
55 years and over	268,000	286,000

There is also a gender effect of migration. Without migration, male employment would have increased by just 6,000 in the five-year period in net terms. Instead, including migration, it increased by 306,000.

5. Discussion and conclusion

The analysis here shows that immigration had a very large impact on employment change in Australia between 2011 and 2016. While this is not an analysis of the economic benefits of migration to Australia, a number of relatively recent studies provide some indication of these benefits.

For example, in the context of a study which showed that immigration negatively affected the wages of low-skilled workers in most OECD countries, Docquier, Özden and Peri (2010, p. 14) found that the 'reverse takes place in Canada and Australia where immigration strongly helps the wages of less educated (+3.3 and +4.5% respectively)'.

A report by McDonald and Temple (2013, p. 10) on the long-term effects of ageing and immigration on labour supply and per capita gross domestic product in Australia concluded: 'To draw a more definite conclusion, if the aim is to optimize GDP per capita growth through to [year] 2053, NOM [net overseas migration] between about 160,000 and 220,000 seems to do this if it is assumed that the migrants' have the same rate of labour productivity growth as the general Australian population.

A broad-based study published by Migration Council Australia utilised the Independent Macroeconometric Model to simulate migration scenarios and concluded:

The economic impact of migration flows through into every aspect of the economy. It has a profound positive impact not just on population growth, but also on labour participation and employment, on wages and incomes, on our national skills base and on net productivity. (Migration Council Australia 2015, p. 2)

The Productivity Commission (2016, p. 2) similarly investigated the economic impacts of immigration, finding: 'Australia's current immigration profile is projected to deliver a *demographic dividend* to Australia and higher economic output per person.' A further study for the Productivity Commission by Breunig, Deutscher and To (2017, p. 1) concluded: 'We find almost no evidence that immigration harms the labour market outcomes of those born in Australia'.

Referring to regional employment impacts, Golebiowska, Elnasri and Withers (2016, p. 449) found:

policy design—particularly the two-step visa process for regional migrants—has allowed substantial and effective regional location encouragement for immigrants over the past decade. ... the job-creation dimensions of immigration may mean that regional policies seeking greater population growth ... can be benefited by the use of targeted migration visa entry conditions.

On the other side of the equation, there are negative externalities created by rapid population growth such as congestion and pressure on natural resources, urban infrastructure and housing. Sobels et al. (2010) concluded: 'the macro-scale modelling found that higher levels of NOM [net overseas migration] impose greater adverse impacts on the quality of our natural and built environments, other things being equal'.

It is clear that strong labour demand in Australia in the first decade of the 21st century led to relatively high immigration and that this had significant economic benefits. This paper has shown that immigration in response to strong labour demand has continued following the GFC. In the next decade, very strong labour demand can be expected in the caring sector with the implementation of the National Disability Insurance Scheme and natural growth also in aged care, and in the construction sector with increased emphasis on infrastructure development. Meeting these demands will have spin-offs in other sectors. The work of Golebiowska, Elnasri and Withers (2016) indicates that migration plays an important role also in regional development.

While there may be surges in temporary migration from time to time (as in 2008), in the longer term the level of immigration is determined by the setting of the federal target for the permanent migration program. The Australian Government has set this target at 190,000 persons per annum for 2017–2018 and the next three years. This means that relatively high population growth will continue. Recognising that there exist potential negative implications of rapid population growth, particularly for Sydney and Melbourne, it is incumbent upon governments to plan for the effects of this inevitable population growth on both infrastructure and resources.

Key messages

- Historical changes in the birth rate, the hiatus of new entrants into the labour force as young Australians increased their participation in tertiary education, increasing numbers retiring and the relatively rapid restructuring of the skill level of labour demand all combined to produce a skilled labour supply challenge in Australia from the mid-1990s.
- Skilled migration, both permanent and temporary, played an important role in meeting this labour demand.
- Immigration in response to strong labour demand continued after the GFC and had a highly significant impact on the growth of employment in Australia between 2011 and 2016.
- It is incumbent upon governments to plan for the effects that inevitable population growth will have on infrastructure and resources in the coming years.

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