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Shifting students: regional mobility of undergraduates in Australia

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Introduction

This Joining the Dots (JTD) Research Briefing explores the mobility of university students in Australia using Census data to track the movement of current students over a five-year period. The data captured in this analysis provide a unique insight into the mobility of the student population in Australia, and allow us to examine the potential impact of internal migration on student populations in Australia.

The research focuses on undergraduate university students in 2011 who were undertaking undergraduate studies and who resided in Australia in 2006. It uses Census data to identify their address in 2011 and their address in 2006. Based on these two addresses, a number of analyses are undertaken to explore the movement of this group in the five years between 2006 and 2011.

Moving home to attend university is not ingrained in the Australian psyche as it is in systems such as the USA and the UK. Nevertheless, some students do move and it is interesting to explore the patterns of this movement. For some people, such as those in remote areas, it is inevitable. These data show that as well as movement among this group, there is also movement within and between cities. While it is the intention of this work to identify patterns of student mobility, it is hoped that the information may help expand further research into the issues surrounding movement, including university choice, barriers to study and motivations for inter-city movement among students.

This briefing first explores the extent to which university student mobility is different from that for the population in general. It then looks at differences in movement among the student body by demographics. The briefing identifies four typologies of movement by the undergraduate university student population and concludes by exploring the net movement of this group from individual cities and regions to paint a picture of the dynamics of the mobile higher education population in Australia.
Key findings from this research are:

- University students are more mobile than the general population. In 2011 they were more likely to have moved from their address of 2006 than other groups.

- As a group, university students have become more mobile during this century.

- University students who are female and those who are no longer dependent on their families are more mobile than males and those still dependent.

- While intra-regional movement (movement within one’s home region/city) is the most common form of movement, inter-regional movement is occurring, especially from regional to metropolitan areas.

- In total, 10 per cent of all university students studying in a metropolitan area in 2011 had been living in regional Australia in 2006. In some capital cities, the contribution of the regions to their student population is more significant. For example, 24 per cent of all students in Brisbane were previously resident in a regional area.

- Net movement of the university student population is most evident for Melbourne and Brisbane, both attracting net gains of students from other capital cities and from regional areas. Melbourne dominates in terms of net movement between capital cities in Australia.
Method

The analysis in this briefing uses data from the 2006 and 2011 Census of Australian Population and Households. The Census enables the identification of university students and includes a variable that identifies the home location of students five years prior to the Census date, as well as current residential location.

For the purpose of this analysis, a proxy indicator has been derived based on responses to the Census relating to current educational enrolment and prior educational qualifications in order to best identify the undergraduate cohort of students. In addition, students who were overseas in the ‘address five years ago’ variable have been removed from the analysis to give the best possible focus on domestic students and movement of students within Australia. As a result of these choices, the population of focus is persons recorded as both being enrolled in university, whose highest completed level of education is below bachelor level, and who were residing in Australia five years prior to the Census date. In other words, the target population is domestic, undergraduate university students.

The mobility of this population of domestic undergraduates is compared to the Australian population at large. In addition, the mobility of a number of sub-populations, including women, students who lived with their parents or guardians, and students under the age of 20, are also explored.

Using the variable that lists the address of individuals five years earlier, this analysis has created a matrix of the university student population to trace movement. Geographic data based on Australian Statistical Geography Standard (ASGS) Statistical Area 4 (SA4), which includes more than 100 Australian regions, has been analysed for the purpose of this study. Aggregations of areas by capital city and rest of state have also been undertaken.

The majority of the analyses here have concentrated on movement between 2006 and 2011 based on data from the 2011 Census. Some additional comparative data have been extracted from the 2006 Census to explore mobility between 2001 and 2006.

Movers - 2011 Census

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.2%</td>
<td>Female students in 2011 lived elsewhere in Australia in 2006</td>
</tr>
<tr>
<td>35.9%</td>
<td>Male students in 2011 lived elsewhere in Australia in 2006</td>
</tr>
<tr>
<td>32.2%</td>
<td>15–19 year old students in 2011 lived elsewhere in Australia in 2006</td>
</tr>
<tr>
<td>31.4%</td>
<td>All 15–19 year olds in 2011 lived elsewhere in Australia in 2006</td>
</tr>
<tr>
<td>19.3%</td>
<td>Dependent students (those still living with parents) in 2011 lived elsewhere in 2006</td>
</tr>
<tr>
<td>49.2%</td>
<td>Non-dependent students (those not living with parents) in 2011 lived elsewhere in 2006</td>
</tr>
</tbody>
</table>

Note: only those who were living in Australia in both 2006 and 2011 are included in the analysis.
Shifting students

Mobility of students – in context

In 2011, there were a total of 660,000 university students in Australia who fit the population for analysis in this research (i.e. they were also residing in Australia in 2006). Of these students, 257,000 lived at a different address from the one recorded in 2006. Therefore, of the domestic university cohort 38.9 per cent of university students had lived elsewhere in Australia in 2006. In comparison to the whole population (i.e. those who lived in Australia in 2006 and in 2011), the university student cohort were more likely to have moved in the previous five years, with 31 per cent of all residents having a different address in 2006.

The mobility of the student cohort appears to have increased over time. The same analysis based on the 2006 Census and looking at residential address in 2001 shows that in 2006 a total of 34.7 per cent of university students recorded a different address five years earlier. This represents a 4.2 percentage point shift between the student cohort of 2006 and those in 2011. By comparison, the rate of mobility of all residents increased more slowly, from 29.1 per cent between 2001 and 2006 to 31 per cent between 2006 and 2011 (a 1.9 percentage point increase). While this difference is modest, it does show that the propensity for mobility has become greater among university students in the past five years than has this propensity across the wider population.

The mobility analysis based on 2011 Census data also shows that female students were more likely to have lived elsewhere in Australia in 2006 than males, with 41.2 per cent of females having moved compared with 35.9 per cent of males.

Younger university students (those aged 15 to 19 in 2011) were less likely to have moved than the whole student group, with 32.2 per cent shown to have had a different address in Australia in 2006. The mobility of this cohort of students was not much different from the whole population of those in this age group (whether at university or not).

Students still living with their family and classified as dependent are shown in the Census data to be much less likely than non-dependent students to have lived at a different Australian address five years earlier. In total only 19.3 per cent of dependent students had changed address between 2006 and 2011 compared with nearly half (49.2 per cent) of students in 2011 who were not dependent on their parents.
A typology of movement

In analysing the data for this research, a range of different groupings of movers among the student population became apparent, and four key movement groups are discussed in this section. These different types of movement show the overall distribution of movement across Australia by university students. The relative contribution of each group to the overall population of students in the relevant regions is explored in later sections.

The movements of 2011 university students who lived at a different address in 2006 are shown in Figure 1. The most common type of movement was of students moving within metropolitan areas (i.e. within the same capital city or from one capital city to another), accounting for 46.4 per cent of all student movers. The next most common type of movement represented those moving within regional areas, with 27.6 per cent of all movers in this category.

The other two groups in the typology are of particular interest. Of all student movers, 19.1 per cent had moved from a regional area in 2006 to a metropolitan area in 2011. The share of movement from metropolitan areas to regional areas was substantially smaller, accounting for 6.9 per cent of all student movers.
Contribution of movers to the student population

The above typologies provide a broad picture of the distribution of origin and destination of Australian university students. However, to understand the relative importance of these typologies of movement, it is useful to examine the overall contribution that these movers make to the full university student populations in metropolitan and regional Australia.

The data from the 2011 Census show that of all students residing in a metropolitan area in 2011, 10.1 per cent had been living in regional Australia five years earlier. Interestingly, students moving from metropolitan areas to regional Australia in 2011 accounted for a similar proportion of all regional students – 10.2 per cent.

While the overall figures for Australia in 2011 show that 10.1 per cent of students in metropolitan areas were living in a regional area in 2006, there are substantial differences in this share of students across the capital cities of Australia. Figure 2 shows that in 2011, of all capital cities, Brisbane had the largest proportion of its university student population who had resided in regional areas five years earlier, with these students accounting for 24 per cent of all domestic university students (although this result is slightly skewed due to the Gold Coast and Sunshine Coast being classified as non-metropolitan areas).

At the other end of the spectrum, only 5 per cent of all university students in Sydney in 2011 had resided in a regional area in 2006.

These differences are further contextualised in Figure 3, which displays the actual numbers of students and their residential location in 2006 for each capital city. It shows that, in absolute numbers, Brisbane still has the largest cohort of students from regional areas, but that these numbers are only slightly larger than for Melbourne, and that the actual number of regional students in Sydney is higher than in any other capital except Brisbane and Melbourne, despite the fact that they make up only 5 per cent of all students in Sydney.

2011 Census shows ...

**Percentage of all university students in metropolitan areas in 2011**

- who were living in a regional area in 2006
  - 10.1%

**Percentage of all university students in regional areas in 2011**

- who were living in a metropolitan area in 2006
  - 10.2%

Note: only those who were living in Australia in both 2006 and 2011 are included in the analysis.
Shifting students

Figure 2
Share of university students who previously resided in a regional area, 2011.

Source: ABS Census, 2011

Figure 3
University students by city of residence in 2011 and previous region of residence

Source: ABS Census, 2011
Net movements by students

The final analysis in this research briefing explores the net contribution to university student populations based on the movement of those who were students in 2011. This analysis takes into account only those who moved into or out of the specific areas listed below (inter-regional movement) – it does not include mobility within areas (intra-regional movement, i.e. from one part of Melbourne to another).

Figure 4 summarises the net movement of this student cohort for each capital city and ‘rest of state’. Overall the pattern is clear, with capital cities experiencing net gains while regional areas experience net losses.

This is not surprising, although the difference in the net gains and losses across the different areas identified here does provide new insights. In this analysis, Melbourne and Brisbane are shown to be the big winners from the internal movement of university students in Australia, with both experiencing net gains of more than 10,000 students among the cohort of students enrolled in 2011. Interestingly, the net gains for Perth, Adelaide, and Canberra were larger than those for Sydney. Regional areas all experienced a net loss, with the pattern in size of the loss linked to the relative population size of these areas.

![Figure 4](net_movement_students.png)

*Figure 4* Net movement between 2006 and 2011 for the 2011 university student cohort

*Source: ABS Census, 2011*
To contextualise these outcomes, Figure 5 charts the net movement of students in relation to the overall size of the student cohort for each capital city and the remainder of the state. While this figure helps to show the relatively small size of these net movements in some of the capital cities, it does highlight some interesting outcomes for regional areas. For example, while the net loss of students from regional NSW, Queensland and Victoria is relatively small in relation to the overall number of students still residing in these areas, for regional South Australia and regional Western Australia the net losses are much larger.

The dynamics of movements between cities and regions are shown in Figure 6. These data offer a visual indication of the net gains and losses of the 2011 university student population from each city to/from other capitals and regional areas. It is apparent from this that the largest net gain for capital cities comes from the regional areas of their states (this is the case for all but Canberra, which draws on regional NSW rather than the very small ‘regional ACT’). The graphs for each city also show the interactions between major cities in terms of gains or losses of this population between 2006 and 2011. For example, Melbourne has a net gain of students from Sydney (427 net increase), as does Canberra (598) and Brisbane (160). Interestingly, Darwin has a small net gain from Sydney (3) while showing a noticeably large net loss to other capitals.

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**Figure 5** Net movement between 2006 and 2011 and total number of university students, 2011

Source: ABS Census, 2011
Figure 6: Net movement of the 2011 university student population from 2006 to 2011 by capital city
Source: ABS Census, 2011
Shifting students

KEY INTER-CITY NET MOVEMENTS FOR MELBOURNE

Source: ABS Census, 2011
Conclusion

The findings in this briefing provide new data relating to the mobility of university students in Australia. They show that university students in 2011 were more likely to have changed address since 2006 than the general population, and that those who were no longer dependent on their families were much more likely to have moved. They also show some recent increase in the likelihood of students to be mobile, with the 2006 Census revealing less movement of students than apparent in the Census five years later.

While much of the movement tracked using the Census was intra-regional, the data do show different dynamics of movement of this student population between regions. Among those moving across regions, students moving from regional to capital cities are far more prevalent than those moving from cities to regional areas.

The inter-regional movement data also show that all capital cities gained substantially from the regional areas within their state, but some were also gaining students from other regional areas and other capital cities. Melbourne and Brisbane stand out in attracting many more students than they lose.

This initial exploration into population movement of university students provides an interesting macro-level examination of the mobility of this cohort. Further work to explore the reasons for movement, and looking in more detail at factors such as disadvantage among the movers and non-movers in the university student population, would help to add further nuance to this area of work.