Age demographics in Australia's rural towns

Lesson Map: http://esriaustralia.com.au/education/SpatialActivity57

Engage

How are settlements characterized in Australia?

→ View the diagram below, showing Australia's towns by population size groupings in 2016.

AUSTRALIA'S TOWNS BY POPULATION SIZE GROUPINGS, 2016

Town Grouping
- 🟠 Major Cities
- 🟡 Large Towns
- 🟣 Medium Towns
- • Small Towns

Source: Census of Population and Housing, 2016
Australian Statistical Geography Standard, 2016
Geocentric Datum of Australia, 1994
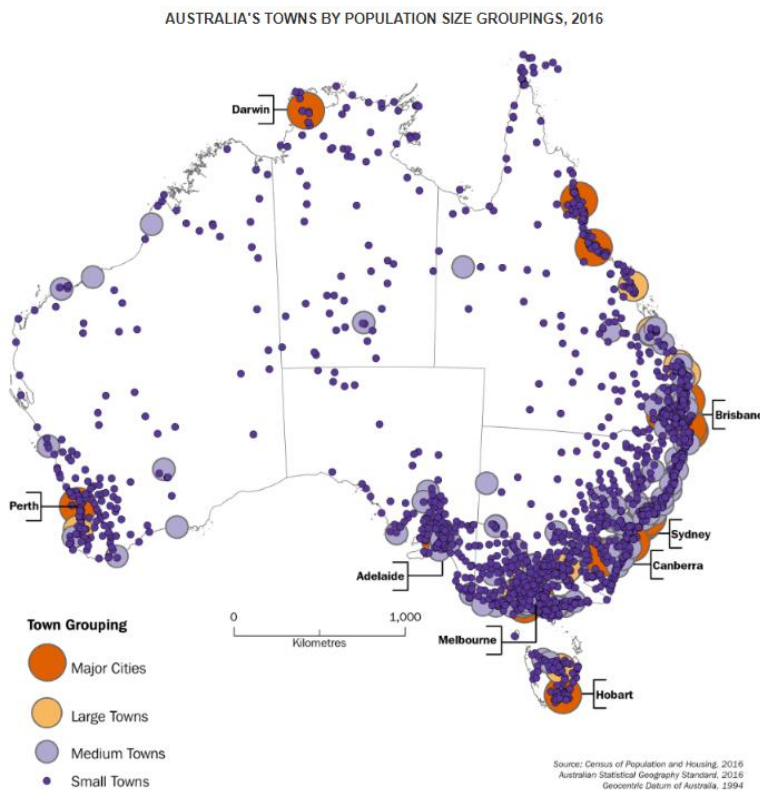
− Australia's settlements are grouped by the following:

Major Cities	Major urban centres with populations of 100,000 people or more.
Large Towns	Urban centres, with populations of 50,000 to less than 100,000 people.
Medium Towns	Urban centres with populations of 10,000 to less than 50,000 people.

Small Towns	Urban centres and other localities with populations of less than 10,000 people.
Rural Areas	Rural areas, Balance of State/Territory.

? The spatial distribution of Australia's capital cities is on our coastlines. Name at least two reasons why cities are located near the sea. *[Historically, cities are established near the sea for many reasons. Ports are necessary to establish trade routes for goods and other products, whilst the climate in these locations often provide fertile lands for agriculture.]*

? What are at least two reasons to explain why small towns exist throughout rural and remote Australia? *[ATSI communities; Mining communities; small agricultural communities.]*

Explore

How will populations in capital cities change in the future?

→ Click on the Lesson URL at the top of the page to open up this lesson's accompanying map. The map extent will show Australia. Under the 'Details' pane, click 'Content' and turn on *% of state population living in capital city area – 2017*. Click on 'Legend' to see what the symbols represent.

? What three states or territories have the highest percentages of their population living in the greater area of their capital city? *[WA – 79%, SA – 77%, VIC – 77%]*

→ Under the 'Details' pane, click 'Content' and toggle between the following layers:

- *% of state population living in capital city area – 2027*
- *% of state population living in capital city area – 2042*
- *% of state population living in capital city area – 2066*

Some data does not exist for each state or territory in each year bracket.

→ Click on the circles on the map to enable an information box. This information box will provide you with exact percentages of the populations projected to be living in each capital city area over time.

? What trend exists across all states and territories? *[The proportion of each state/territory's capital city populations is projected to increase into the future.]*

? What implication does this have for other Australian settlements? *[As the proportion of Australians living in capital cities increases, there will be a decline in the proportion of Australians living in small and medium towns, as well as, rural*

communities.]

Explain

Where are the young people going?

→ Turn off all layers. Turn on *2018 Median age by capital city.* Click 'Legend' to see what each colour represents. Click on each state or territory to enable an information box to pop up. This will tell you what the median age for each state or territory is.

− Median age refers to the age at which half the population is older and half of the population is younger.

→ Turn off *2018 Median age by capital city* and turn on *2018 Median age in rest of state.* Click 'Legend' to see what each colour represents.

? What contrast exists between the median age of the population in cities versus the median age of the population that lives in the rest of the states or territories? *[In most states and territories, the median age of the city population is younger than the median age of the 'rest of state' population.]*

? Are there any exceptions to this pattern? Hint: Click on each state across the two layers to compare the median ages. *[Yes. The Northern Territory has a younger median age in the rest of the territory compared to that of Darwin.]*

? Identify and explain at least one reason that may have contributed to this? *[The NT has a higher percentage of the population that identifies as ATSI. Australia's ATSI population has higher fertility rates and a higher proportion of ATSI peoples live in rural communities, which could contribute to a younger median age.]*

→ View the population pyramid below. You can view this in a larger size by either visiting the ABS website or by going to the appendix in this document.

AGE AND SEX DISTRIBUTION OF PEOPLE LIVING IN SMALL TOWNS AND MAJOR CITIES, 2016


Source: ABS Census of Population and Housing, 2016
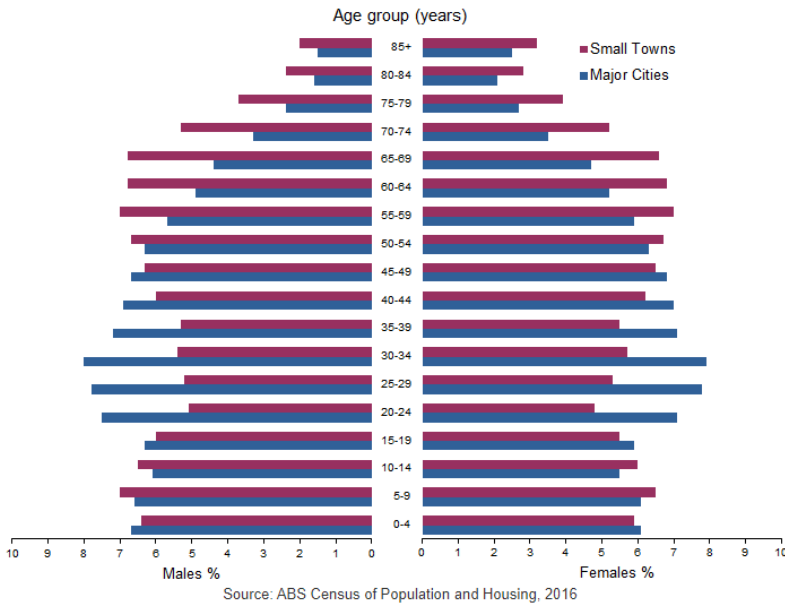
? Identify the 2 periods of life where the percentage of males and females living in small towns is at its highest. Explain why these trends may exist. *[The first period of life is during infancy to early teen years; this trend most likely exists as children are dependent on their parents as they grow and develop. The second period of life where the percentage of those living in small towns is at its highest is the 50 − 69 year period. This may be because Australia's economy was more strongly centered on Agriculture 40 − 50 years ago compared to now.]*

→ Return to the map. Under the 'Details' pane, click 'Content' and turn off all layers. Then, turn on *Median age in Statistical Area level 2 – 2018*. Click 'Legend' to see what each colour represents.

− A Statistical area level allows governments to collect and analyse data at various geographical scales. Statistical area level 2 is designed to reflect suburb and locality boundaries. This SA2 area is the smallest area for the release of many ABS statistics.

→ To complete the following activity, you will need to work at a closer scale. You can accomplish this by:

1. Going to the 'Bookmarks' tab and clicking each location to change the map extent (recommended).

Bookmarks
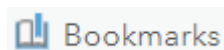
2. Dragging your cursor around the map and using the + and – buttons to zoom in and out.

[?] By exploring the map layer and clicking on the different regions (enabling an information pop-up box), populate the table below. Note: Queensland has been populated as an example.

State / Territory	Where are the younger demographics located and why?	Where are the older demographics located and why?
ACT	Younger demographics are located north of the city centre due to the location of the University of Canberra and Australian National University. Duntroon also contains a high concentration of defence personnel who are often younger.	Older demographics are located south of the city centre and further away as they are more focused on retirement or raising a family. The exception to this is Yarralumla, which is also located right next to Parliament and a golf course – this may suggest that the population are largely politicians or retirees.
NT	Younger demographics tend to be located in remote and rural NT, away from Darwin. This may be due to the presence of small indigenous communities. The indigenous population have higher fertility rates and lower life expectancies, which may explain a younger demographic median.	Older demographics are located in or close to Darwin or Alice Springs, which are the two major city centres in the NT. Considering most of NT is of a harsh environment, it makes sense that older demographics choose to live, work or retire in a place of comfort and convenience.
NSW	Younger demographics in Sydney are in Kensington and Kingsford, which are both in close proximity to the University of NSW. Other concentrations of younger people are located in Wagga Wagga, Tamworth and Newcastle, all of which are regional centres that may offer more employment, recreational and social opportunities in comparison to rural settlements.	Concentrations of older demographics can be found spread along NSW's Central and South coasts. Coastal areas are popular retirement spots and offer a sea-change for retirees who may have worked in urban settlements during their career years.
QLD	High concentrations of younger people appear in St Lucia, Brisbane, which has access to the University of QLD, and in Douglas, Townsville, which has access to James Cook University. Higher concentrations also exist near Cairns and on the Northern Peninsula and Torres Strait Islands, which again are predominantly indigenous populations (higher fertility rates, lower life expectancies)	High concentrations of older demographics appear along Queensland's South-East and Central coasts. Locations such as King's Beach on the Sunshine Coast and North Stradbroke make popular retirement locations.
SA	South Australia's younger demographics are located in Adelaide and its surrounding suburbs. This is most likely because it offers greater employment, recreational and education opportunities e.g. The University of Adelaide. Another younger demographic exists in remote South Australia (north) and is characterized by a high indigenous population.	High concentrations of older demographics appear along the Yorke Peninsula, Victor Harbour and Port Elliot. Locations like these make popular retirement locations due to their proximity to the coast.
TAS	Tasmania has an older age demographic in general but younger	Older demographics are located along Tasmania's East coast and Beauty Point on the

|		Northern side of the state. This again suggests that older populations relocate to these locations for a sea-change or for retirement.
	demographics are focused around Hobart and Launceston. Both of these cities offer greater employment, social and educational opportunities. The University of Tasmania is also located in Launceston.	
VIC	Concentrations of Victoria's younger demographics are evident in Melbourne. Carlton and Parkville likely have high concentrations of university students that attend the University of Melbourne. This trend is evident in Burwood and Clayton, which are both in close proximity to Deakin University and Monash University. Melbourne CBD also has a prominent younger demographic, most likely representing younger demographics entering the workforce and living in apartments close to their place of employment.	Older demographics are concentrated in Geelong and Latrobe – Gippsland. These are popular retirement areas due to their proximity to the coast for those after a sea-change. Latrobe – Gippsland also offers access to National Parks for those desiring a tree-change.
WA	Younger demographics are located near city centres like Perth and Broome, which offer greater employment, educational and social opportunities. Halls Creek in the north-west also has a concentrated younger demographic, most likely because it is the only sizeable town in the region for 600km.	Concentrations of older demographics are located North and South of Perth, along the coast, representing the desire for a sea-change during retirement. Other concentrations exist East of Perth, representing both the desire for a tree-change during retirement and the convenience of proximity to the capital city.

Extend

Why do young people move?

→ Visit this linked webpage. This will take you to the Australian Bureau of Statistics 2016 Census data. Go to section 3, titled 'WHO MOVES?' Alternatively, go to the appendix of this document to view the section.

→ Read the information and answer the following questions.

? View the line graph titled *Migration intensity (one year) (a) by age & sex, 2016*. In what age brackets does migration intensify? *[Migration begins to show a significant and immediate rise in intensity in the late teen years (18/19) and peaks in the mid-20s; there is also a slight rise in migration intensity at 65 years of age and in the mid-80s.]*

? After reading the information that precedes and follows the line graph, what contributes to the intensification of migration in these different age brackets? *[Rises in migration intensity from the late teens to mid-20s may be attributed to enrolment into post-schooling education or entrance into the workforce, and formations of romantic partnerships. Rises in migration intensity at 65 years old is likely due to retirees looking for a tree/sea-change to enjoy in their later years. Rises in migration*

intensity for the 80-85+ age bracket is attributed to residential adjustments following widowhood or due to ageing.]

→ Visit this linked webpage. This will take you to the Australian Bureau of Statistics 2016 Census data, focusing on small towns. Go to the section titled 'LEARNING AND EARNING' to view the following graphs and contextual information. Alternatively, go to the appendix of this document to view the section.
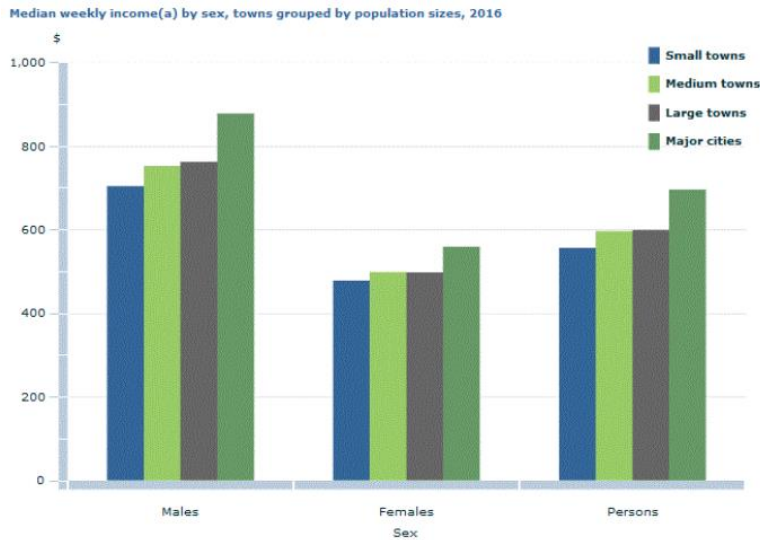
→ Read the information and answer the following questions.

Highest level of non-school qualifications(a), towns grouped by population sizes, 2016
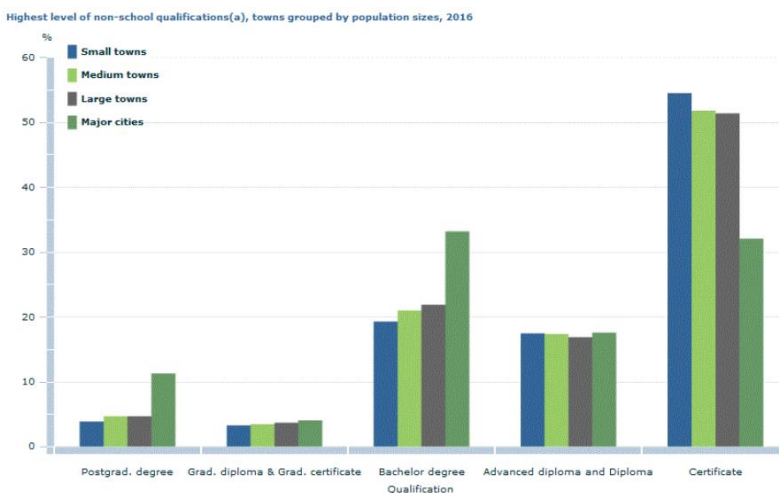
? View the column graph above. Identify the highest non-school qualification people from small towns and major cities are most likely to obtain? *[People from small towns are most likely going to obtain a Certificate (55%) as their highest non-school qualification. People from major cities are most likely going to obtain a bachelor's degree (33%) as their highest non-school qualification.]*

? Explain why there may be differences in what level of non-school qualification may be obtained when comparing people from small towns to major cities. *[People from small towns most likely need to obtain a certificate to perform certain work functions in labour-intensive jobs e.g. operating machinery or technology for mining and agriculture sectors. They also do not have access to educational institutions that offer higher learning. People in major cities are more likely to need a bachelor's degree to enter the workforce in a white-collar job. They are less likely to require certificates that authorize them to use machinery and they have access to*

universities.]

Median weekly income(a) by sex, towns grouped by population sizes, 2016

Legend:
- Small towns
- Medium towns
- Large towns
- Major cities

(?) View the column graph above. Observe the 'Persons' grouping. What is the approximate weekly income for people from small towns, medium towns and major cities? *[Small towns: approx. $557; Medium towns: approx. $597; Major cities: approx. $696.]*

(?) What relationship is apparent between the size of the settlement a person lives in and their income? *[When more people live in a settlement area (e.g. large town versus small town) one can expect to receive a higher weekly income.]*

(?) What relationship exists between level of education attainment, settlement size and employment? *[When residing in a larger settlement area, higher levels of educational qualifications are often needed to enter the workforce as work-based skills are often specialized and job competition is fiercer. However, because a person is likely to have spent more time obtaining further qualifications, they are also recognized for it by receiving higher rates of pay.]*

(?) Why would greater educational, employment, income and social opportunities be of a particular interest to younger demographics? *[Answers will vary but may include: Australia's economy has grown to incorporate employment opportunities in sectors other than agriculture and mining; Young adults are more likely to move than older demographics as they have not yet settled down with a significant other, began a family or locked down a career pathway; the perception that there are more social and recreational activities in larger settlements may also be a contributing factor.]*

Next Steps:

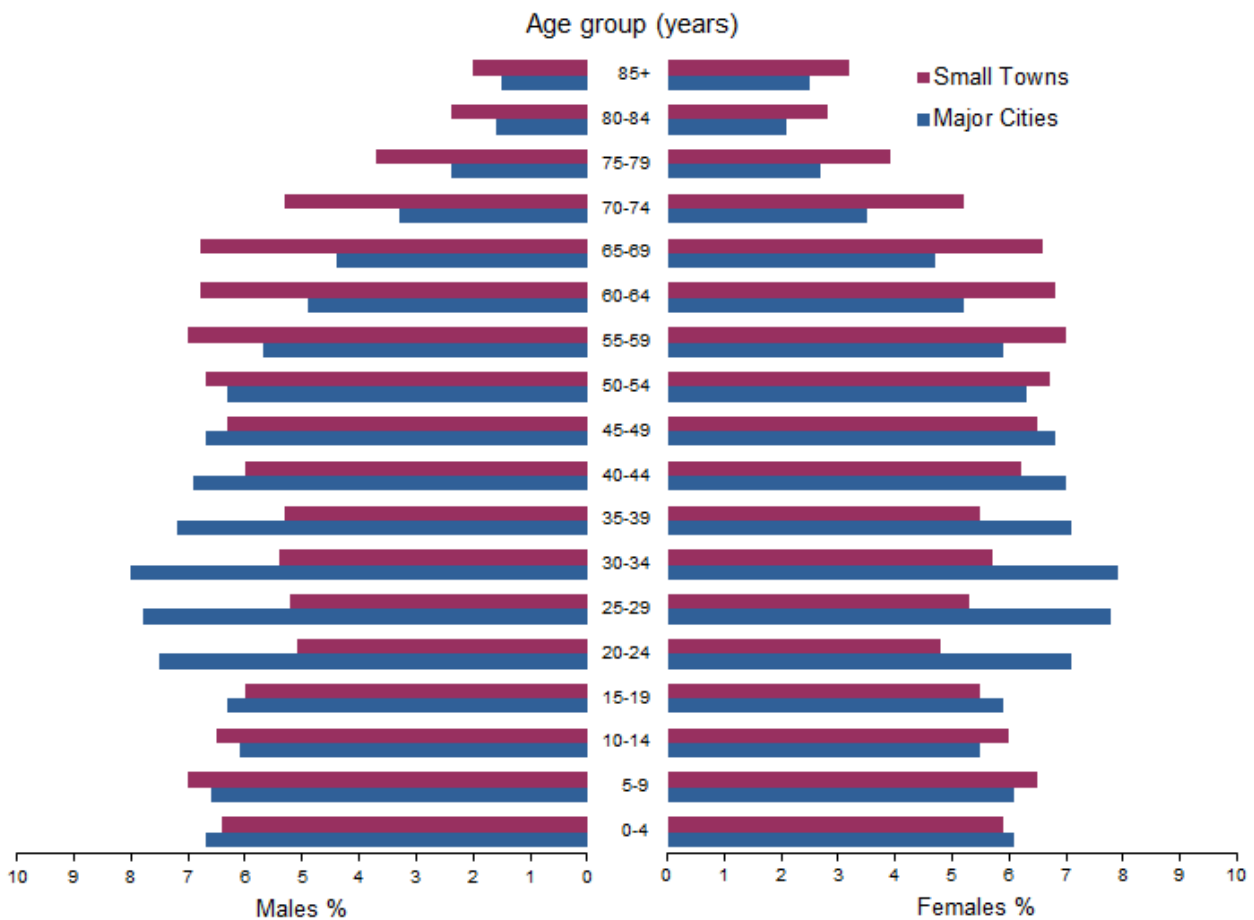## Request a free ArcGIS Online Account for your school:

Australian schools can request a free ArcGIS Online account as part of Esri Australia's Classroom GIS Initiative. A school subscription provides additional map layers, content, features and privacy. Learn more about ArcGIS Online, and apply for your ArcGIS Online School subscription at http://esriaustralia.com.au/education

Appendix:

Figure 1: Australian Bureau of Statistics. (2016) *2071.0 Census of Population and Housing: Reflecting Australia – Stories form the Census, 2016* [Date accessed: 29/04/2020]. Available from World Wide Web:
https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0~2016~Main%20Features~Small%20Towns~113

AGE AND SEX DISTRIBUTION OF PEOPLE LIVING IN SMALL TOWNS AND MAJOR CITIES, 2016

Source: ABS Census of Population and Housing, 2016

Figure 2 on following page: Australian Bureau of Statistics. (2016) *2071.0 Census of Population and Housing: Reflecting Australia – Stories form the Census, 2016* [Date accessed: 29/04/2020]. Available from World Wide Web:
https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0~2016~Main%20Features~Population%20Shift:%20Understanding%20Internal%20Migration%20in%20Australia~69

3. WHO MOVES?

Internal migration is a highly selective process and there are marked differences in the level of migration between people of differing characteristics, especially age. As in other parts of the world, internal migration in Australia peaks among young adults, reflecting the many moves associated with the transition to adulthood. It then declines through older working ages, with a small rise around retirement[6]. Higher migration among young children is tied to that of their parents, while the rise at older ages reflects residential adjustment following widowhood, and ageing. Figure 2 shows the migration profile for males and females and a number of differences are apparent. Internal migration peaks earlier, and at a higher rate, for females (age 24) than for males (age 25). This gap is generally attributed to age differences in partnership formation, whereby women, on average, generally partner with men older than themselves. In addition, lower levels of migration among males reflect a later exit from the parental home, with 43% of young men and 34% of young women aged 18-29 years living at home with their parents at the 2016 Census. The peak in internal migration for females was later in 2016 than in 2011 (age 23), but has remained stable for men at around 25 years of age.

2. Migration intensity (one year)(a) by age & sex, 2016

■ Males   ■ Females

Save Chart Image
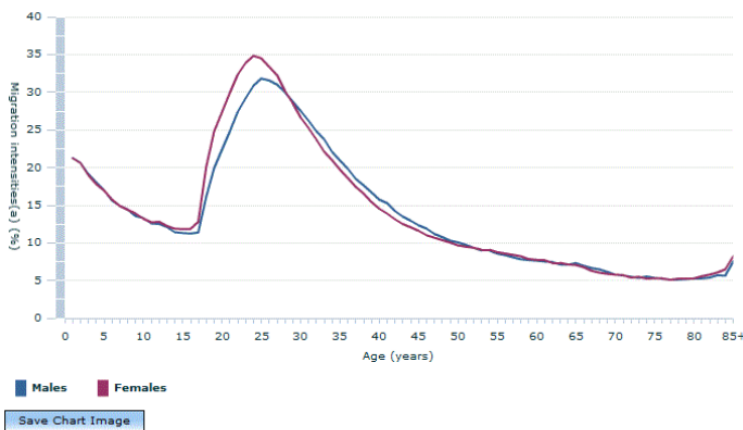
Australian Bureau of Statistics

© Commonwealth of Australia 2018.

Footnote(s): *(a) Migration intensity is a measure of the overall propensity to move in a population. It is calculated by expressing the total number of internal migrants in a given time period as a percentage of the population at risk of moving. In figure two, migration intensity is calculated separately by sex and single year of age.*
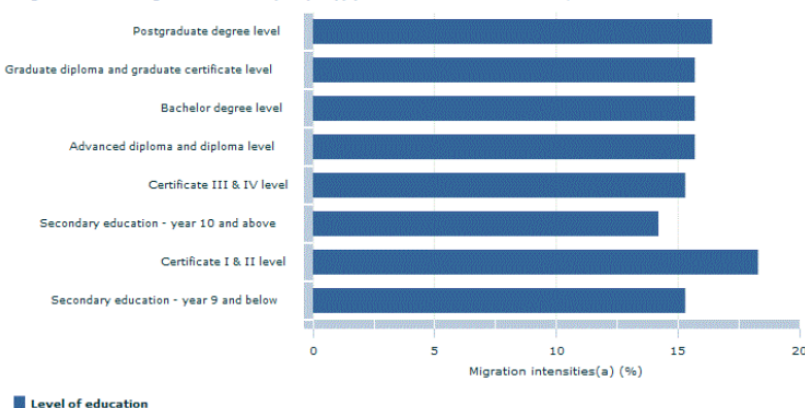
Source(s): *ABS Census of Population and Housing, 2016*

A range of other characteristics also affect the likelihood of migration within Australia. These include economic characteristics such as educational attainment, employment status, industry of employment; social dimensions such as indigenous status, country of birth; and housing tenure. The Census does not capture the characteristics of internal migrants at the time of migration (which would have occurred sometime in the one or five years prior to the Census), but rather captures their attributes on Census night. Despite this limitation, some insights can still be gained into who moves by examining the characteristics of recent internal migrants. Given that most characteristics vary across the life course and that migration is also highly selective of age, it is necessary to control for age effects by calculating age-standardised migration rates. It is important to recognise that age standardised rates are only meaningful in comparison to the 'standard' population, which in this instance is all usual residents enumerated in Australia on Census night who stated a place of usual residence one year prior to the Census as the same as in 2016, or elsewhere in Australia.

Education

When differences in age structure are controlled for there is a weak positive association between the level of education and the level of mobility. The highest age-standardised migration rates are recorded among individuals with Certificate I & II level qualifications (18% compared with 15% for the standard population). This might reflect high levels of mobility for industries in which certificate qualifications are prominent e.g. tourism, mining. Setting this group aside, mobility generally increases with level of education, with an age-standardised rate of 16% for individuals with a Postgraduate degree moving in the year prior to the 2016 Census compared to an age-standardised rate of 14% for individuals with Secondary education - year 10 and above as their highest level of education. This suggests that more educated individuals are competing in national rather than local job markets, leading to more long distance employment-related moves.

3. Age standardised migration intensities (one year)(a) for different levels of education, 2016

■ Level of education

Figure 3 and 4: Australian Bureau of Statistics. (2016) *2071.0 Census of Population and Housing: Reflecting Australia – Stories form the Census, 2016* [Date accessed: 29/04/2020]. Available from World Wide Web:
https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0~2016~Main%20Features~Small%20Towns~113

Highest level of non-school qualifications(a), towns grouped by population sizes, 2016

Median weekly income(a) by sex, towns grouped by population sizes, 2016