

SYDNEY'S MILLENNIAL EXODUS

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Sydney has been rapidly losing its population to other places in Australia, offset only by inward foreign migration. The largest groups leaving are people in their 30s and people leaving areas with the fastest housing price growth.

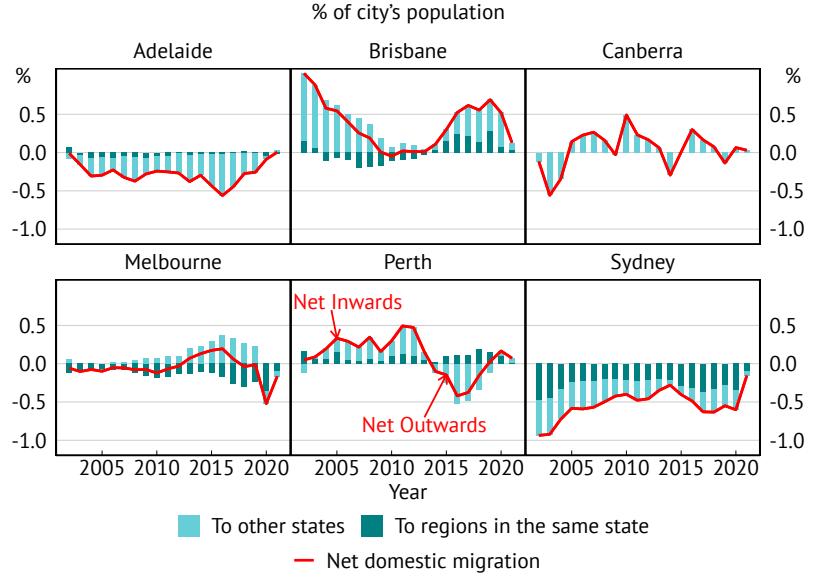
In recent decades Sydney's population has grown about 1% per year. But this is more than accounted for by inward overseas migration. Focusing on *domestic* migration, Sydney has been losing 0.5% of its population each year for about 20 years.

This stands in contrast to other large capitals (Figure 1). Brisbane, Canberra, Melbourne, and Perth have each had minimal or negative net domestic out-migration, on average. Adelaide has averaged about half the outflows of Sydney.

Housing affordability is a prime suspect. Sydney people are leaving the areas where housing prices have risen fastest (Figure 2). For every extra percentage point that an area's housing prices grew in the five years to 2016, an extra 0.2% of the population left in the following five years (based on least squares estimation).

People in their 30s are leaving the fastest (Figure 3), the age when families grow and need more housing. Those in their 40s and 60s are the next fastest out (in net terms), the former perhaps for the same reason, and the latter possibly related to sea- and tree-changing retirees. These age patterns were occurring well before the COVID-19 pandemic (Figure A.2) and seem specific to Sydney. Between 2011-2016, Melbourne had positive in-migration of 30-39-year-olds (Figure A.4).

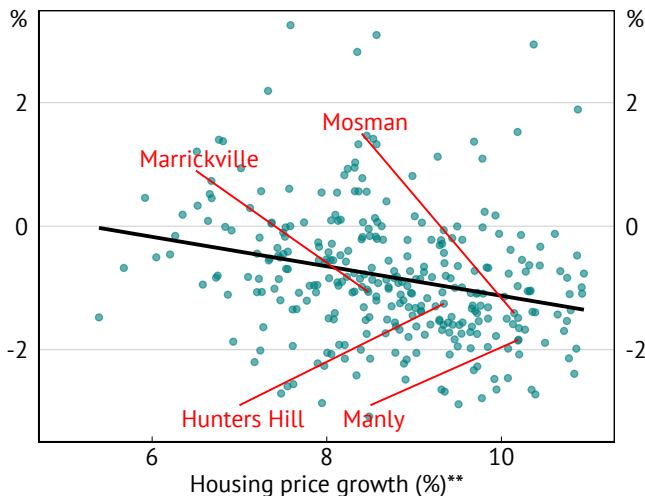
Figure 1: Net Domestic People Movements



* ABS estimated internal migration between GCCSA areas as a % of last year's population
Sources: ABS; e61

Figure 2: Sydney Departures and Housing Prices

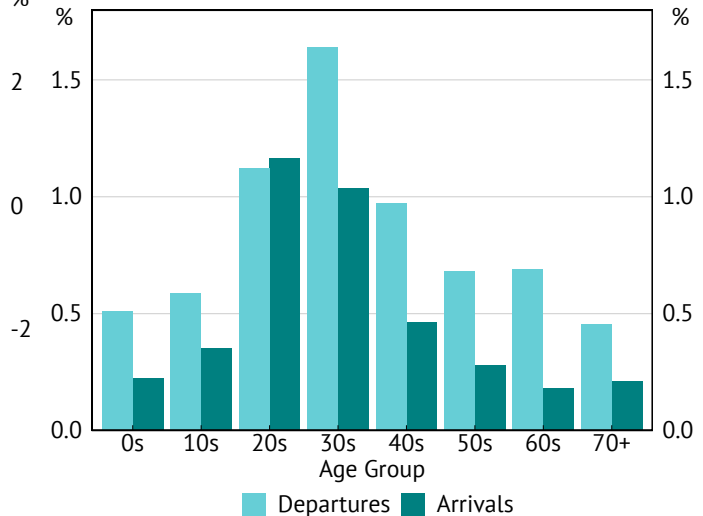
Net domestic migration* by area (Sydney SA2)



* Annualised 2016-21 migration as % of 2016 pop.
** Annualised 2011-16 SA2-level growth.
Sources: ABS; e61; PropTrack

Figure 3: Who is Leaving Sydney?

2016-21 domestic migration flows as % of 2016 Sydney population



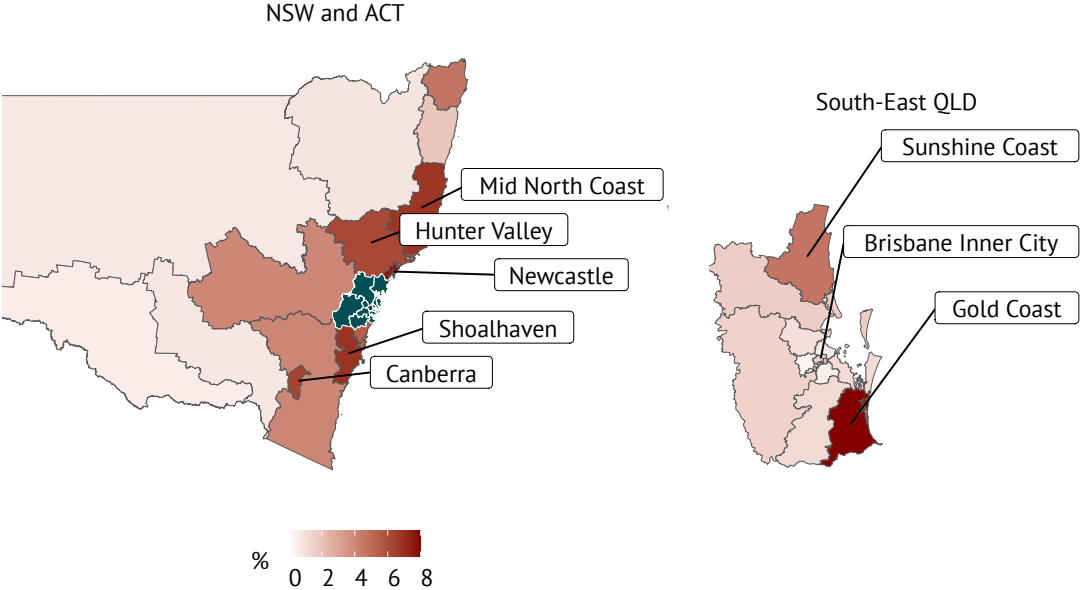
Sources: ABS; e61

Where are they going? Most are choosing less-expensive nearby coastal areas, including the Wollongong and Newcastle regions and the Gold Coast (Figure 4). Canberra is also popular; Melbourne, not so much (Figure A.5).

These trends may suggest that unaffordable housing is driving large-scale labour reallocation across Australia. Upcoming e61 research will further investigate this labour reallocation and its implications for Australia’s productivity and welfare.

Figure 4: Where Do Sydney Leavers Go?

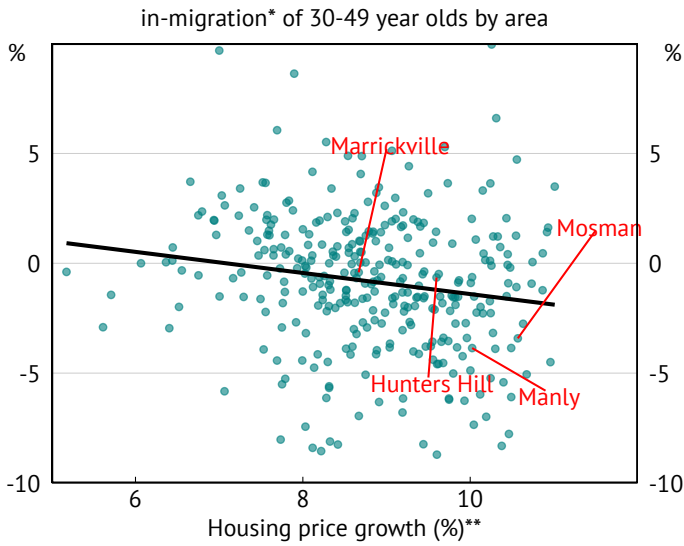
% of 2016-2021 net moves from Sydney



Sources: ABS; e61

A.1. Additional Figures

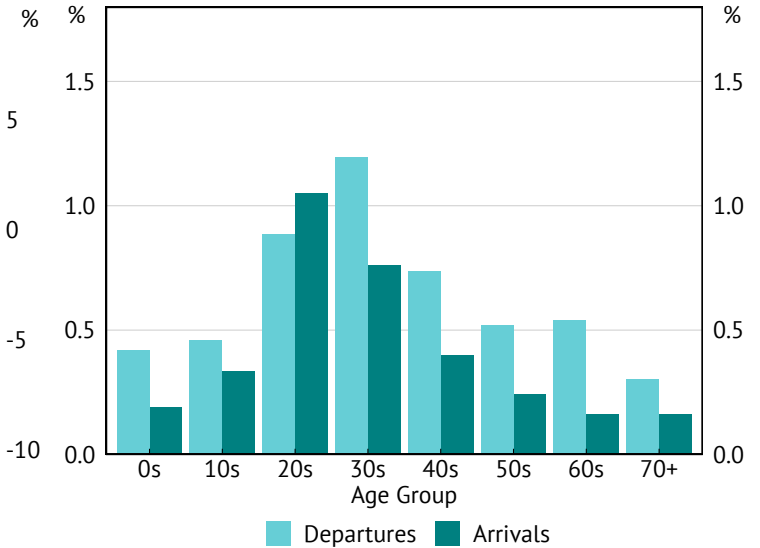
Figure A.1: Sydney 30-39 Year Old Departures and Housing Prices



* Annualised migration (2016-2021) as % of 2016 pop.
 ** Annualised mean dwelling price growth (2011-2016).
 Sources: ABS; e61; PropTrack

Figure A.2: Who Left Sydney in 2011-16?

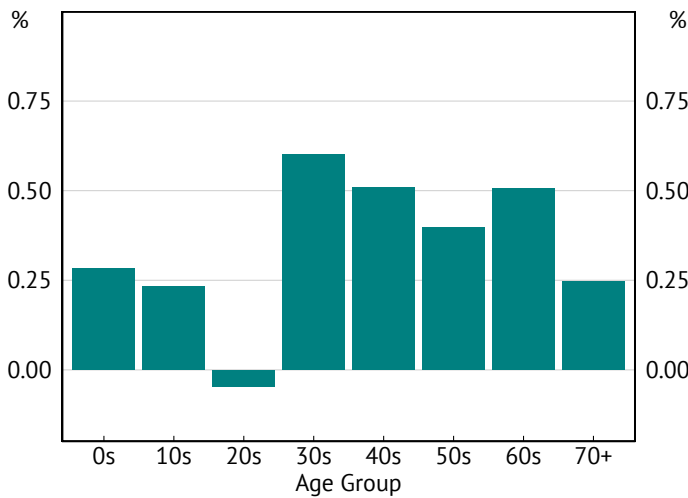
2011-16 domestic migration flows as % of 2011 Sydney population



Sources: ABS; e61

Figure A.3: Who is Leaving Sydney on net?

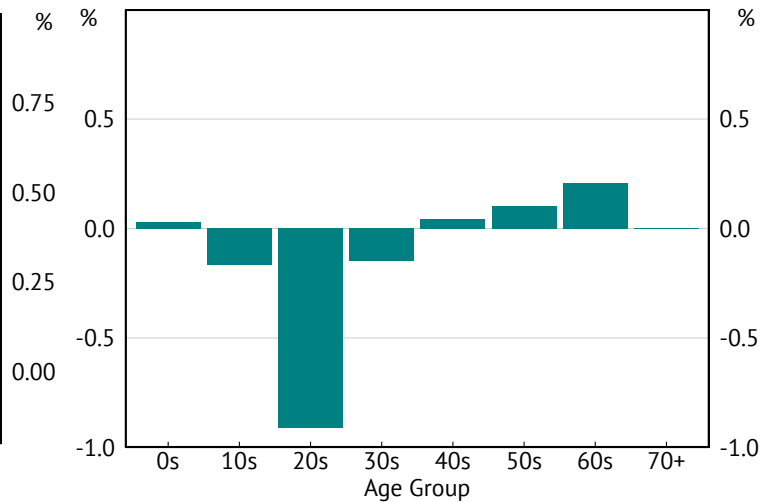
2016-21 net domestic migration outflows as % of 2016 Sydney population



Sources: ABS; e61

Figure A.4: Who is Leaving Melbourne on net?

2011-16 net domestic migration outflows as % of 2011 Melbourne population



Sources: ABS; e61

- A.1.** The positive relationship in Figure 2 holds, with a steeper slope, when limiting the sample to 30-39 year olds.
- A.2.** The recent Sydney out-migration patterns by age (Figure 3) were similar prior to covid.
- A.3.** This figure reports the net flows implied by the gross flows in Figure 3 and **A.4** shows the same for Melbourne.

Figure A.5: Where do Sydney Leavers Go? (continued)

% of 2016-2021 net moves from Sydney
Greater Melbourne

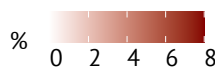
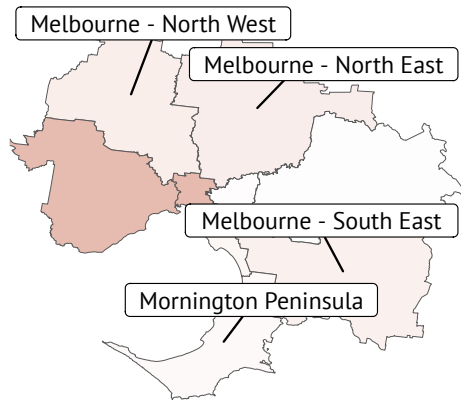
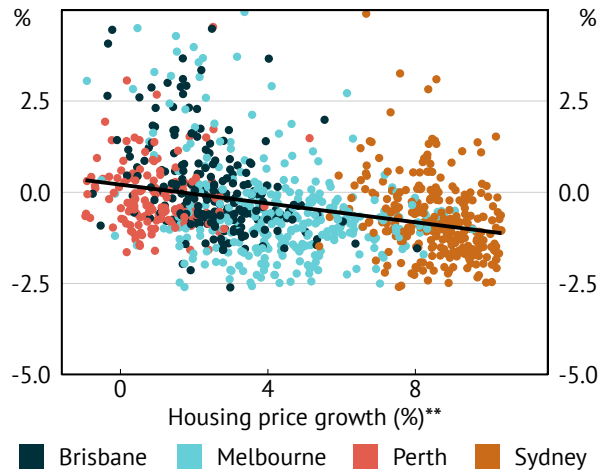


Figure A.6: Departures and Housing Prices

Net domestic migration* by area (Major Cities)

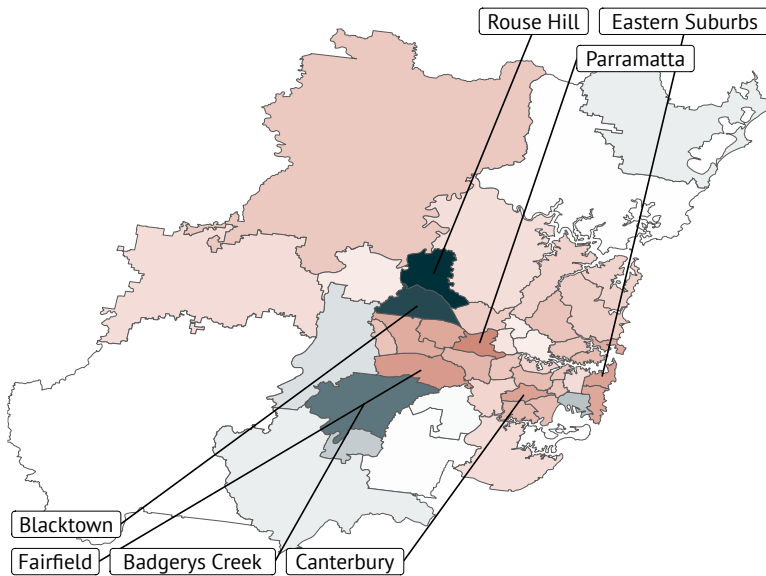


■ Brisbane ■ Melbourne ■ Perth ■ Sydney

* Annualised 2016-21 migration as % of 2016 pop.
** Annualised 2011-16 SA2-level growth.
Sources: ABS; e61; PropTrack

Figure A.7: Where are People Leaving the Most?*

Sydney SA3s



Annualised Net Inbound Domestic Migration 2016-2021 (%)* -2 -10 1 2 3 4

Sources: ABS; e61

A.5. More people leave Sydney for South East Queensland, Canberra and other NSW destinations (Figure 4) than for Melbourne.

A.6. The relationship between housing prices and out-migration is consistent across other capital cities; however, Sydney has higher growth in housing prices, consistent with its higher observed rates of out-migration in its SA2 areas.

A.7. Out-migration is strongest from the Eastern Suburbs and Parramatta. Places like Rouse Hill and Blacktown on the other hand gained more people.

A.2. Data Construction

A.2.1 Population Data

Annual internal migration data

To compute annual net migration flows between capital cities and the rest of the state (as defined by GCCSA boundaries), we use [internal migration statistics](#) published by the ABS. We measure flows relative to the annual reported [regional population](#) of each city.

Migration Rates between smaller areas

To compute net migration flows between smaller areas (e.g. SA2, SA3, SA4), we use Census data. We define an internal migration flow as an individual who reported living in one statistical area on Census night in 2021, and reported living in a different area in Australia five years beforehand (2016).

In [Figure 2](#) we measure these flows relative to the reported [regional population](#) of each statistical area in 2016. As these figures represent flows over five years, we take the geometric average to annualise the figures.

In [Figure 4](#), we represent these flows relative to the total amount of moves from Sydney.

The Census data also allow separating migration flows by reported age, like in [Figure 3](#). Here, we express age-specific flows in and out of Sydney as a percentage of Sydney's total population in 2016.

A.2.2 Analysis of housing price growth

To measure growth in housing prices by SA2 areas, we use the history of Australian property sales between FY10-FY21 from REA PropTrack Data. The calculation procedure follows two steps. To control for cyclical factors and housing characteristics, the first step regresses sale prices on month-of-year indicators (e.g. dummies for each January, February, etc), year indicators, the number of bedrooms, the number of bathrooms and the number of carspaces:

$$\text{LogSalePrice}_{it} = m_t + \delta_t + \beta_1 \times \text{Bedrooms}_{it} + \beta_2 \times \text{Bathrooms}_{it} + \beta_3 \times \text{Carspaces}_{it} + \varepsilon_{it}$$

where

- LogSalePrice_{it} - the natural logarithm of property i sale price, in dollars at time t .
- m_t - month of sale indicators eg. January
- δ_t - Calendar year of sale
- Bedrooms_{it} - number of bedrooms in a property at time of sale.
- Bathrooms_{it} - number of bathrooms in a property at time of sale.
- Carspaces_{it} - number of carspaces in a property at time of sale.
- ε_{it} - an error term.

The second step takes the mean of the residuals and year-fixed effect terms (including the regression constant) by calendar year and SA2. Using the estimated SA2-year specific means, we take the difference between these means in 2011 and 2016 for each SA2 and annualise it.

In [Figure 2](#), to avoid reverse causality, we look at the impact of prior price growth (2011-2016) on the subsequent out-migration rate (2016-2021). We focus on Sydney SA2s; however, a similar relationship can be seen in different capital cities, albeit at different points of the distribution of housing price growth ([Figure A.6](#)).