The
CIE

Internal Migration in Australia and the impact of government levers

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Executive summary

The task

The CIE has been tasked with investigating government influences on internal migration in Australia, by the Centre for Population within Australian Treasury.

The Centre for Population has already undertaken considerable work with internal migration statistics from the ABS Census, ABS population estimates (combining the Census and administrative data) and the Household, Income and Labour Dynamics in Australia (HILDA) survey.[1] This has identified some of the broad economic factors influencing migration, and particularly interstate migration.

The purpose of this project is to build on this work to identify the factors that government influences and how these impact on internal migration, to provide both conceptual and empirical direction for policy.

Understanding the influences on internal migration

The decision to migrate (or not) is a complex one, with a variety of competing influences or drivers. How decisions to migrate are made also vary depending on who is migrating (for example people of different ages or domestic versus international migrants), the type of move being made (city to country, country to coast, inter-state) and the distance of the move.

The complexity associated with migration decisions presents difficulties for policy makers who have an interest in driving a migration or population outcomes. This is because migration decisions are not dominated by any one criteria or characteristic. Ultimately, the extent to which government levers can influence migration depends on the overlap between government policy and the broad set of factors that people consider when making a decision to migrate.

The drivers of migration (i.e. the things people consider when moving) are generally well established by the literature and range from economic, environmental, geographic as well as social factors (i.e., distance to family and friends). The role of government and its potential to have influence over things that drive migration is much less well understood.

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[1]   Bernard, A et. al. 2020, 'Anticipating the impact of COVID-19 on internal migration', Centre for Population Research Paper, The Australian Government, Canberra

Theory of migration process and role of government

A key first step in understanding if and how government can influence migration and population outcomes was to engage in consultation with a range of policymakers across different jurisdictions to seek their views on the role of government in influencing migration outcomes. A variety of views were expressed on both the effectiveness of government intervention in driving outcomes as well as what the role of government should be (i.e. should it intervene at all or merely respond to change).

In terms of the capabilities of government to influence migration. Policymakers expressed a range of views, including:

- **Supporting job creation and economic development** — government as the key driving force for economic development of a place and using employment opportunities as the key attractor of new residents

- **Supply of services and building infrastructure** — government services and infrastructure as being the essential equalising force between high population and high growth areas like capital cities and smaller regional centres that experience net outward migration to such places

- **Promote branding and market destinations** — which appeals to the personal and cultural characteristics of places and the people to whom they would appeal in attempting to drive migration

- **Place-based initiatives** — to support a wide range of location specific outcomes by considering a holistic and all encompassing view on what a place needs, rather than impacting migration through individual levers

- **A limited role of government in driving change** — meaning that the effectiveness of government is limited due to the complex and multifaceted nature of migration. Migration decisions are considered to be largely personal, while place characteristics are considered to be naturally occurring and independent of government.

In terms of what the role of government *should be*, a subset of policymakers considered that government is best placed to respond to change by observing trends and acting accordingly (such as providing infrastructure where growth is demonstrated) while others expressed that government should lead change directly (i.e. "build it and they will come"). Policymakers who were of the view that government's effectiveness was limited believed that the role of government should be simply to remove barriers to enable population and migration decisions that would otherwise take place on their own.

Evidence of government impact

We have undertaken a variety of exercises to ascertain evidence on the extent of government impacts on internal migration, including:

- Descriptive analysis — to catalogue who is moving and why and the types of moves that people make

- Empirical analysis — which formally tests whether a statistical relationship exists between observable migration outcomes and the numerous drivers of migration and potential government levers.
- Case studies of recent government initiatives in both Geelong and Townsville and whether there were any impacts on migration and population outcomes.
- A survey of the Australian population to better understand migration propensity, the triggers leading to migration, barriers to migration and the key factors people consider to be important for future migration intentions.

Descriptive analysis

Descriptive analysis of historic migration patterns in Australia suggests that broad economic factors are a dominant influence in migration outcomes. There has tended to be persistent patterns of declining populations and net migration outflows from remote areas and growth in coastal towns, particularly those closer to capital cities. Inland towns have had more mixed outcomes. The largest capital cities are net exporters of people within Australia, but grow their populations through accepting the majority of overseas migrants.

There are also clear patterns in terms of which population subgroups move and why. People in younger cohorts (those aged between 20 and 40) are most likely to migrate. The reasons for migration have remained fairly similar over time, primarily for family reasons and for job reasons. Secondary reasons to migrate relate to housing, education and health.

While the reasons for migrating have remained similar, there has been a downward trend in internal migration rates in Australia over time.

Evidence from empirical modelling

The empirical model relates the net migration rates of different urban centres and localities (UCLs) across time to a range of different place characteristics that reflect the drivers of migration including the unemployment rate, median rent and income, geographic location as well as indicators of service levels (such as education and health). The model was estimated across a variety of population subgroups by age, education, occupation, ancestry and international migrants.

A key result from the modelling were overall low rates of explanatory power for many of the drivers. The most consistent finding was a relationship between higher unemployment rates and net outward migration across most population subgroups. There were different relationships between the provision of services and different population subgroups. For example, younger Australians are more likely to migrate to a region with higher availability of transport services and education services, while older Australians are driven more strongly by residential aged care and hospitals. To the extent that government can influence the provision of services in a region, this indicates a role of government in influencing migration outcomes for that region.

When comparing the types of impacts that improvements in government services generates in terms of net migrants, the overall quantum appears low. For example, improving service levels from regions in the bottom 25th percentile with a population of 13 500 to match those service levels of regions in the 75th percentile leads to a place from having a baseline outward migration people of around 80 people over a 5-year period to a net inward migration of just under 50 people (chart 1). The impacts differ depending on the population subgroup and the levels of statistical significance for service improvements also differ depending on sub-group characteristics.

1   Number of new migrants resulting from an improvement in services
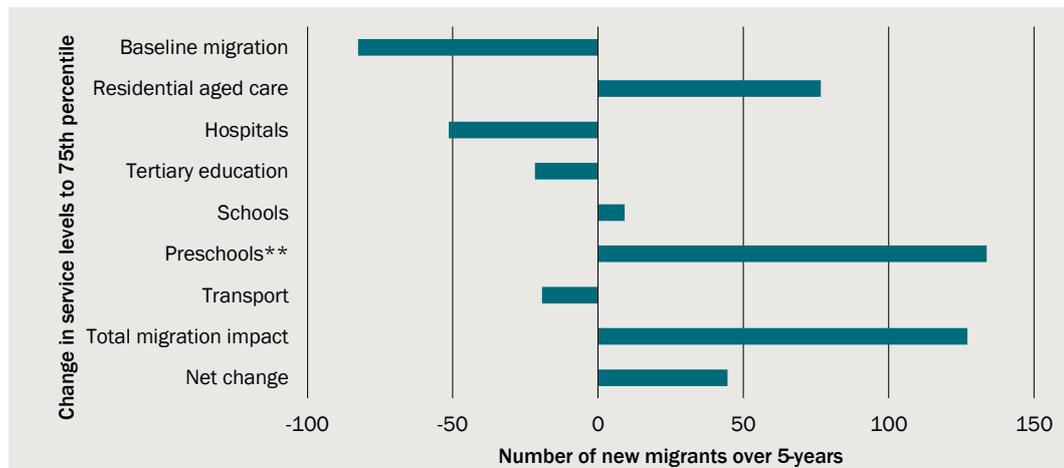
Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level. Total and net change represents the sum of all impacts across modelled parameters and therefore does not include a measure of statistical significance.
Source: CIE analysis.

Changes in the unemployment rate from 25th percentile rates to 75th percentile rates tend to generate larger impacts both in the total population and across subgroups, with statistically significant impacts estimated for the total population as well as those aged between 40 and 49 (chart 2).

2   Number of new migrants due to a decrease in the unemployment rate
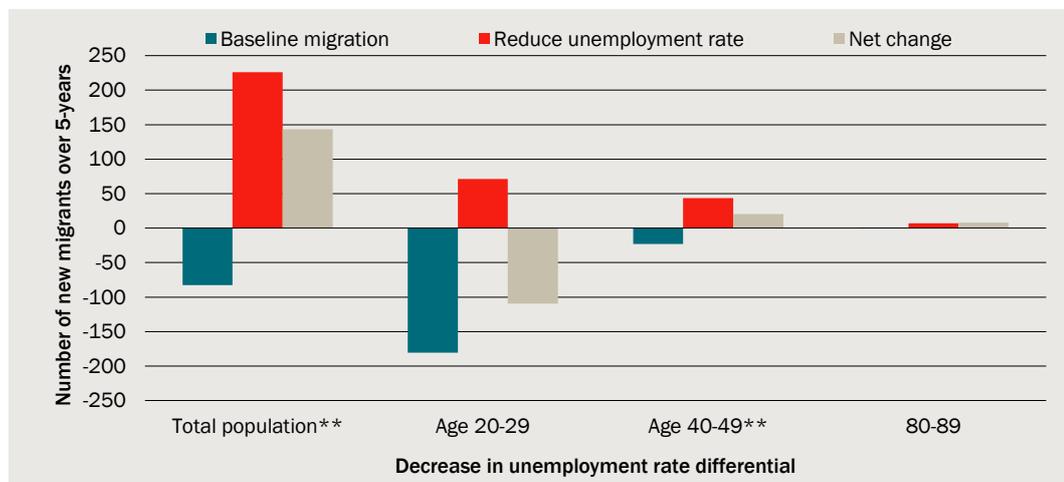
Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level. For a benchmark town of 13 500 people.
Source: CIE analysis.

A key finding from the analysis was that the best predictor of net migration rates are past net migration rates. This means that trends in net migration are highly persistent, and suggests that government efforts will be working against other persistent drivers of migration (chart 3).

3   Persistence of net migration trends over time (2011-16 versus 2016-21 NIM rates)

$y = 0.7162x + 11.733$
$R^2 = 0.6183$
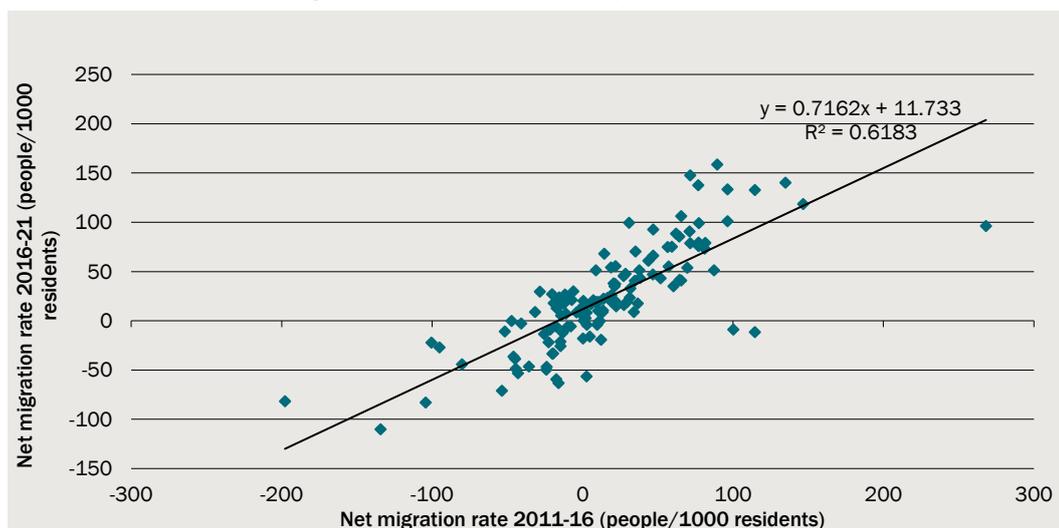
Data source: CIE.

Case studies of government interventions

The ability of government to influence migration outcomes can also be examined through case studies of places where government has made a concerted effort to achieve this. Two case studies have been examined for this report:

■ Geelong — Geelong has been the focus of government effort through relocating government agencies and, more recently, a City Deal

■ Townsville — Townsville was the first City Deal in Australia, started in 2016.

The evidence related to the first case study suggests that the direct relocation of government jobs to Geelong has impacted on migration outcomes and economic outcomes in the region. However, there have been other important activities occurring at the same time, which may also be driving changes. For the second case study, there is little to suggest that Townsville has achieved higher inward migration or improved economic outcomes as a result of the City Deal to date. However, the activities undertaken so far are less likely to impact on migration directly and are more recent than the activities undertaken in Geelong.

Evidence from a survey of residents

We conducted a survey of 4313 Australian residents covering a range of demographics including age, sex, geographic location as well as people who have moved and not moved.

The most important trigger for a move for people migrating and from overseas was to take up a job (cited by over 35 per cent of respondents). This was followed by the desire to be near family and friends (27 per cent of respondents) and housing availability and affordability (17 per cent).

In terms of the factors considered to be important when deciding whether or not to move, a range of government provided or partly provided services were seen as important by the majority of respondents, such as high-quality healthcare and digital connectivity. There were also many factors that were considered important which over which government has limited influence, including being near family and friends, natural amenity of the place as well as climate. These findings were consistent across both domestic and international migrants.

For those that did not move, respondents suggested that there are barriers to moving that governments can address, but that government will likely not be the major driver of allowing current non-movers to migrate in the future. Most respondents do not consider themselves likely to move in the future, and those that rated moving as being likely or highly likely tend to have as specific type of destination in mind, rather than being open to a range of different types of locations. This suggests that policies that reduce the barriers to people who would consider moving to a particular type of location are likely to be more influential than trying to change a mover's ultimate destination.

Conclusions and implications for government

Our findings indicate that migration decisions are complex and multifaceted. While it is generally difficult to systematically explain and predict migration patterns in a quantitative setting, the range of evidence we have gathered point towards the importance of both economic as well as social factors. These largely relate to the availability of jobs as well as being close to family and friends.

Evidence suggests that the potential for government to influence migration outcomes is at the margin, because other factors are the key triggers for migration decisions. While the availability and quality of services such as healthcare, education and transport were found to be important, the overall volume of people predicted to respond to changes in the empirical model is small, especially when compared to other drivers such as employment conditions. Survey respondents also considered these factors to be of second order importance when considering moving, instead placing more emphasis on lifestyle and personal factors. While most survey respondents did not consider themselves likely to move, those that did were found to be quite selective in the types of places which they would consider moving. This means it is more difficult for government to influence migration outcomes of specific places if those places do not align with the characteristics that people care about.

Case studies of government interventions further support the view that government has a larger impact on driving population and migration outcomes on places which people already consider to be desirable but lack the things that would otherwise enable them to move. Geelong is an example of a successful intervention, being located within regional Victoria and in in relatively close proximity to Melbourne, where trends in migration

were already demonstrated. This has seen an influx of younger people and professionals move to the area to take advantage of job opportunities following the relocation of public service agencies. In comparison, the more remote region of Townsville, which saw similar levels of investment in infrastructure and defence did not experience a turnaround in declining migration rates.

The overall effectiveness of government is appears to be higher when it acts to remove barriers to migration allowing people to move in a way that responds to the other aspects of the 'bundle' of factors that drives their migration choices, rather than trying to drive outcomes directly and in contradiction to other factors influencing migration patterns.

1   Introduction

The task

The CIE has been tasked with investigating government influences on internal migration in Australia, by the Centre for Population within Australian Treasury.

The Centre for Population has already undertaken considerable work with internal migration statistics from the ABS Census, ABS population estimates (combining the Census and administrative data) and the Household, Income and Labour Dynamics in Australia (HILDA) survey.[2] This has identified some of the broad economic factors influencing migration, and particularly interstate migration.

The purpose of this project is to build on this work to identify the factors that government influences and how these impact on internal migration, to provide both conceptual and empirical direction for policy.

Why is this task important?

- Government is often aiming to influence where people live and work explicitly and implicitly
- Forecasting/planning role
- There is a gap in the literature with respect to the role of Government

Structure of this report

The structure of this report is as follows:

- Chapter 2 describes the theoretical underpinnings of the drivers of migration, which are the factors people consider to be important when deciding to migrate, as understood by the literature.
- Chapter 3 explores the key patterns of migration intensity and the types of moves made by various population subgroups and demographic characteristics
- Chapter 4 analyses the spatial trends in migration and population growth over Australia and shows these patterns across various population subgroups. It also analyses outlier regions experiencing high levels of inward and outward migration and their characteristics

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2   Bernard, A et. al. 2020, 'Anticipating the impact of COVID-19 on internal migration', Centre for Population Research Paper, The Australian Government, Canberra

- Chapter 5 discusses theories on the role of government and the expectations of different policymakers on the relative effectiveness of government in driving migration outcomes.

- Chapter 6 analyses the results of the empirical model, which uses statistical methods to understand the relationship between migration rates over different localities across Australia and the key drivers of migration including government levers.

- Chapter 7 explores two case studies of previous government intervention in the localities of Geelong (Victoria) and Townsville (Queensland) and assesses whether such interventions have been effective in driving population and migration outcomes

- Chapter 8 analyses the results of a survey of Australian and overseas migrants and explores the key triggers for moving, the factors that are important when deciding to move, barriers that exist to moving as well as peoples future moving intentions and how they relate to government policy.

2   Understanding influences on internal migration

Theoretical framework for migration decisions

The decision to migrate can be thought of as making a series of trade-offs, across a broad spectrum of important factors, both economic and non-economic in nature. As such, migration is a highly complex decision with a multitude of different and competing variables[3].

These decisions also vary depending on who is migrating (for example, people of different ages, gender or ethnicity) and the distance and type of the move (e.g. city to country, country to coast, inter-state etc…). For instance, Clark and Maas 2015 found that migrants that moved distances of 30 km and under predominantly moved for non-employment related reasons such as for housing and being close to family. In contrast, internal migrants moving greater than 30 kilometres had a much stronger weighting towards jobs[4]. Similarly, employment related motivations were stronger for men when migrating while non-employment related motivations were stronger for women.[5]

Chart 2.1 visually illustrates the types of trade-offs an individual faces when making a migration decision. For example, a migration decision may involve a better or higher paying job and improvements to lifestyle but may reside in a remote region far away from family and friends with poorer quality services. The decision on whether or not to move will depend on whether the benefits outweigh the costs of moving across a range of different categories, many of which are non-economic or financial in nature.

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[3]   Understanding the drivers of internal migration, Anne Green 2018, chapter 2, page 1

[4]   Clark and Maas, Interpreting Migration Through the Prism of Reasons for Moves, 2015, p59

[5]   Ibid

2.1   Trade-offs associated with internal migration
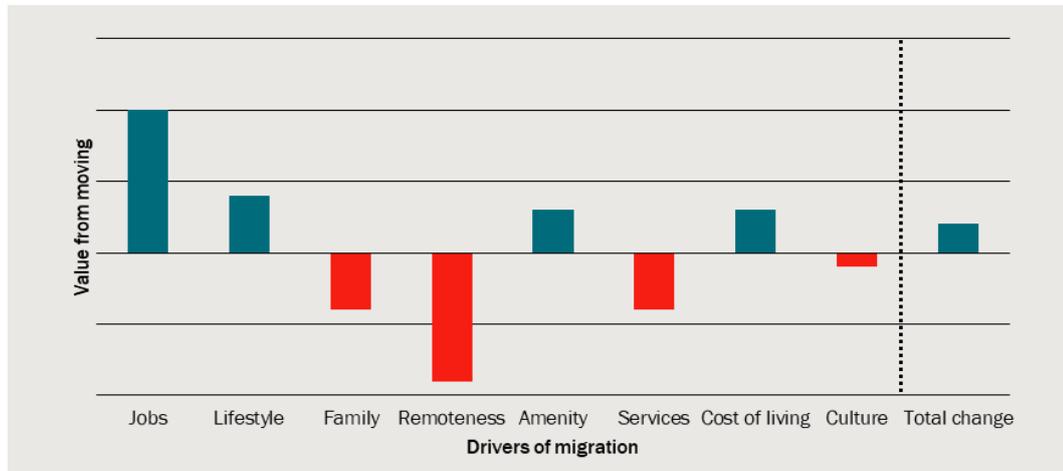
Data source: CIE Illustration.

Extent of government influence

The complexity associated with migration decisions presents difficulties for policymakers who have an interest in driving a migration or population outcome. This is because migration decisions are not dominated by any one criteria or characteristic. Ultimately, the extent to which government levers can influence migration depends on the overlap between government policy and the broad set of factors that people consider when making a decision to migrate (chart 7.10).

2.2   Relationship between drivers and government levers
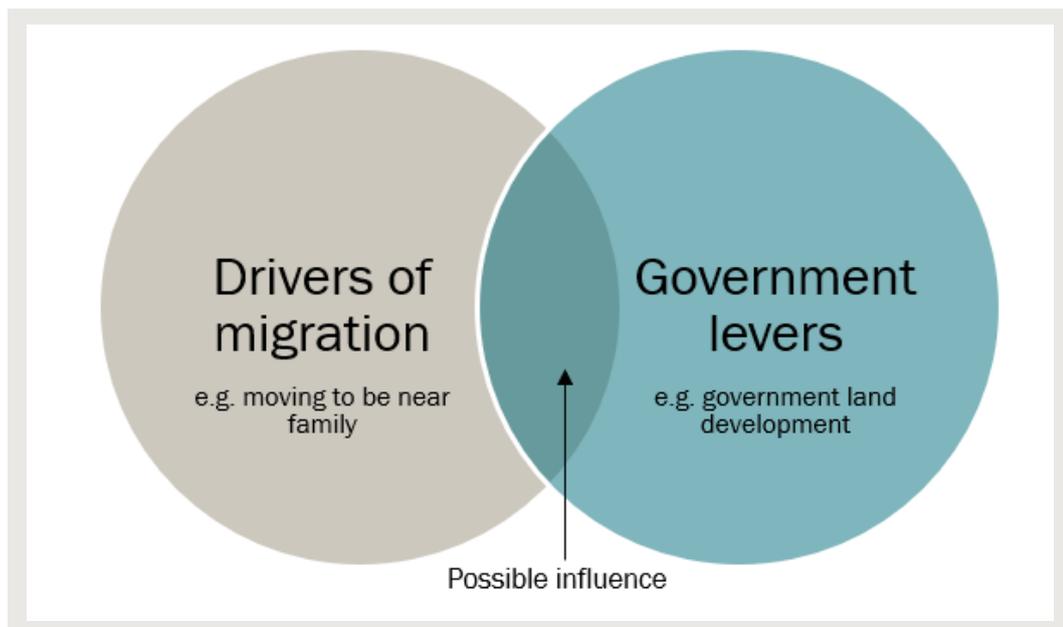
Data source: CIE illustration.

There is a very large literature that has examined the different criteria people consider when migrating, known as the drivers of migration. There is a significant gap in the

literature however as to the role of Government in influencing migration decisions and driving migration and population outcomes. There are a variety of views expressed by policymakers that have been engaged as part of this exercise as to the likely role of government in influencing migration outcomes.

Drivers of migration

The drivers of migration have been studied extensively within the literature. A recent article by Czaika and Reinprecht (2020) comprehensively reviewed the literature, analysing 1450 journal articles on the drivers of migration ranging from 2000 to 2018[6]. The literature on migration has established a broad range of different motivations that influence migration decisions, both from an internal and international perspective. A significant proportion of these studies focus on the economic influences such as local business conditions and employment opportunities (chart 3.8).

2.3   Drivers of migration reported across the literature
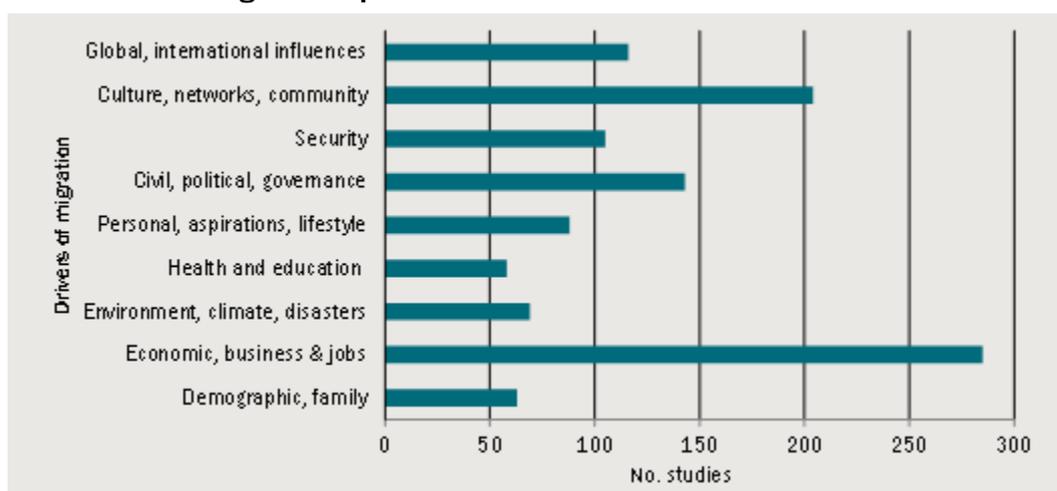
Data source: by Czaika and Reinprecht (2020), page 8.

To better understand the drivers of internal migration within the Australian context, The CIE engaged in consultation with experts in migration and population research as well as policymakers across a range of jurisdictions across different states and territories. The range of views expressed by experts echoes, to a large degree, the view that the drivers of migration are complex and numerous. These are summarised in table 4.6 and discussed in further detail below.

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6   Czaika and Reinprecht (2020), "Drivers of migration: a synthesis of knowledge", *International Migration Institute working papers,* No. 163, April,
    https://www.migrationinstitute.org/publications/drivers-of-migration-a-synthesis-of-knowledge.

2.4 Drivers of internal migration

Drivers of migration	Key factors	Drivers of migration	Key factors
Employment	▪ Number of jobs, ▪ Variety of jobs, ▪ Partner employment, ▪ Career progression prospects, ▪ Ease of changing jobs and careers	Environmental	▪ Weather and climate, ▪ Natural disasters (floods and bushfires), ▪ Climate change ▪ Resilience
Economic factors	▪ Cost of living ▪ Cost of moving ▪ Other financial	Housing	▪ Housing affordability ▪ Housing availability ▪ Housing choice (quality and type)
Lifestyle and amenity	▪ Coastal versus inland, ▪ Natural beauty, ▪ Variety of recreation activities	Availability and quality of services	▪ Education (schools, universities) ▪ Health (both acute and non-acute e.g., emergency departments and GPs) ▪ Childcare services ▪ Aged care and disability services ▪ Telecommunications
Personal and family	▪ Moving based on age and stage of life ▪ Location next to family	Community and culture	▪ Feelings of inclusion within community, ▪ Shared sense of culture, ▪ Common values (e.g., religion), ▪ Social infrastructure (e.g., networks and peers)
Legal and regulatory	▪ Visa requirements ▪ Displacement from government activities (e.g., land acquisition)		

Source: CIE.

Employment

The employment prospects associated with a particular region is a key consideration for migrants and is among one of the most studied drivers of internal migration across the literature. There is a strong theoretical underpinning between job location, the desire to maximise income and migration decisions. These patterns of behaviour are explained by studies which have observed a relationship between bilateral migration flows and unemployment rate differentials, job opportunities and wages across different regions[7]. For example, recent analysis by AHURI identified a significant relationship between the strength of local labour markets and rates of population growth, with higher rates of

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7 Czaika and Reinprecht (2020), "Drivers of migration: a synthesis of knowledge", *International Migration Institute working papers,* No. 163, April, p13
https://www.migrationinstitute.org/publications/drivers-of-migration-a-synthesis-of-knowledge

unemployment associated with declines in the rate of population growth across different localities within Australia[8]. Similarly, research by Clark and Maas 2015 found that up to 44 per cent of long-distance migration was attributed to employment related reasons in men aged 21 to 49 and 32 per cent of women aged 21 to 49[9].

Consultation with labour market orientated policymakers and migration experts have also highlighted that there are multiple layers of consideration with regards to employment opportunity when moving to a new region than the job itself. For instance, migrants not only consider their next job but also future job opportunities and career progression[10]. The number and variety of jobs, as well as the diversity of industries available in the region provides greater opportunities to progress a career or change careers entirely. This is particularly apparent when comparing cities to regional towns, whereby cities comprise a diversity of industries whereas, in contrast, towns may only comprise a subset of industries (such as agriculture or mining). This concern also extends not only to the job-mover, but also for couples and families in which partners also seek employment. Partner employment opportunities can act as a barrier to would be movers if sufficient opportunities are not available[11].

Lifestyle and amenity

A significant driver of migration decisions is the accompanying lifestyle and amenity of the region to which people migrate. There are physical and environmental differences for instance between urban areas (namely cities) and regional areas. Lifestyle and amenity are typically strong drivers associated with decisions to migrate from cities to regional towns. Research by the University of Melbourne found that of the people moving to regional Victoria from Melbourne, 73 per cent of migrants stated that a better lifestyle and amenity was a significant influence on their decision to migrate, while 61 per cent stated that being closer to the natural environment was a significant influence on their decision to migrate[12].

Economic factors

Economic factors refer to those characteristics associated with a move (or lack of a move) that have a more direct financial impact. For instance, barriers to migration could be caused by the costs associated with moving such as relocation costs, as well as the costs associated with buying and selling property (including transaction costs such as stamp duty, selling fees etc…). Research has shown that the effects of stamp duty for instance,

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8   Understanding what attracts new residents to smaller cities, AHURI, 2020, page 31

9   Clark and Maas, Interpreting Migration Through the Prism of Reasons for Moves, 2015, p59

10   Consultation with SA Department of Treasury and Finance

11   Consultation with Department of Regional NSW

12   The Great Migration: Leaving our Cities for the Regions, Regional migration survey, University of Melbourne, page 10, https://www.unimelb.edu.au/__data/assets/pdf_file/0006/4084890/rmr_part_1.pdf

have the effect of "locking in" households leading to a reduction in overall residential mobility[13]. This would indicate that economic costs can act as a barrier to migration.

Housing

Housing was regularly identified through consultation as a key driver of internal migration within Australia. To a degree, housing acts as both an attractor and a barrier in that people move in order to take advantage of more affordable housing while in other instances may be prevented from moving due to unaffordable housing in the desired destination or a general lack of supply or quality of housing (as is the case in many regional areas which have recently experienced an influx of migrants from capital cities).

This is validated across the literature, for example a study by AHURI (2003) identified housing affordability, housing size and housing quality as the single most important factors influencing decisions by income-support recipients to move away from Sydney and Adelaide. Similarly, the University of Melbourne found that 52 per cent of migrants to regional Victoria attributed housing affordability as a significant influence on their decision to leave capital cities (and a further 30 per cent saying housing affordability was a moderate influence).

Availability and quality of services

The availability and quality of services is an important consideration for migration decisions. Service availability and quality can act as both an attractor and a barrier. For instance, younger demographics will tend to relocate to capital cities due to the provision of tertiary education and universities, while at the same time people may be hindered from leaving cities due to the absence of important services such as health and aged care in regional areas. Poor quality and lack of service provision in regional and remote areas was frequently cited as a barrier to internal migration from cities to regional areas by policymakers with which The CIE consulted. This is supported by a recent survey conducted by the National Faster Rail Agency, which found that among the top barriers to moving regionally, was the perception of poorer access to medical facilities and hospitals as well as fewer public transport options[14].

Personal and family

There are a range of reasons why people are motivated to migrate that are purely non-financial and non-economic in nature. These are mainly individual motivators, such as moving to be closer to family or for reasons associated with stage of life (such as downsizing one's home and moving into retirement). Research by the University of Melbourne found that of the people moving to regional Victoria from Melbourne, 31 per

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[13] Impacts of stamp duty on residential mobility and travel behavior, Shiran, J, RMIT University, 2020, available at: https://researchrepository.rmit.edu.au/esploro/outputs/doctoral/Impacts-of-stamp-duty-on-residential-mobility-and-travel-behaviour/9921898709001341

[14] Research into Triggers to Shift Populations with Faster Rail, National Faster Rail Agency, September 2020, page 20

cent stated that raising a family was a significant influence on moving to the regions, while 22 per cent stated that being closer to family and friends was a significant reason.[15]

Environmental

Environmental characteristics such as weather, climate and resilience are also considerations for some migrants, depending on the nature of the destination. For instance, coastal areas which are susceptible to climate change could create barriers to migration due to the adverse impacts of extreme weather events. Likewise, regions which reside in flood prone areas, regions which are subject to droughts, bushfires and other natural disasters can have the effect of driving population decline (e.g., people leaving after incurring a natural disaster to safer regions).

Community and culture

Community and culture are a driver which refers to the social infrastructure that exists within a place. This is an important consideration for potential migrants, as they seek to become part of a community that makes them feel welcome. This is especially true for international migrants, who tend to gravitate towards communities that share a common language, or belief system.

Legal and regulatory

Legal and regulatory drivers are those that refer to instances where people may be displaced or relocated due to the presence of government activities or policies. For instance, international migrants may choose to locate within a regional area due to visa requirements or incentives. Likewise, government acquisition of property may displace residents from one area to another after being forced to sell their home.

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15 The Great Migration: Leaving our Cities for the Regions, Regional migration survey, University of Melbourne, page 10, https://www.unimelb.edu.au/__data/assets/pdf_file/0006/4084890/rmr_part_1.pdf

3   Who migrates and why?

The mechanisms through which government can influence or hinder migration will depend on who is migrating and their underlying reasons for migrating. This chapter assesses these patterns as a backdrop for understanding the potential influence of government levers.

Key patterns that emerge from past studies and the data include:

- reducing rates of internal migration over time

- migration rates are highest for people aged 20-40. There is not a noticeable increase in migration rates at retirement age

- migration rates are lower for people who are unemployed

- migration rates are higher for single people, and

- the main reasons for migration are family and jobs, with housing and health/education being the next most important reasons.

Migration intensity is high but declining

Australia remains a highly mobile society, with the 39 per cent of people changing their address every five years, compared to a global average of 21 per cent[16]. However, over the past 40 years, the intensity of internal migration in Australia has declined considerably (chart 3.1)[17] . Between 1991 and 2011, interstate migration declined by 16 per cent while migration within states decreased by 21 per cent[18]. Since 2011, migration rates have been broadly stable.

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[16] Charles- Edwards, E. 2018. More local moves in Australian internal migration patterns. UQ News. The University of Queensland. Australia.

[17] Kalemba, S.V., Bernard, A., Corcoran, J. et al. Has the decline in the intensity of internal migration been accompanied by changes in reasons for migration?. J Pop Research 39, 279–313 (2022).

[18] Bell, M., Charles-Edwards, E., Bernard, A., & Ueffing, P. 2018. Global trends in internal migration. In T. Champion, T. Cooke, & I. Shuttleworth (Eds). Internal migration in the developed world: Are we becoming less mobile. pp. 167-192; Kalemba, S.V. et al. 2020. Decline in internal migration levels in Australia: Compositional or behavioural effect?. Population, Space and Place, 27(7).

3.1   Interstate and intrastate migration as a proportion of resident population
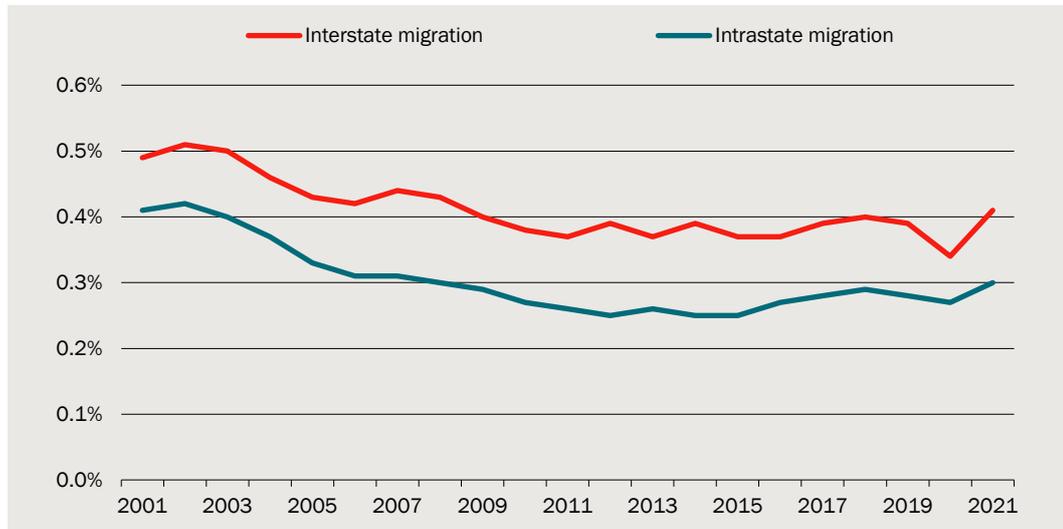
Note: Intrastate migration is defined as moving from a capital city to the rest of the state or vice-versa.
Data source: CIE analysis; ABS Regional internal migration estimates, provisional, March 2021.

The decline in the intensity of internal migration in Australia has, in part, been attributed to the ageing of Australia's population in addition to the increase in dual-income households[19]. Older people move less and uprooting and migrating is a more challenging decision when both partners have established careers and professional networks. This is because a move requires finding suitable job prospects for both individuals in the new place. It is estimated that up to a quarter of the fall in migration intensity has been caused by the changing age structure in Australia[20]. Although, a recent study by Coate and Mangum would indicate that both these forces are being offset by an increase in the relative share of mobile groups such as tertiary- educated people, immigrants, renters, and singles[21]. This points to the downward shift in the internal migration intensity occurring due to behavioural and structural shift, rather than population composition. Simply put, people aged 20-40 years are moving less today than in the past[22].

19 Charles-Edwards, E. 2018. More local moves in Australian internal migration patterns. UQ News. The University of Queensland. Australia.

20 Bell, M., Charles-Edwards, E., Bernard, A., & Ueffing, P. (2018). Global trends in internal migration; T. Champion, T. Cooke, & I. Shuttleworth (Eds.), Internal migration in the developed world: Are we becoming less mobile (pp. 76–97); Kalemba, S.V. et al. 2020. Decline in internal migration levels in Australia: Compositional or behavioural effect?. Population, Space and Place, 27(7).

21 Coate and Mangum, 2019. Cooke, 2011. Kalemba et al., 2020. Foster, 2017a

22 Bernard, A. and Kalemba, S. 2020. Australians are moving home less. Why? And does it matter? *The Conversation.*

Who migrates?

Migration patterns differ by key demographic characteristics such as age, employment status and education.

Age is a key driver of internal migration

Migration is a highly age-selective process. Migration rates peak in young adulthood and then decline with age, rising in the Australian case very late in life[23]. The observed changes in age based migration are associated with life-course transitions such as education, entering the labour force, partnership and childbearing, many of which occur at young age and trigger a move (chart 2.2).

3.2   Age profile of migration with life course transitions, 2016 to 2021
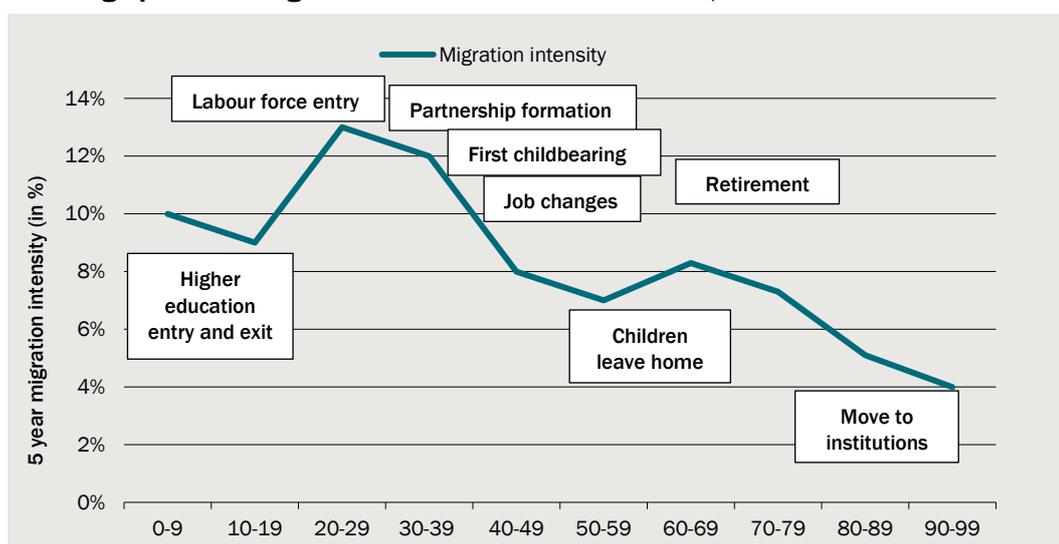
Note: Migration intensity is the propensity to move, which is the number of people who moved from their UCL in the past 5 years expressed as a percentage of total population in the UCL in 2021. A weighted average of migration intensity has been calculated across all UCLs for each age group.

Data source: CIE analysis; Census of Population and Housing, 2021; Bernard, A., Bell,M. and Charles-Edwards, E. 2014. Life-course transitions and the age profile of internal migration. *Population and Development Review.* 40(2), pp. 213–239.

The patterns of migration intensity by age are broadly the same across males and females, although internal migration peaks earlier and at a higher rate for females compared to males. This gap generally attributed to age differences in partnership formation since women on average partner with males older than themselves (chart 3.3)[24] .

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23 Bernard, A., Bell,M. and Charles-Edwards, E. 2014. Life-course transitions and the age profile of internal migration. *Population and Development Review.* 40(2), pp. 213–239.

24 Australian Bureau of Statistics. (2016). 2071.0 - Ref (cat. no. 2071.0). Census of Population and Housing: Reflecting Australia – Stories from the Census, 2016. *Population shift: understanding internal migration in Australia.* Available at: https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/2071.0Main+Features692016?Open Document

3.3 Migration intensity across males and females 2016 to 2021
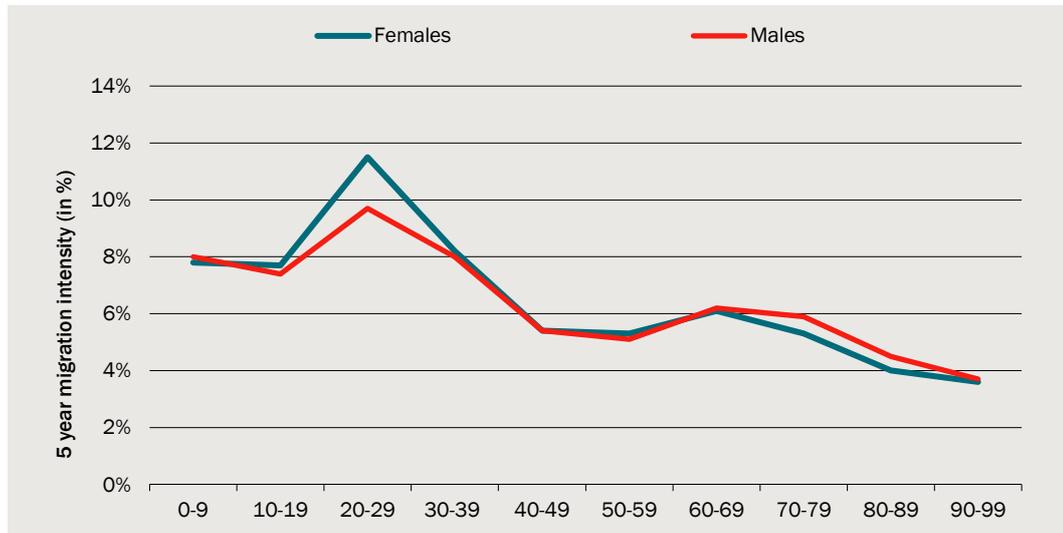
Note: Migration intensity is the propensity to move, which is the number of people who moved from their UCL in the past 5 years expressed as a percentage of total population in the UCL in 2021. A weighted average of migration intensity has been calculated across all UCLs for each age group.

Data source: CIE analysis; Census of Population and Housing, 2021.

Internal migration and education level

Many studies report a positive relationship between the level of educational attainment and the likelihood that an individual will migrate[25]. This is because education lowers the costs and barriers associated with moving while increasing economic returns, particularly in relation to wages[26]. However, within the Australian context this does not seem to be apparent in the data, where the highest level of mobility is observed for those with Certificate III and IV level qualifications (Chart 3.4). This may reflect that, unlike other countries, Australia's major universities are co-located within capital cities, which also comprise central business districts and the jobs which employ skilled employees. This would reduce the level of migration required for university qualified cohorts.

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25 Bernard, A., Bell, M. and Cooper, J. 2018. Internal migration and education: a cross national comparison.

26 Bernard, A., Bell, M. and Cooper, J. 2018. Internal migration and education: a cross national comparison.

3.4   Migration intensities across different levels of education 2016 to 2021
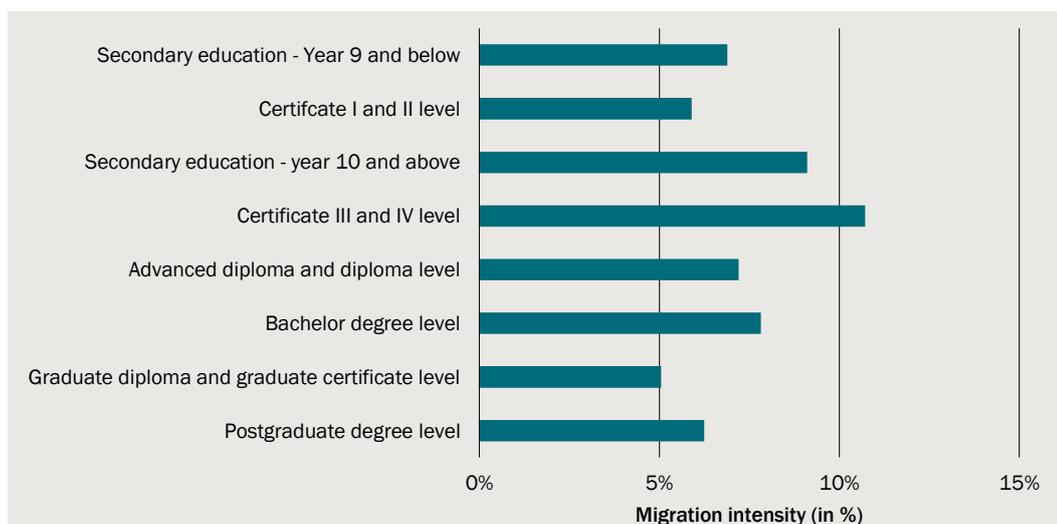
Note: Migration intensity is the propensity to move, which is the number of people who moved from their UCL in the past 5 years expressed as a percentage of total population in the UCL in 2021. A weighted average of migration intensity has been calculated across all UCLs for each educational classification.

Data source: CIE analysis. ABS Census, 2021.

Migration intensity is lower for people who are unemployed

From 2016 to 2021, employed people as well as those not in the labour force had higher migration intensities compared to the unemployed (Chart 3.5). The gradual decline in variation of wages, industry and occupation composition, and unemployment between different regions has diminished the role of wage differentials as a driving force behind migration[27]. Local attachment could be another reason why individuals opt to remain in their current location, even in places of high unemployment[28].

Within the employed group, studies have found that dual income households where both partners are employed but not tertiary educated are moving less frequently than they once did[29]. This has been attributed to rising housing costs and stagnating salaries[30].

People outside the labour force exhibit high mobility. This reflects, at least in part, the absence of constraints tied to a specific workplace. This could include retirement and education related migration, family considerations revolving around caregiving responsibilities, lifestyle changes, economic factors such as cost of living.

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27   Kalemba, S.V., Bernard, A., Charles-Edwards, E. and Corcoran, J. 2020. Decline in internal migration levels in Australia: Compositional or behavioural effect?

28   Rhee, S. and Karahan, F. 2017. Population aging, migration spillovers and the decline in interstate migration.

29   Kalemba, S.V., Bernard, A., Charles-Edwards, E. and Corcoran, J. 2020. Decline in internal migration levels in Australia: Compositional or behavioural effect?

30   Ibid

3.5   Migration intensity for different labour force statuses 2016 to 2021
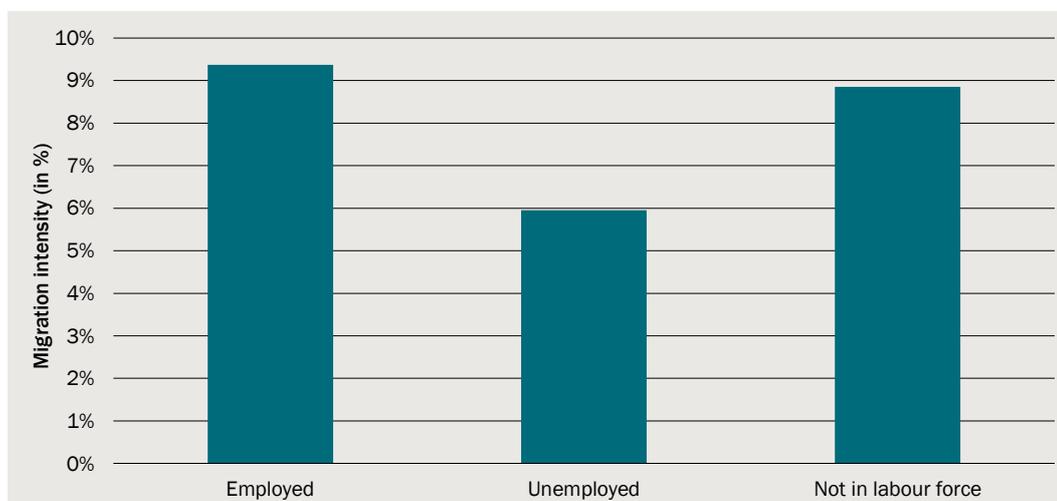
Note: Migration intensity is the propensity to move, which is the number of people who moved from their UCL in the past 5 years expressed as a percentage of total population in the UCL in 2021. A weighted average of migration intensity has been calculated across all UCLs across each labour force status classification.

Data source: CIE analysis. ABS Census, 2021.

Single people have higher migration rates

Single people are observed to have higher migration intensities compared to married couples, while divorced/separated/widowed individuals observe the lowest migration intensities. It is expected that a higher proportion of singles within the population has had an inflating effect on shorter distance mobility but has contributed to a decline in long distance migration.[31] While singles have been traditionally mobile, this change points towards behavioural shifts. Everything else being equal, singles are 10 per cent less likely to undertake a residential move compared to 15 years ago.[32] This can be attributed to delays in leaving the family home and partnership formation among young adults. As depicted by Chart 3.6, singles still display higher migration intensities at the UCL level when compared to other groups. Meanwhile divorced and separated couples are less mobile due to the need to remain in closer proximity to children and other family members.[33]

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[31] Kalemba, S.V., Bernard, A., Charles-Edwards, E. and Corcoran, J. 2020. Decline in internal migration levels in Australia: Compositional or behavioural effect?

[32] Ibid

[33] Thomas, MJ., Mulder, CH. and Cooke, TJ. 2017. Geographical distances between separated parents: A longitudinal analysis. European Journal of Population. 34(4):463-489.

3.6   Migration intensity across marital status 2016 to 2021
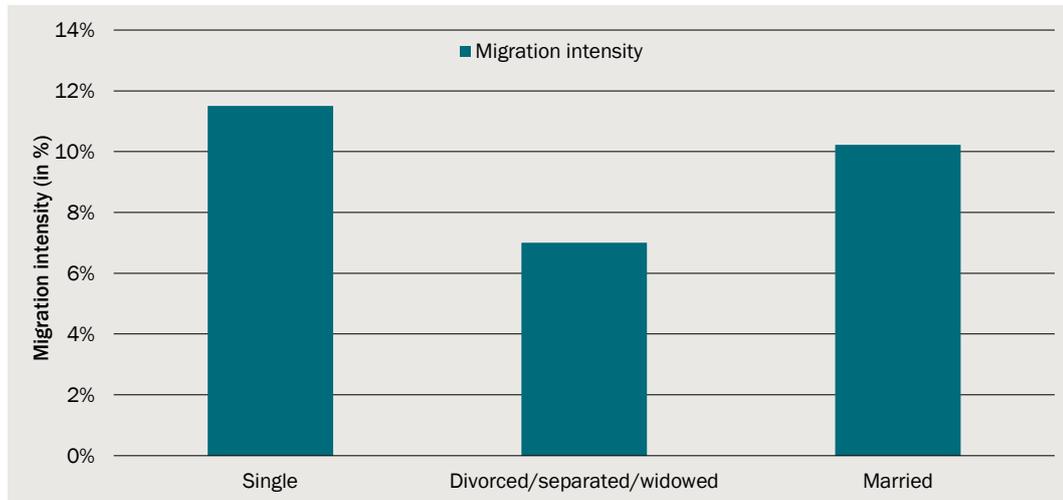
Note: Migration intensity is the propensity to move, which is the number of people who moved from their UCL in the past 5 years expressed as a percentage of total population in the UCL in 2021. A weighted average of migration intensity has been calculated across all UCLs across each marital status classification.

Data source: CIE analysis. ABS Census, 2021.

Reasons for migration

The reasons for moving and their behavioural underpinnings have been well documented within the Australian migration literature. A common source of information on the behavioural drivers of mobility is the HILDA survey.

- The main reasons cited for migration are family and employment (chart 3.7)
- Other important reasons are health and education and housing
- The reasons for migration have remained relatively constant over time.

3.7   Reasons for migration have remained stable for over a decade
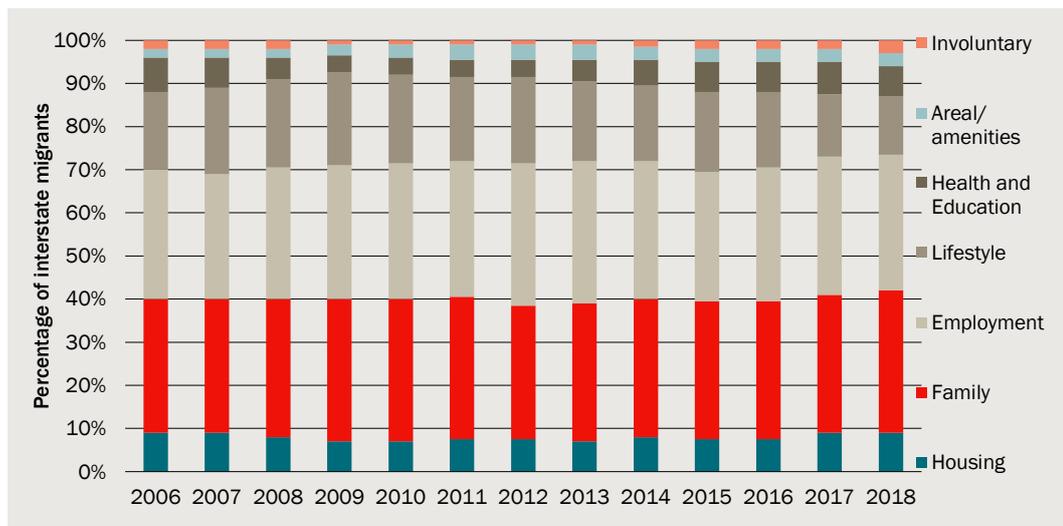
Note: Migration has been defined as a 1 year migration transition by comparing place of residence between two successive annual waves of HILDA data.

Data source: HILDA waves 2-18. Kalemba, S.V., Bernard, A., Corcoran, J. et al. Has the decline in the intensity of internal migration been accompanied by changes in reasons for migration?. J Pop Research 39, 279–313 (2022).

The HILDA survey offers insight into the reasons of migration by age. Between the ages 15 and 24, the dominant reason is due to family reasons (most likely reflecting the fact that migration decisions for a large part of this age group would be tied to parents), while those within the 25 to 34 and 35 to 64 year age bracket are motivated by the purchase of a dwelling and the desire for a change in the size or style of their home. Those aged 65 and over by contrast are motivated by family reasons, downsizing and lifestyle reasons (chart 3.8).

Note that the HILDA data does not distinguish by type of move and these reasons are capturing moving house within the same town. City or region as well as what would be considered a migration. Housing reasons are likely to be much more important for moving within a region than longer distance moves.

3.8   Main reason for last move by age of reference person 5 years to 2020[]
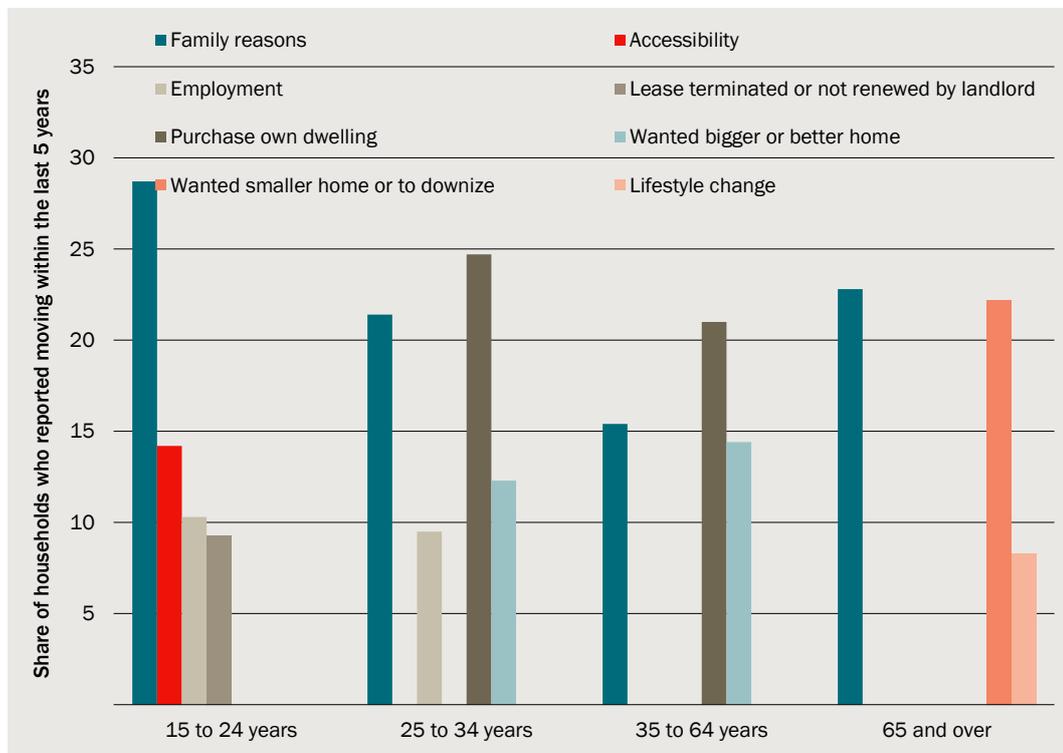
Note: Households in which the reference person changed their place of usual residence in the last 5 years.
Data source: ABS, Housing Mobility and Conditions 2019-20; CIE.

The longer term decline in migration rates has been attributed to a number of underlying behavioural factors:

■   An increasing sense of place attachment is believed to be one of the key drivers of a gradual decline in internal migration over time. The ability of a statistical model to explain long and short distance migration improved by 30 per cent when place attachment was included by way of tenure type and duration of residence as

proxies[34]. This is because social, institutional and geographical capital ties anchor individuals in place by imposing a significant cost on any potential move[35]. Such location specific ties become stronger with an increased duration of stay[36], thus creating a resistance to moving. Rooted or 'moored' individuals can often accommodate some level of discomfort if they can be compensated through other location specific ties such as work, family, or friendships[37].

- Entrapment is the inability to migrate despite having clear intentions to do so and is usually attributed to increasing costs of migrating between regions. This is particularly true for low-income and low-skilled workers and home equity constrained households. Australian evidence suggests lower migration intensities among low-skilled and low-paid workers[38].

- Housing costs and delayed partnership formation have led to an increase in the proportion of young Australians living at home, with 56 per cent of Australians under the age of 30 still living at home, compared to 47 per cent in 2001[39]. Migration also tends to be self-reinforcing, meaning a person is more likely to move if they have moved in the past. This means that young adults who have remained in the same place for a longer period of time are now less likely to move later since they have not been exposed to the challenges of relocating early in life[40].

- The rise in alternate forms of mobility via advances in Information and Communication Technology (ICT), long distance commuting, and teleworking are thought to have increased place elasticity by enabling individuals to maintain personal and professional connections remotely. Evidence from Australia suggests that

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[34] Clark, W. A. V., & Lisowski, W. (2019). Extending the human capital model of migration: The role of risk, place, and social capital in the migration decision. Population, Space and Place, 25(4), e2225. https://doi.org/10.1002/psp.2225

[35] Moon, B. (1995). Paradigms in migration research: Exploring "moorings" as a schema. Progress in Human Geography, 19(4), 504–524; Kalemba, S.V., Bernard, A., Corcoran, J. et al. Has the decline in the intensity of internal migration been accompanied by changes in reasons for migration?. J Pop Research 39, 279–313 (2022).

[36] Thomas, M. J., Stillwell, J. C. H., & Gould, M. I. (2016). Modelling the duration of residence and plans for future residential relocation: A multilevel analysis. Transactions of the Institute of British Geographers, 41(3), 297–312; Huff, J. O., & Clark, W. A. (1978). Cumulative stress and cumulative inertia: A behavioral model of the decision to move. Environment and Planning A, 10(10), 1101–1119.

[37] Moon, B. (1995). Paradigms in migration research: Exploring "moorings" as a schema. Progress in Human Geography, 19(4), 504–524; Kalemba, S.V., Bernard, A., Corcoran, J. et al. Has the decline in the intensity of internal migration been accompanied by changes in reasons for migration?. J Pop Research 39, 279–313 (2022).

[38] Kalemba, S. V., Bernard, A., Charles-Edwards, E., & Corcoran, J. (2020). Decline in internal migration levels in Australia: Compositional or behavioural effect? Population, Space and Place. https://doi.org/10.1002/psp.2341.

[39] Bernard, A. and Kalemba, S. 2020. Australians are moving home less. Why? And does it matter? *The Conversation.*

[40] Bernard, A. and Kalemba, S. 2020. Australians are moving home less. Why? And does it matter? *The Conversation.*

teleworking has only had a marginal effect (1 per cent to 4 per cent) on the decline in migration between 2001-2016[41].

Short versus long distance migration in the Australian context

To date, studies of the relationship between motives of migration and distance remain scant. Long distance or interstate migration is typically motivated by economic reasons such as employment as well as education opportunities[42]. This is because individuals are generally more inclined to undertake costly and disruptive long-distance relocations only when it is necessary to achieve highly valued goals[43]. On the contrary, unlike United States, Sweden and United Kingdom, long distance migration in Australia is jointly driven by family considerations rather than just employment and education reasons, highlighting the role of non-economic drivers of migration (see chart 3.9)[44] .

3.9   Reasons for interstate migration/long distance across Australian states
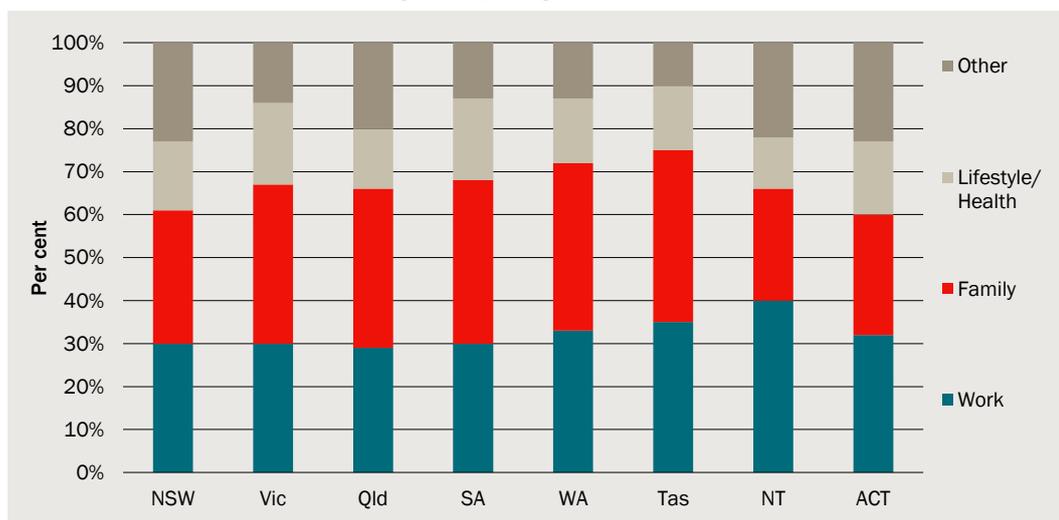
Note: Other includes relocating for housing, area, education, and involuntary relocation.
Data source: University of Queensland, HILDA data averaged results from 2002-2018.

Short distance migration (intracity or intraregional) is primarily motivated by housing. The Survey of Income and Housing (SIH) by the ABS tracks people's motives for moving. Of the reported total moves, 51 per cent cited housing as the main reason. This includes moving to a bigger house, downsizing or the end of a rental lease.[45] Family

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[41] Kalemba, S. V., Bernard, A., Charles-Edwards, E., & Corcoran, J. (2020). Decline in internal migration levels in Australia: Compositional or behavioural effect? Population, Space and Place. https://doi.org/10.1002/psp.2341.

[42] Coulter, R., & Scott, J. 2015. *What motivates residential mobility? Re-examining self-reported reasons for desiring and making residential moves*. Population, Space and Place, 21(4), 354–371.

[43] Kley S. 2011. *Explaining the Stages of Migration Within a Life-course Framework*. European Sociological Review. 27: 469–486.

[44] Kalemba, S.V., Bernard, A., Corcoran, J. et al. *Has the decline in the intensity of internal migration been accompanied by changes in reasons for migration*?. J Pop Research 39, 279–313 (2022).

[45] Why do people move? Centre for Population. ABS Survey of Income and Housing, 2013-14.

reasons such as end of a relationship or moving closer to family were the second most reported driver standing at 22 per cent[46]. Contrary to Sweden and United Kingdom, where housing becomes a less common motive to move beyond 30-40 km, housing remains a common reason for moving even at 50 km in Australia[47]. This may be reflective of Australia's low density and highly sub-urbanised population centres.

Factors that deter internal migration

A key barrier to migration is the uncertainties relating to the economic outcomes associated with making a move. For example, the ABS Survey of Income and Housing reported that those who indicated a willingness to relocate but chose not to, described that this was due to not being able to afford a place of residence in their destination of choice, in addition to the costs of relocating and the overall effort of moving[48].

The Muval Index reports moving trends based on online searches and booking for removalists[49]. This study reported that as inflation and interest rates begin to increase in 2022, the motivation for moving became increasingly monetary, with 11 per cent of those surveyed indicating that they had already moved to reduce their cost of living[50]. For those not working, downsizing was the most common reason (around 23 per cent)[51] . Around two-thirds of respondents said that a substantial increase in the cost-of-living would increase their desire to move. Rent hikes were the most powerful economic trigger for moving followed by cheaper house prices, electricity prices, loss of income or reduced employment opportunities, interest rate hikes and Covid-related disruptions.

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[46] Why do people move? Centre for Population. ABS Survey of Income and Housing, 2013-14.

[47] Thomas, M., Gillespie, B. and Lomax, N. 2019. Variations in migration motives over distance. Demographic Research, 40, pp. 1097–1110.

[48] Housing Mobility and Conditions. 2019-20. Australian Bureau of Statistics.

[49] The Muval Index has been validated by the University of Queensland as a reliable source for current and future migration forecasts.

[50] Muval Index. 2022. From COVID to Cost of Living Australia's new reason to move house.

[51] Muval Index. 2022. From COVID to Cost of Living Australia's new reason to move house.

3.10 Economic events which increase the desire (pressure) to move
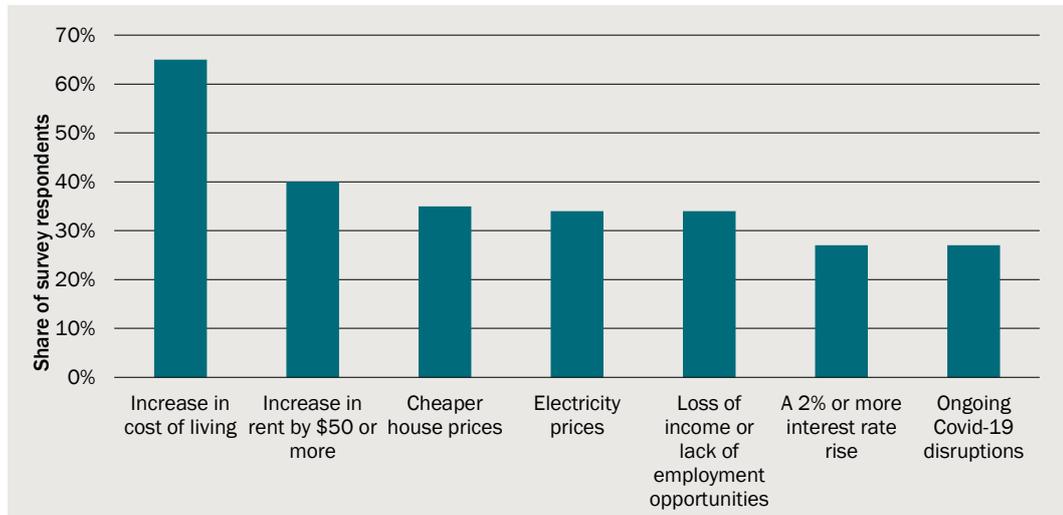
Note: Muval Index gathers data based on removalist enquiries made by people 30 days before moving.
Data source: Muval Index. 2022. From COVID to Cost of Living Australia's new reason to move house.

International migration

International migration drives around 60 per cent of Australia's population growth[52]. Around a quarter of migrants who arrived in Australia between 5 and 10 years ago and remain in the country have transitioned to permanent residency[53]. In this context it becomes important to understand how international migration can influence internal migration.

Settlement patterns of immigrants exert a considerable influence on population growth and its geographic distribution. Research on subsequent migration of immigrants is part of a small but emerging piece of literature. Since 1990's the Australian immigration policy has moved away from shaping the level and composition of immigrant intake towards influencing where immigrants settle after arriving in Australia[54]. For instance, introduction of State-specific Migration Mechanisms (SsMM) in 1995 which included regional sponsored migration scheme (RSMS), enabled employers in regional or low population growth areas to fill skilled positions which are otherwise unfilled from the local labour market.

Migrants differ not only in terms of country of origin but also reasons for moving, thus making understanding of location choices of immigrants a complex process. Literature on location choice of immigrants shows various factors are influential in decision making

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52 Mackey, W., Coates, B., and Sherrell, H. (2022). *Migrants in the Australian workforce*. Grattan Institute.

53 Mackey, W., Coates, B., and Sherrell, H. (2022). *Migrants in the Australian workforce*. Grattan Institute.

54 Hugo, G. (2011). Changing spatial patterns of immigrant settlement. In J. Jupp & M. Clyne (Eds.), *Multiculturalism and Integration: A harmonious Relationship.* ANU Press. https://doi.org/10.22459/MI.07.2011.01

such as educational attainment, English proficiency, attitudinal factors such as marital status and age and contextual factors such as ethnic enclaves. Immigrants less proficient in English or with a lower educational attainment are more likely to reside in areas with large concentrations of other immigrants. Similarly, ethnic enclaves attract immigrants to an area. Employment-based immigrants are found to be attracted by ethnic concentrations but not large immigrant population[55].

Literature also shows that migrants have a clear preference for cities and tend to locate with people of the same ethnicity (chart 3.11). In Australia, Sydney and Melbourne offer a mix between providing access to socio-ethnic networks and being a large metropolitan city thus providing access to educational and employment opportunities. A disproportionate representation of immigrants in large cities suggest attraction due to location-based characteristics or due to an already existing critical mass of immigrants (chart 3.12). This makes it particularly challenging for policymakers to encourage immigrants to reside in a particular location through state specific migration mechanisms.

3.11 Overseas migrants prefer to settle in capital cities (2018-19)
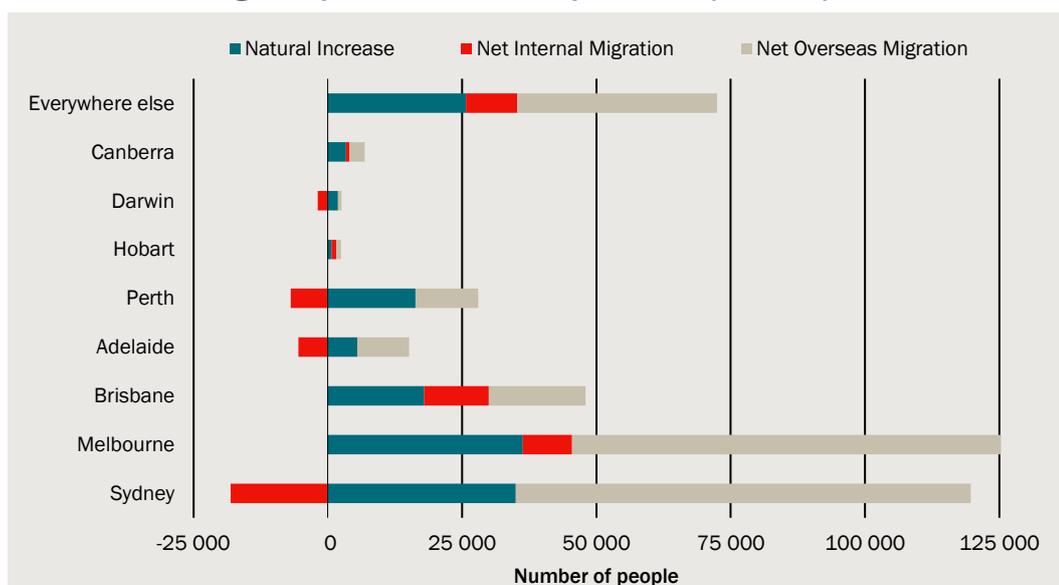
Note: The ABS periodically revises these estimates.
Data source: Grattan Institute – Terrill et al. 2018.

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55 Scott, D. M., Coomes, P. A., & Izyumov, A. I. (2005). The location choice of employment-based immigrants among U.S. metro areas. *Journal of Regional Science*, *45*(1), 113–145

3.12 Place of residence by visa type

Note: Other includes no usual address, not stated, migratory visas, and overseas visitors. Other refers to other regional/transitory remoteness level.
Data source: Grattan analysis of ABS (2016a), ABS(2016b) and ABS (2016c).

Spatial assimilation and network theory are the two main theories used to explain the settlement outcomes from international migration. The former implies that as duration of residence increases, immigrants relocate from an ethnically segregated neighborhood to areas predominantly occupied by natives. Australian evidence shows that in Australia settlements patterns of immigrants converge to those of natives within a decade[56]. Network theory explains residential clustering of new immigrants in particular locations due to proximity to people who provide beforehand information and access to support in the form of transport, accommodation, or employment.

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56 Guan, Q. (2020). Resettlement of China-born immigrants in Australia: Age, duration of stay and interstate migration. *Population, Space and Place*. https://doi.org/10.1002/psp.2388

4   *Where do people migrate to and from?*

There have been strong spatial patterns of migration around Australia over time. Historically, smaller inland town have had slow growing or declining populations and coastal cities and major city fringe areas have had the fastest population growth rates.

Capital cities are typically a source of migrants to other areas, with inflows to capital cities coming more from overseas. Remote areas have had considerable net outward migration.

This chapter explores these spatial patterns of migration in detail.

Areas of growth and decline across Australia

The patterns of growth and decline across Australia are such that areas of growth are situated along the coast, while areas of decline are more likely to be in regions that are inland (chart 4.1). This phenomenon is largely consistent across state boundaries.

4.1   Population changes by UCL 2016-21 — Australia
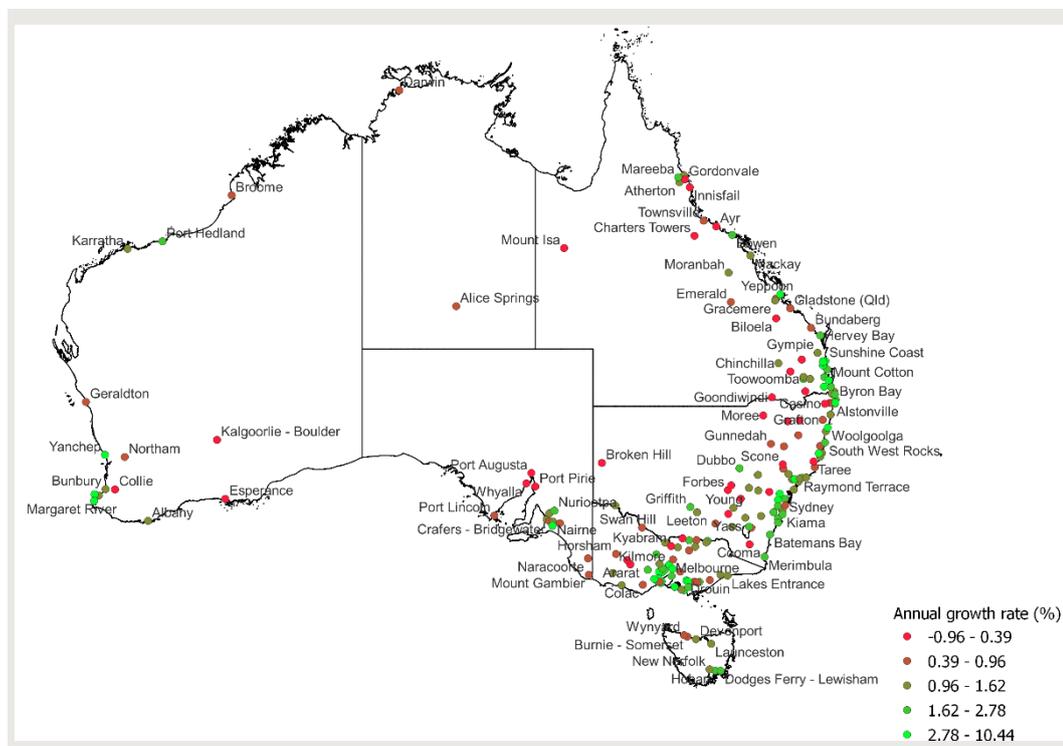
Data source: CIE analysis based on ABS Census data 2021.

In NSW, between 2016 and 2021, coastal cities such as Sydney, Port Macquarie, Woolgoolga, Ballina, Byron Bay have outperformed their inland counterparts. The exception to this trend is Griffith, Albury and Dubbo, which maintain high population growth in spite of their surrounding inland neighbours experiencing population decline, and to a lesser extent Orange, Bathurst and Mudgee (chart 4.2).

4.2   Population changes by UCL 2016-21 — NSW
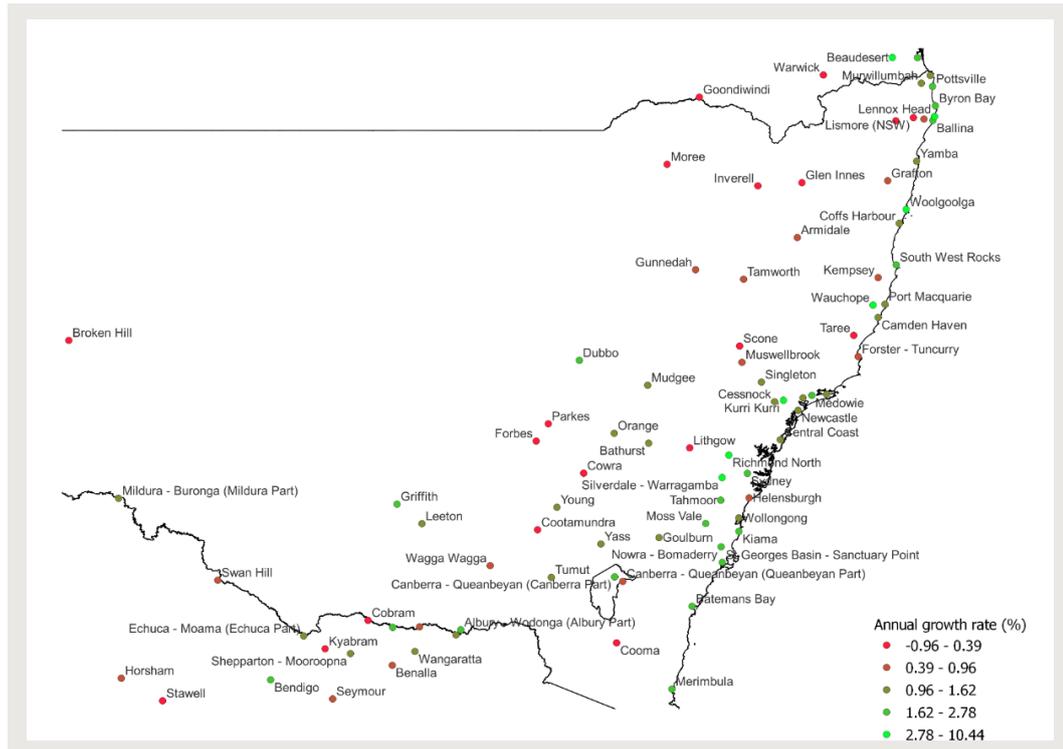
Data source: CIE analysis based on ABS Census data 2021.

In contrast to NSW, Victoria's inland urban centres, particularly those on the fringe or surrounds of Melbourne have experienced population growth. The decline in inland population is more likely to be further inland towards the border of NSW and to the north west (chart 4.3)

4.3   Population changes by UCL 2016-21 — VIC
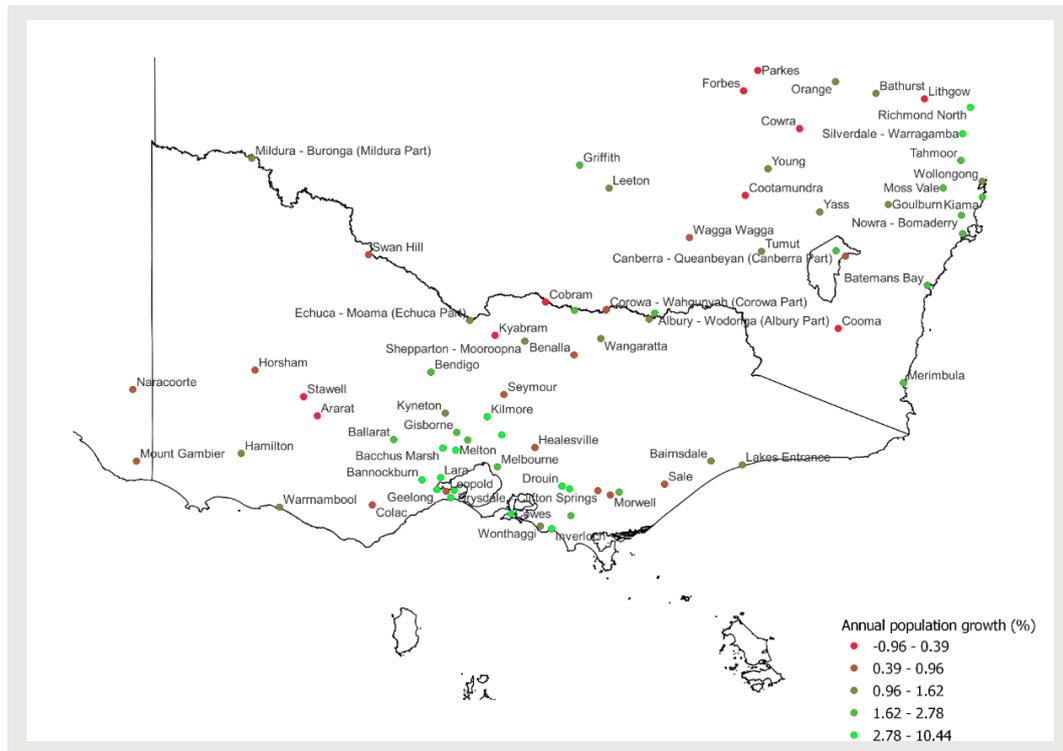
Data source: CIE analysis based on ABS Census data 2021.

Population growth in Queensland is predominantly coastal, and in the southern part of the state including Brisbane, Sunshine Coast and the Gold Coast. Inland regions such as Mount Isa, Biloela and coastal regions further north such as Townsville experience lower population growth or even population decline (chart 4.9).

4.4   Population changes by UCL 2016-21 — QLD
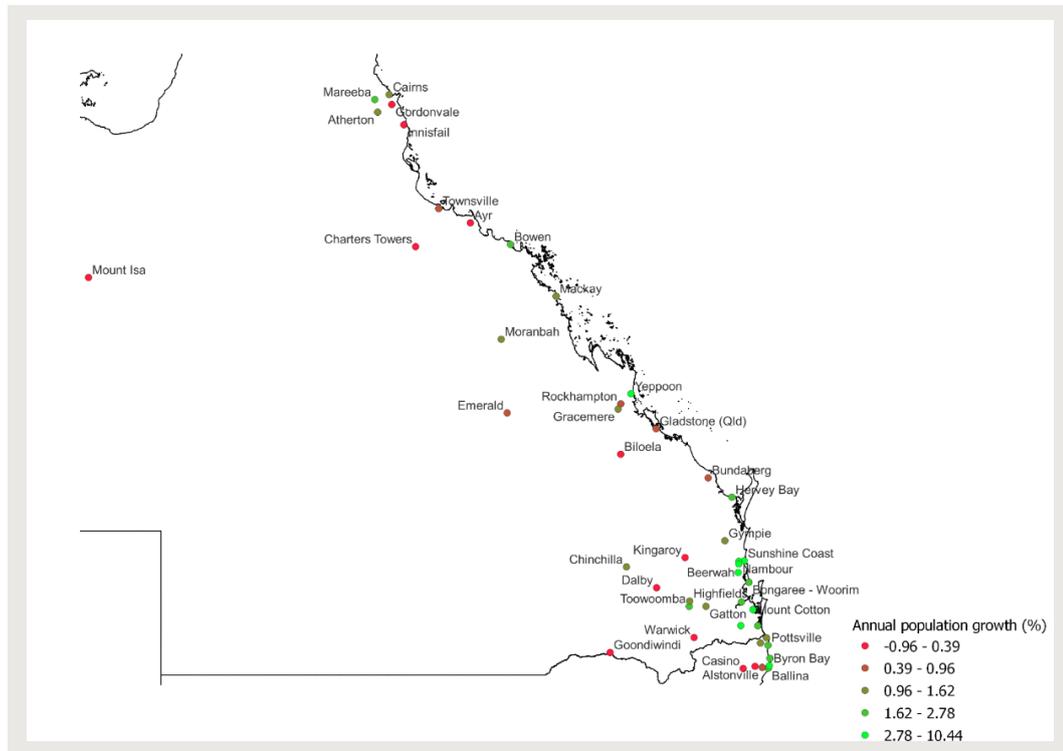
Data source: CIE analysis based on ABS Census data 2021.

Net migration patterns by type of place

Types of places where people live

The overwhelming majority of Australia's population resides within capital cities, with around 65 per cent of Australians having reported as living within a capital city in each census period from 2011 to 2021. This is followed by coastal cities, comprising just over 17 per cent of the population and having grown in proportion marginally over time. The remainder of the population resides within inland cities and country areas, with less than one per cent residing within remote areas (chart 4.5). The types of places in which people live have remained consistent over the period.

4.5   Types of regions where people live
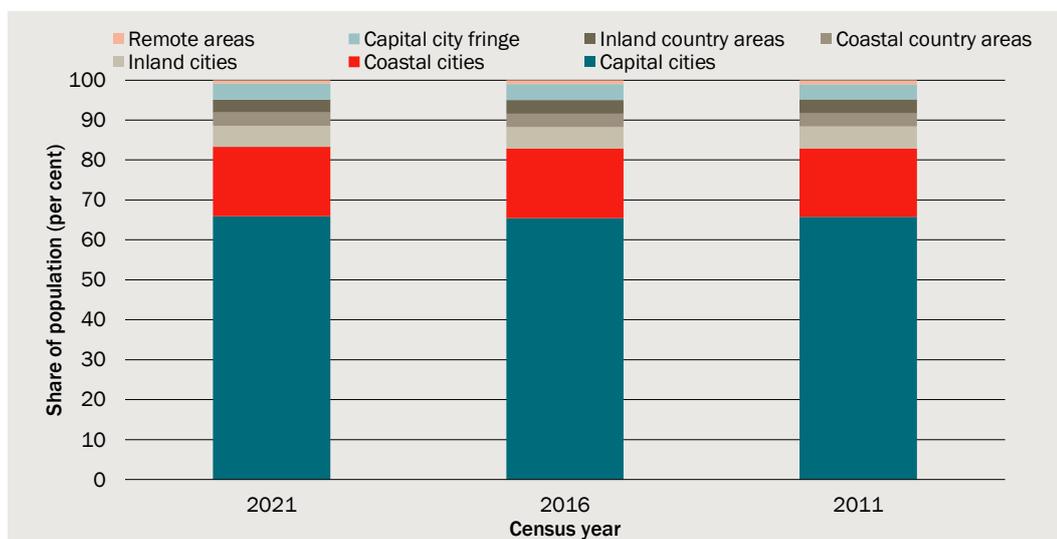
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.

Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Changes in domestic net migration patterns by type of place over time

Over the past decade, capital cities across Australia have tended to lose more domestic migrants than they have gained, leading to negative net migration rates. This was more pronounced between 2016 and 2021, in which the net loss of domestic migrants from capital cities to other regions almost tripled from 4.52 people per thousand residents to 12.17 (or about 1.22 per cent of the total population). This likely reflects Covid-19 impacts. The period between 2016 and 2021 also saw a reversal in the migrations rates of inland cities and inland country areas from net negative to net positive, albeit by a slim margin. Coastal cities, country areas as well as regions on the fringe of capital cities have consistently experienced net inward migration, while remote areas have consistently experienced net outward migration (chart 4.6).

4.6   Changes in net migration rate by BITRE spatial region 2011-21
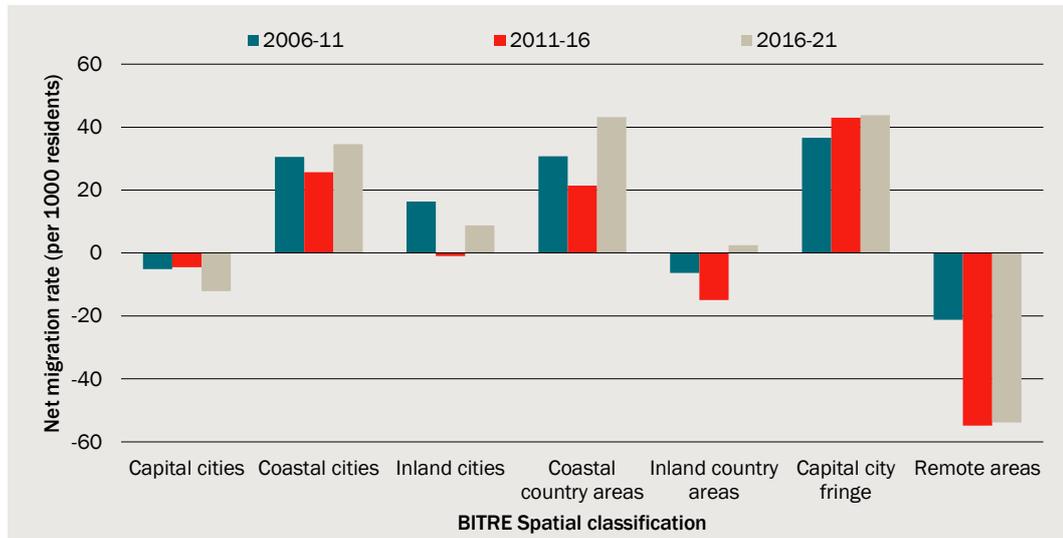
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

The destination of those who leave capital cities is largely other capital cities. However, for those who go to a place other than a capital city, the preferred location is coastal cities. This is particularly true for New South Wales and Queensland with almost 60 per cent of those that leave Sydney and Brisbane who do not move to another capital city or to overseas, opting for a coastal city (chart 4.7). By contrast, those that leave Melbourne are more likely than those from other cities to choose a region on the fringe of the city, in addition to a coastal country area or inland city. This largely reflects the patterns of population growth observed across each of the states. While also including a high proportion of people that move to coastal cities, residents who leave Canberra are more likely to move to an inland country area inland city compared to any other capital city, likely reflecting the fact that Canberra is itself an inland city and the patterns of movement to other inland regions around the ACT.

4.7   Destination of capital city leavers excluding other capital cities 2016-21
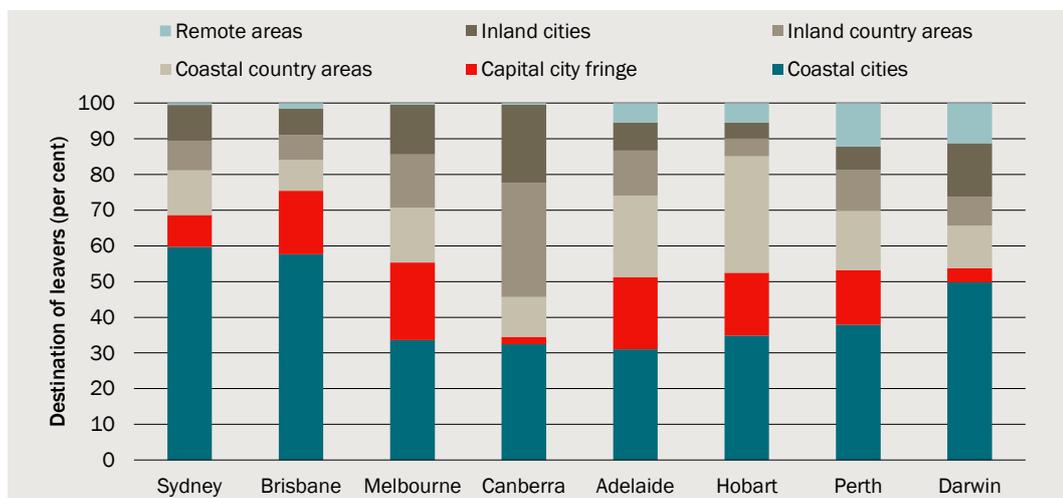
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021

Changes in domestic net migration patterns by state

Net outward migration of domestic migrants from Sydney has persisted from 2006 to 2021 and accelerated between 2016 and 2021. In contrast coastal cities, coastal country areas as well as capital city fringe regions have experienced net inward migration while remote areas have decline sharply and by an increasing magnitude throughout time (chart 4.8).

4.8   Changes in net migration rate by BITRE spatial region 2006-21 — NSW
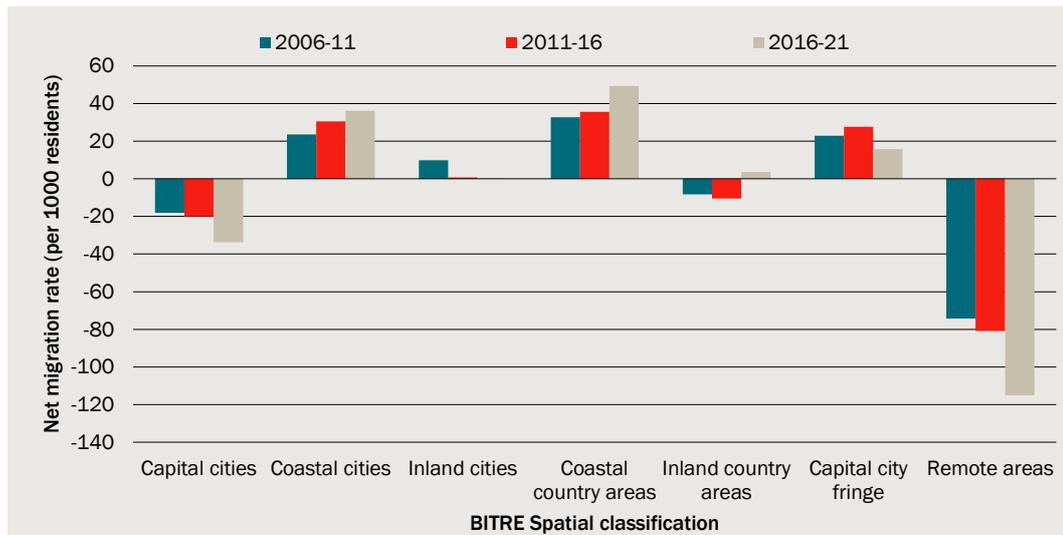
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

The period between 2016 to 2021 saw a large reversal in the net migration rate of Melbourne from a very small net inward migration rate to just over 18 net outward migrants for every thousand residents (or -1.82 per cent of the population). Within the same period, coastal cities and coastal country areas experienced a surge in their migration rates, reflecting an influx of new residents from those who had left Melbourne (chart 4.9). These changes reflected reactions to Covid-19 lockdowns focused on Melbourne.

4.9   Changes in net migration rate by BITRE spatial region 2006-21 — VIC
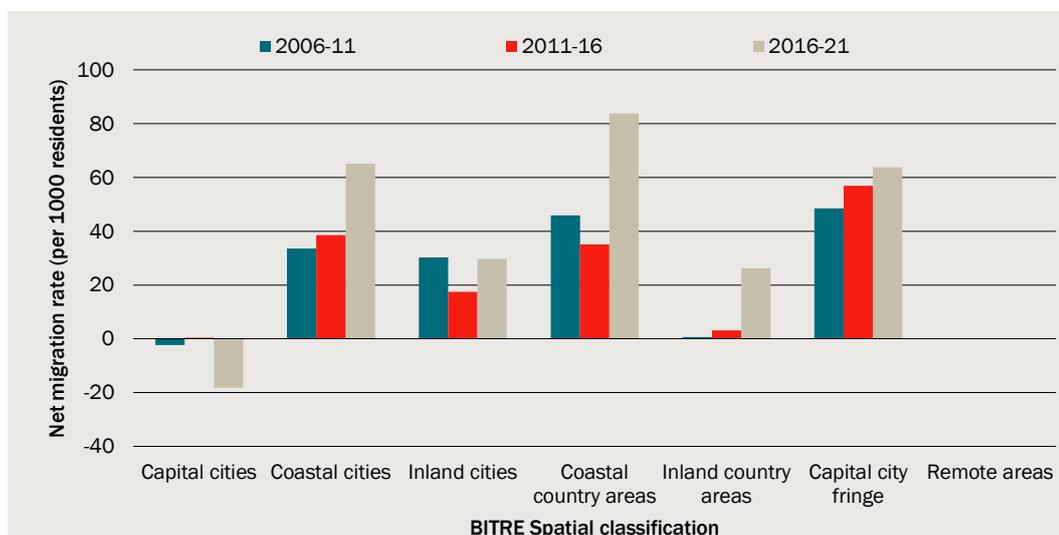
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Unlike Sydney and Melbourne, Brisbane has maintained positive net inward migration, with a net inward migration rate that has increased over time. Regions on the fringe of Brisbane have also exhibited strong net inward migration, as well as coastal cities while inland cities and remote areas experience the strongest rates of net outward migration (chart 4.10).

4.10   Changes in net migration rate by BITRE spatial region 2006-21 — QLD
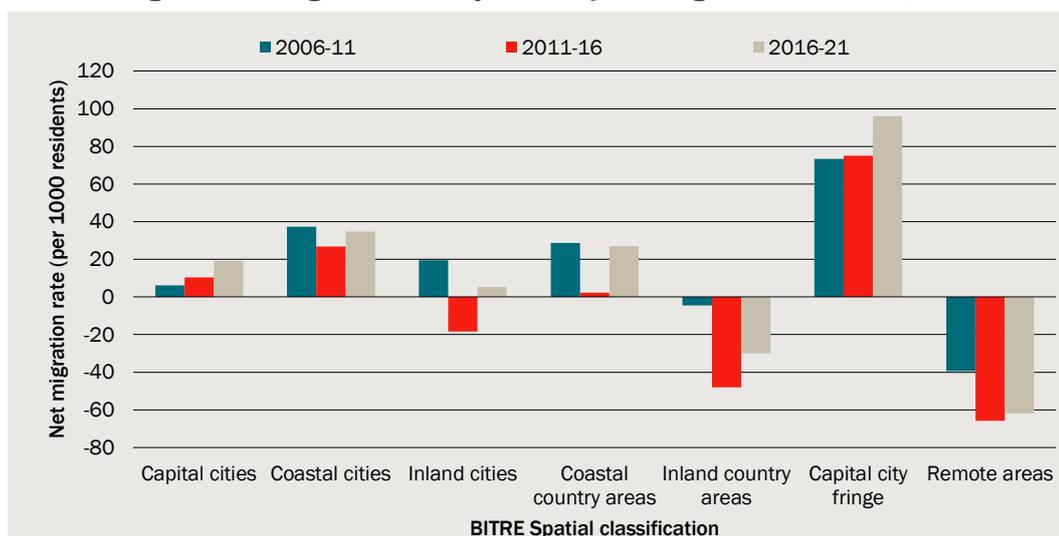
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Similarly, Perth has maintained net inward migration, although at a very marginal rate. Unlike other states and territories, coastal cities in WA have not experienced strong levels of inward migration since 2006-11 and have since reversed to be marginally negative. This turnaround, in addition to the decline in net migration to inland and

remote areas likely reflects the changing employment dynamics as mining investment becomes less prominent in those regions (chart 4.11).

4.11   Changes in net migration rate by BITRE spatial region 2006-21 — WA
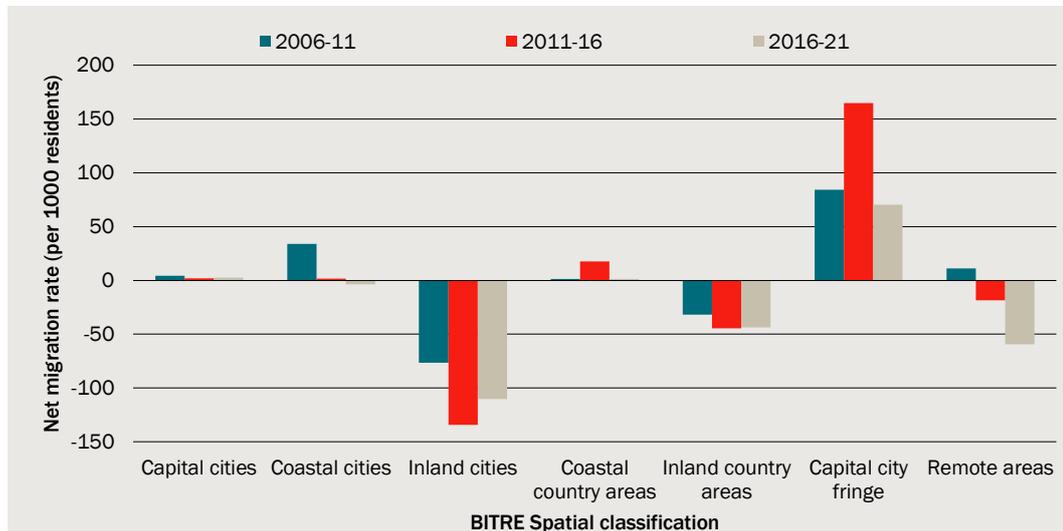
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

In SA, Adelaide has maintained net outward migration while there is net inward migration into coastal cities and country areas as well as inland cities appears to have moderated substantially since the period 2006-11. Remote areas experienced a substantial decline in net migration during the period 2011-16, appearing to coincide with the decline in the mining cycle (chart 4.12).

4.12   Changes in net migration rate by BITRE spatial region 2006-21 — SA
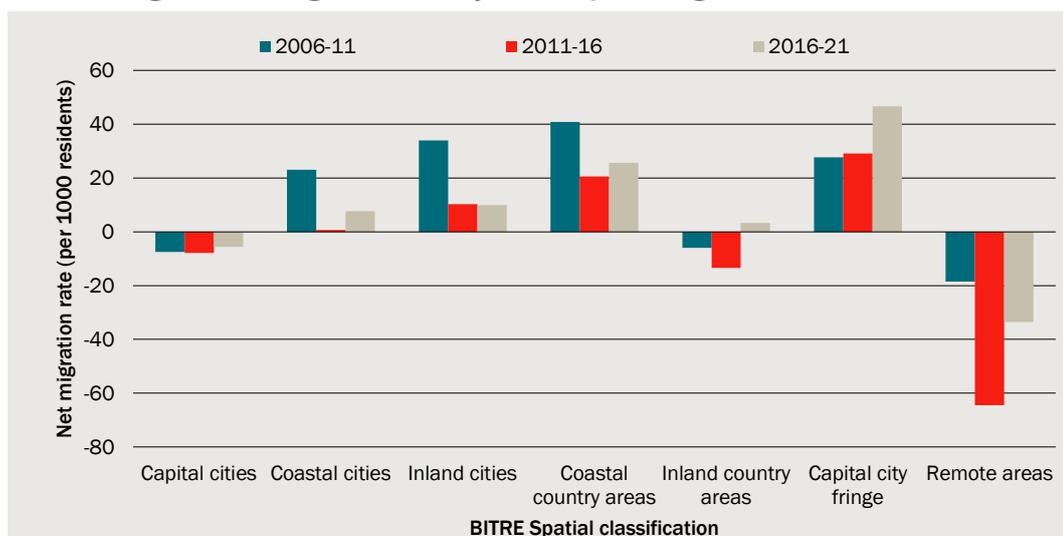
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Across Tasmania, there have been uplifts in the net inward migration rates of Hobart and the fringe as well as coastal and inland country areas compared to previous years (chart 4.13).

4.13 Changes in net migration rate by BITRE spatial region 2006-21 — TAS

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Migration rates by region and demographic characteristics

There are a range of demographic factors that can have an influence on migration decisions, both in terms of migration propensity and the types of moves made. We have provided a breakdown of the population and net migration into and out of various types of regions based on:

- Age
- Level of education
- Occupation
- Ancestry

Migration by age

The overall proportion of the population by age differ based on the type of region. For instance, according to the most recent 2021 census, capital cities are somewhat younger compared to other places, with a higher proportion of those aged 20-29 and 30-39. In comparison, inland country areas as well as coastal country areas have a higher proportion of older Australians aged 60 and over (chart 4.14).

### 4.14 Age composition of different regions — 2021
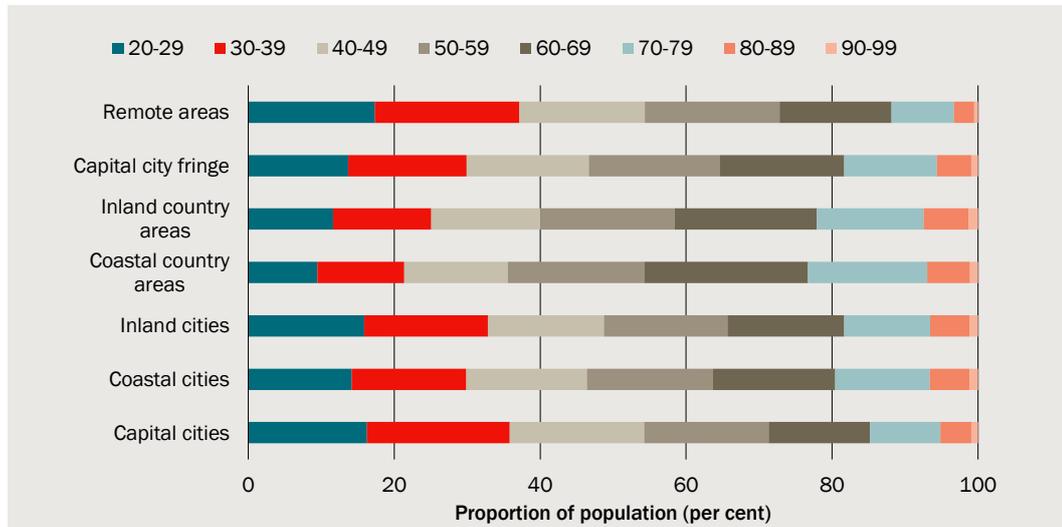
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021.

There are observable differences in the migration rates of different types of places across different age brackets. For instance, between 2016 and 2021, capital cities experienced net inward migration of those aged 20-29, while at the same time observing net outward migration of other aged groups (chart 4.15). By comparison, coastal cities and capital city fringe regions experienced stronger net inward migration of older age groups. Net outward migration of those aged 20-29 was particularly strong within inland and coastal country areas, while net positive for older aged groups. These differences are likely explained by the different and unique ways in which the drivers of migration relate to age. We have only included a subset of age brackets that represent young, middle aged and older age groups for ease of comparison (thus excluding 30-39 and 60-69 age brackets).

4.15 Net migration rates by BITRE spatial region by age — 2016-21
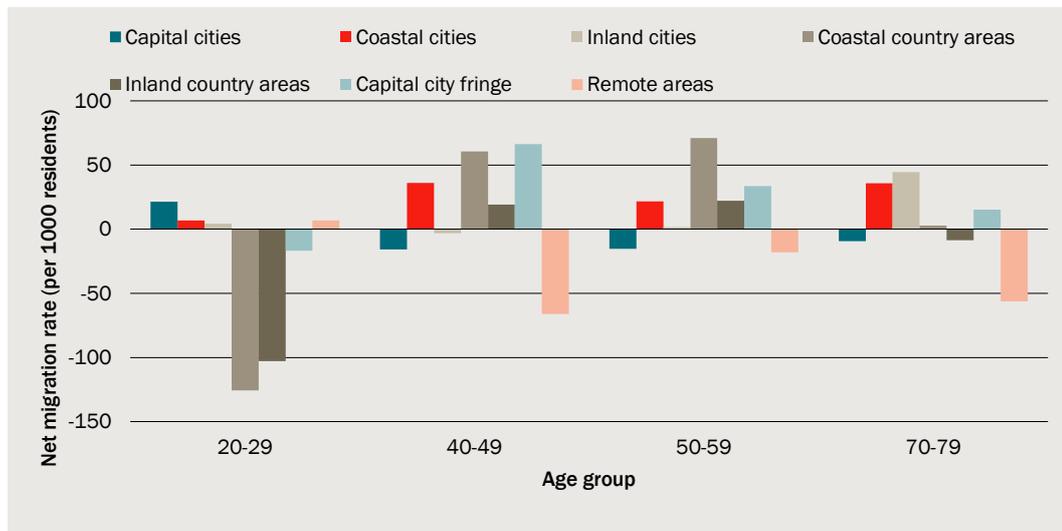
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021.

The patterns for 2011-16 are similar in their direction, although appear smaller in magnitude. This potentially reflects the unique circumstances of the COVID-19 pandemic on regional preferences among those that have migrated compared to previous census periods (chart 4.16).

4.16 Net migration rates by BITRE spatial region by age — 2011-16


Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data 2016.

A key observable difference within the period 2006-11 is the relatively strong net inward migration of those aged 20-29 into remote areas. These places are led by remote localities within Western Australia and the Northern Territory and were led by stronger mining employment opportunities compared to later years (chart 4.17).

4.17 Net migration rates by BITRE spatial region by age — 2006-11
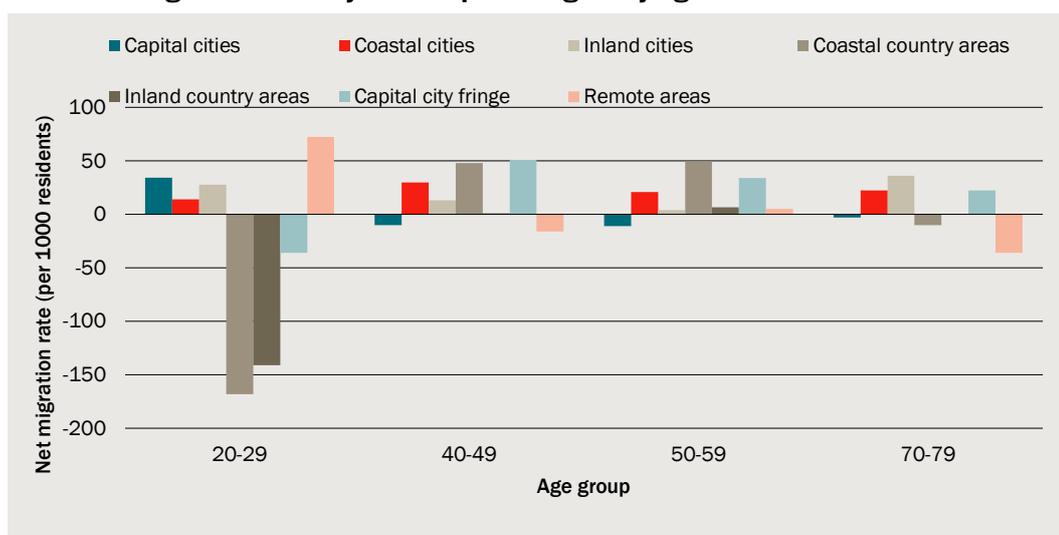
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data 2011.

Migration by level of education

The rates of educational attainments vary according to the types of places across Australia. Capital cities tend to comprise a more highly educated population, with almost half of the population having attained a form of higher education in the form of a Bachelors or postgraduate degree. Rates of higher educational attainment decline towards inland cities and country areas as well as more remote areas, comprising instead a higher proportion of those with the highest level of educational attainment being either secondary education or a certificate level qualification (chart 4.18).

**4.18   Educational composition of different regions — 2021**
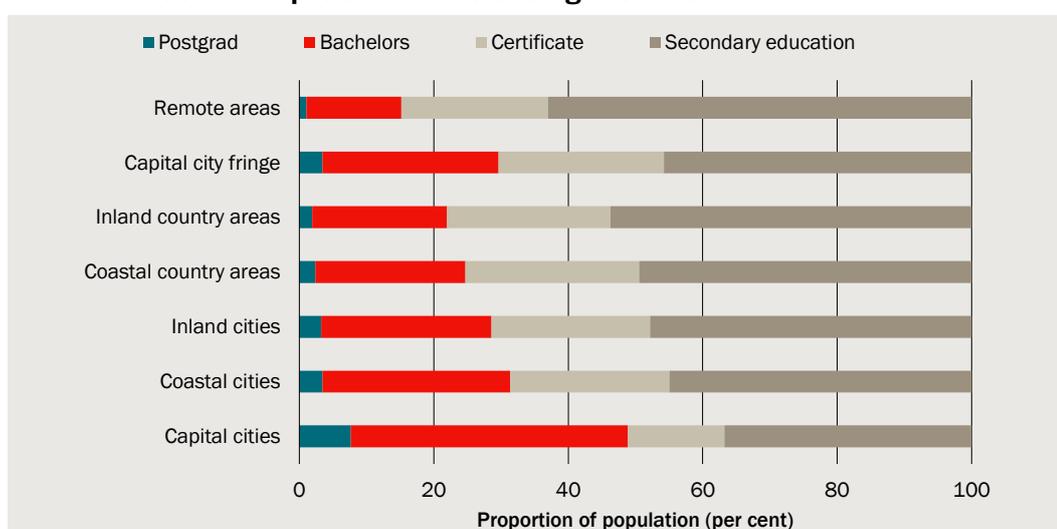
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021.

In terms of migration behaviour, the direction of migration is similar across education groups while the magnitude differs. There is a consistent pattern of net outward migration from capital cities across all education subgroups with the exception of secondary education which is very marginally positive. University educated individuals tend to have higher overall migration propensities compared to certificate and secondary school educated people, with higher comparable rates of net inward migration to costal cities, coastal country areas and regions on the fringe of capital cities (chart 4.19).

4.19 Net migration rates by BITRE spatial region by education level — 2016-21
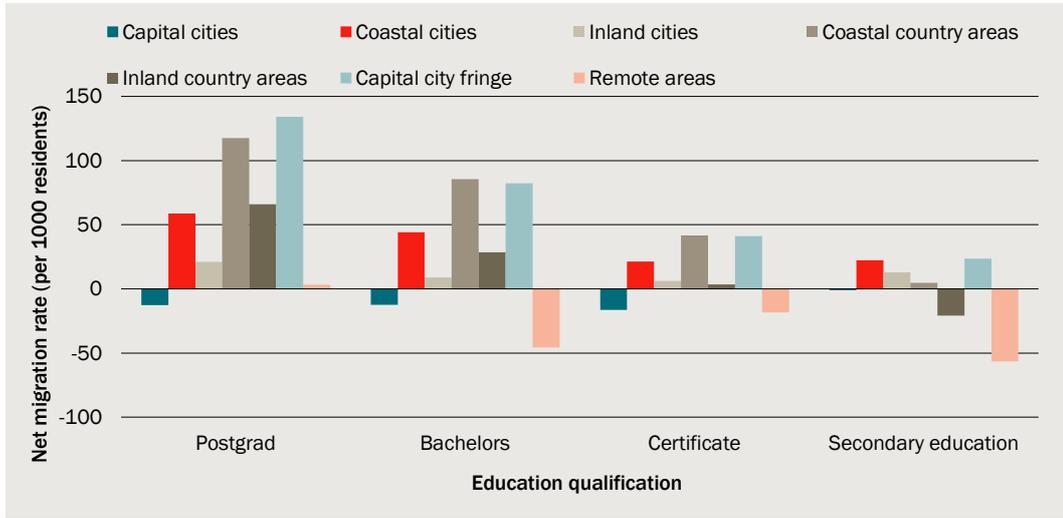

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data 2021.

The patterns for 2016-21 are largely mirrored in the migration rates observed between the periods 2011-16, with the exception of migration rates for remote areas for postgraduates. Remote areas received marginally positive net inward migration to remote areas compared to 2011-16 which comprised a similar rate as other education subgroups (chart 4.20). Given the relatively low existing population of postgraduate educated people in remote areas, this change is occurring from a relatively small base and would not represent a broader shift in preferences. For example, a scientific research project occurring in a remote area could see a group of scientists relocate, leading to a spike in the localities net migration rate of postgraduate educated people.

4.20 Net migration rates by BITRE spatial region by education level — 2011-16
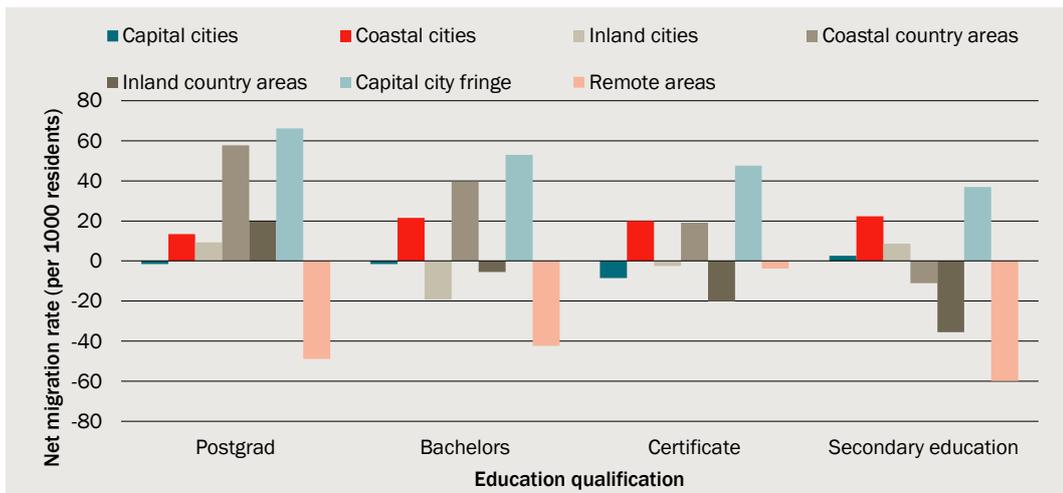
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data 2016.

Comparison to 2006-11 are not available due to a change in the way the ABS reported educational attainment for certificate and secondary educated individuals.

Migration by occupation

Net migration rates also vary between people of different occupations. The below comparisons compare net migration rates for a subset of different occupation types, with further analysis across the remainder of occupations occurring in chapter 6.

There is a consistent pattern of net outward migration from capital cities across all compared occupation subgroups. Professionals have higher overall migration propensities compared to other occupation types, however all groups maintain positive net inward migration to coastal cities, country areas and region on the fringe of capital cities. Professionals exhibit net outward migration out of remote areas, whilst the other occupation subgroups maintain net inward migration. This likely reflects the differences in the types of jobs available in such places to which these occupation types are involved. (Chart 4.21).

4.21 Net migration rates by BITRE spatial region by occupation — 2016-21
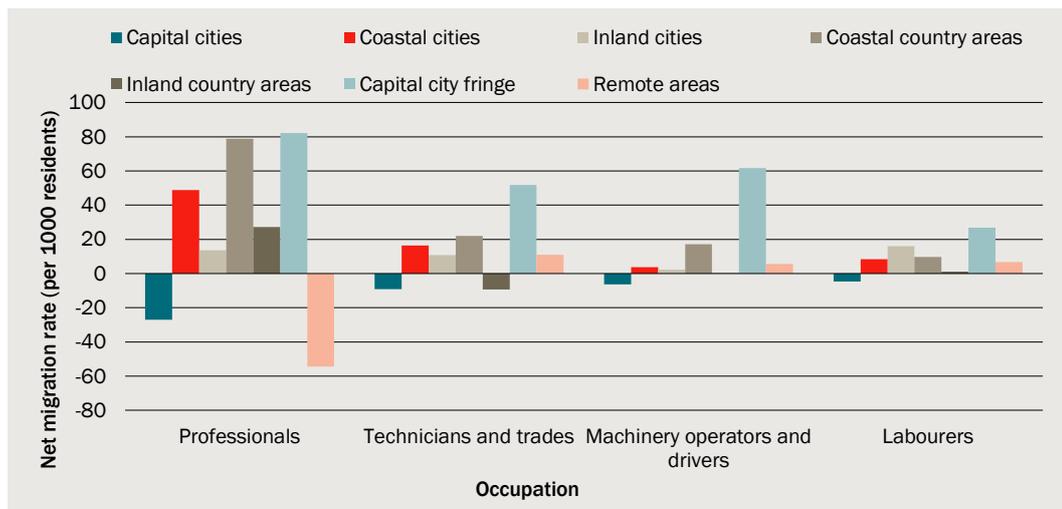
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021.

The migration rates into remote areas are much stronger between 2011-16 and 2006-11 compared to 2016-21, with higher rates of net inward migration across the occupation subgroups with the exception of professionals in 2011-16 (charts 4.22 and 4.23).

4.22   Net migration rates by BITRE spatial region by occupation — 2011-16
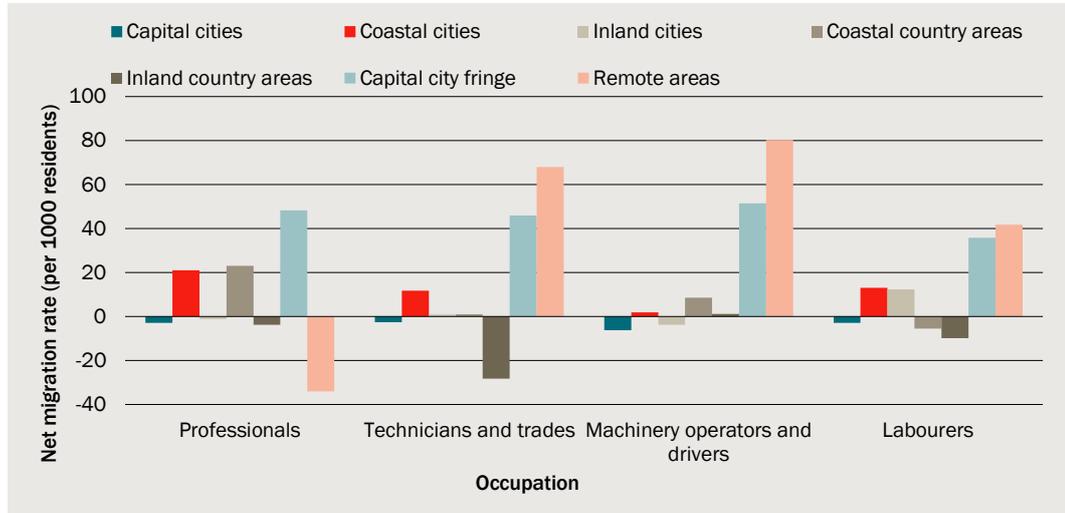
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data 2016.

4.23   Net migration rates by BITRE spatial region by occupation — 2006-11
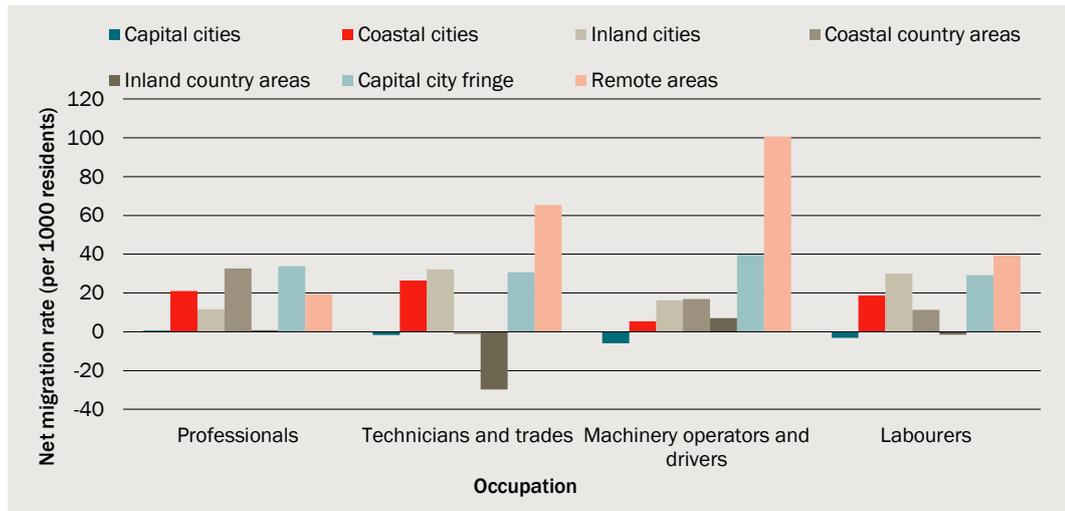
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data 2011.

Migration by ancestry

Ancestry, as defined by the ABS, refers to the cultural groups with which people most identify[57]. This means that a person's ancestry is not necessarily connected with their birthplace (e.g. a person can be born in Australia but have cultural ties to another country). The majority of Australia's population comprises people whose ancestry is European, followed by Oceania (including First Nations, New Zealand, PNG and other

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57   https://www.abs.gov.au/statistics/detailed-methodology-information/information-papers/understanding-and-using-ancestry-data

island nations). Capital cities have a higher relative proportion of residents with ancestry including Africa and the Middle East as well as Asia (chart 4.24).

**4.24 Proportion of ancestry as a share of total population by region — 2021**
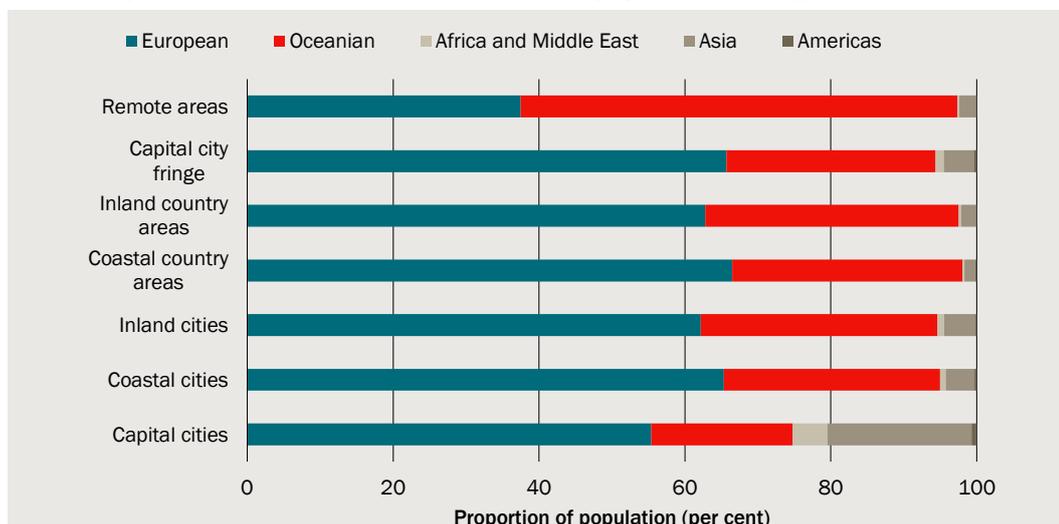
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data 2021.

Migrants with Oceanian and European ancestry share similar migration patterns, with generally net outward migration from capital cities and net inward migration into coastal cities, coastal country areas and areas on the fringe of capital cities. Migrants with Asian ancestry in contrast have net outward migration patterns for similar areas with the exception of coastal cities. Migrants with ancestry from Africa and the Middle East, Asia and the Americas have particularly high net outward migration rates from remote regions and high inward migration rates to areas on the fringe of capital cities compared to other ancestries (chart 4.25).

4.25 Net migration rates by BITRE spatial region by ancestry — 2016-21
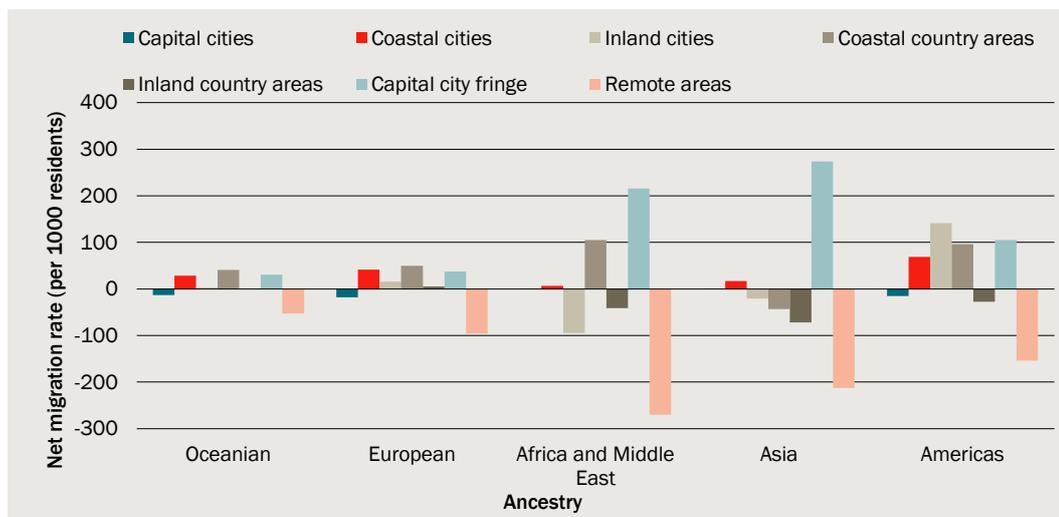

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data 2021.

The observed patterns are largely consistent throughout time, with the exception of inland country areas, which experienced larger rates of outward migration from those with African and Middle eastern Ancestry (charts 4.26 and 4.27).

4.26 Net migration rates by BITRE spatial region by ancestry — 2011-16
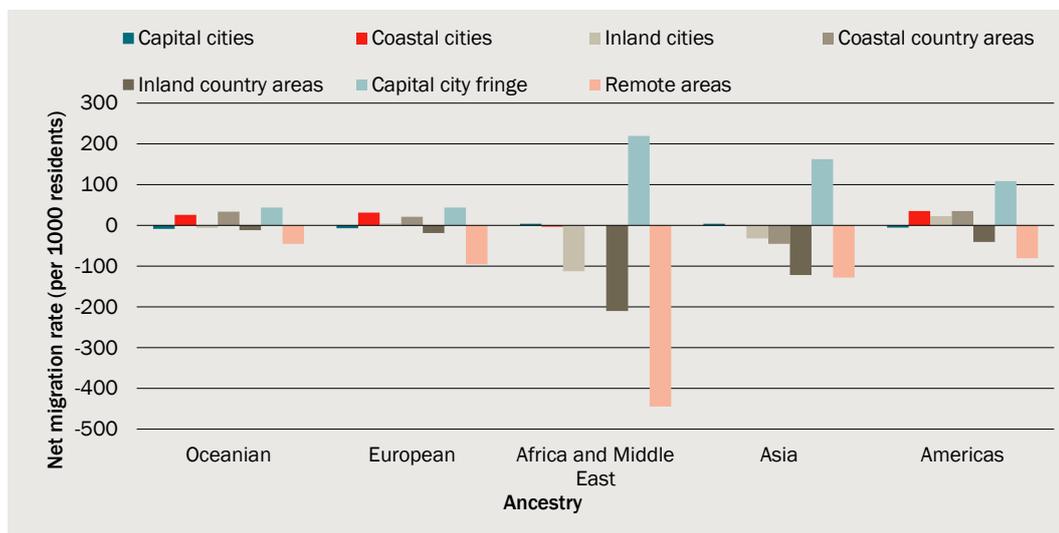
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.

Data source: CIE analysis based on ABS Census data 2016.

4.27 Net migration rates by BITRE spatial region by ancestry — 2006-11
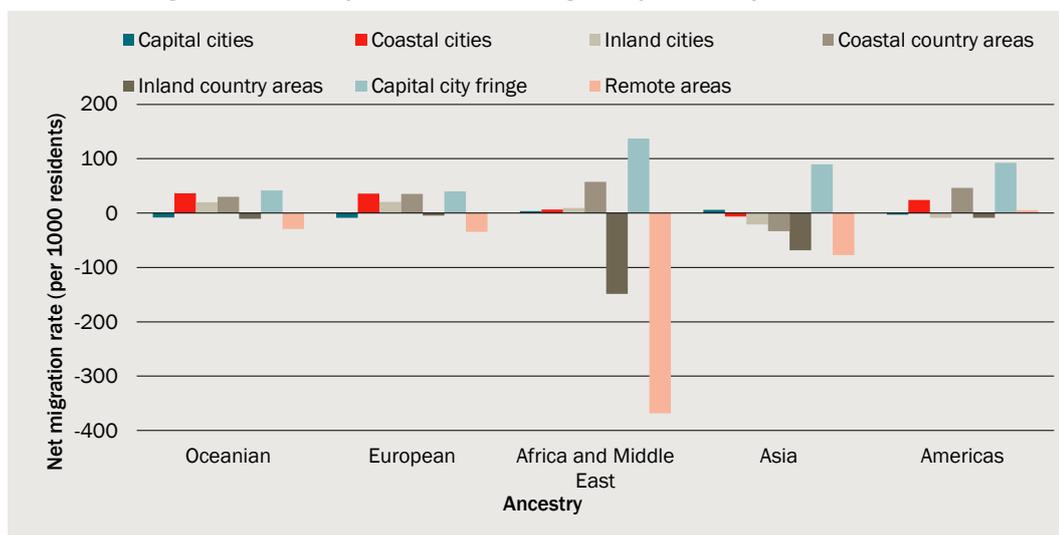

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.

Data source: CIE analysis based on ABS Census data 2011.

Outlier regions and their characteristics

The range of net migration rates across Australian urban centres and localities (UCLs) with a population greater than or equal to 10 000 people between 2006 and 2021 has been relatively stable with a median net migration rate of:

- 19.15 people per thousand residents between 2016 and 2021
- 11.86 people per thousand residents between 2011 and 2016
- 21.23 people per thousand residents between 2006 and 2011

The dispersion around these medians has been similarly consistent, although has widened somewhat since the period 2006 to 2011, encompassing a greater number of regions experiencing net outward migration (chart 4.28). Of interest are those regions which sit outside of the typical range of net migration rates, and this includes regions which experience strong net inward migration as well as net outward migration. From a policy perspective, it is useful to understand in further detail the characteristics of such places that may relate to their migration patterns.

4.28 Range of net migration rates across Urban Centres and Localities 2006-21
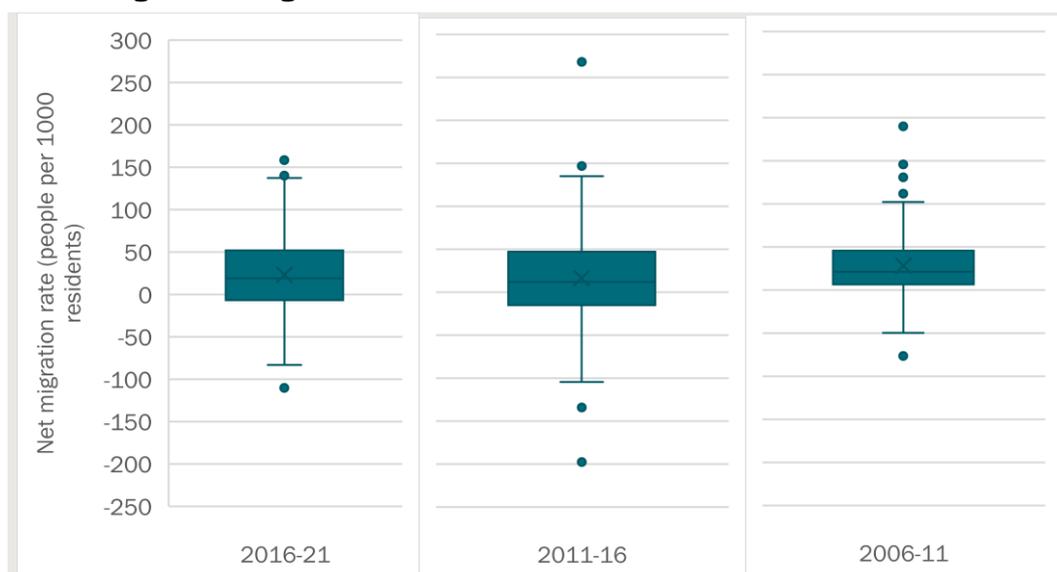

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Further information on the summary statistics can be found in table 4.29.

4.29 Net migration rate across census periods

Percentile	Net migration rate 2016-21	Net migration rate 2011-16	Net migration rate 2006-11	Average across all years
	No./1000 residents	No./1000 residents	No./1000 residents	No./1000 residents
Maximum	158.39	268.09	190.01	171.71
75th percentile	51.23	46.90	44.69	52.05
Median	19.15	11.86	21.23	15.55

| Percentile	Net migration rate 2016-21	Net migration rate 2011-16	Net migration rate 2006-11	Average across all years
	No./1000 residents	No./1000 residents	No./1000 residents	No./1000 residents
25th percentile	-6.07	-14.68	6.97	-2.59
Minimum	-110.41	-197.77	-76.56	-107.43

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
*Data source:* CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Table 4.30 presents the top 10 outlier regions in terms of their net inward migration rates across time in addition to the bottom 10 outlier regions in terms of their net outward migration rates over the same period. The growth regions predominantly include UCLs within Victoria, South Australia and Queensland. Areas experiencing outward mainly include regions within New South Wales and Western Australia.

The average net migration rate for top 10 outlier regions ranges from 93.1 to 171.7 people per thousand residents over the period 2006-21 while the average net migration rate for bottom 10 outlier regions ranges from -34.3 to -107.4 people per thousand residents.

4.30   Top 10 and bottom 10 outliers in terms of net migration rate — 2006-21

UCL	2016-21	NIM 2011-16	NIM 2006-11	Average NIM 2006-21	Region type	State
	People/100 residents	People/100 residents	People/100 residents	People/100 residents		Name
Top 10 outliers						
Yanchep	96.0	268.1	151.1	171.7	Capital city fringe	WA
Drouin	132.5	114.6	145.8	131.0	Coastal city	VIC
Torquay - Jan Juc	133.4	96.4	138.9	122.9	Coastal city	VIC
Wallan	140.1	134.9	63.5	112.8	Capital city fringe	VIC
Ocean Grove - Barwon Heads	118.5	146.7	57.8	107.6	Coastal city	VIC
Victor Harbor	99.0	77.3	119.7	98.7	Coastal city	SA
Mount Barker (SA)	137.5	77.0	71.9	95.5	Capital city fringe	SA
Drysdale - Clifton Springs	158.4	89.5	35.0	94.3	Coastal city	VIC
Gracemere	-8.9	100.3	190.0	93.8	Coastal	QLD
Bongaree - Woorim	147.5	71.6	60.3	93.1	Capital city fringe	QLD
Bottom 10 outliers						
Mount Isa	-81.8	-197.8	-42.8	-107.4	Inland city	QLD
Kalgoorlie - Boulder	-110.4	-134.3	-76.6	-107.1	Inland city	WA
Alice Springs	-83.2	-104.4	-25.1	-70.9	Inland city	NT
Griffith	-53.3	-42.8	-49.9	-48.7	Inland city	NSW
Broken Hill	-36.5	-45.8	-49.5	-43.9	Inland city	NSW

| UCL	2016-21	NIM 2011-16	NIM 2006-11	Average NIM 2006-21	Region type	State
	People/100 residents	People/100 residents	People/100 residents	People/100 residents		Name
Port Hedland	-22.3	-100.4	-8.1	-43.6	Coastal city	WA
Port Augusta	-48.8	-44.3	-27.4	-40.2	Coastal city	SA
Muswellbrook	-59.6	-17.5	-29.9	-35.7	Inland city	NSW
Esperance	-49.7	-24.0	-30.8	-34.8	Coastal city	WA
Karratha	-44.2	-80.1	21.4	-34.3	Coastal city	WA

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
*Data source:* CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Characteristics common to areas in growth and decline

In trying to ascertain the potential reasons for why outlier regions exhibit net migration rates above or below the average to such an extent, we can compare the various characteristics of outlier regions to compare both similarities and differences. Table 4.31 compares the typical characteristics of outlier regions across each of the census periods. The average characteristics of outlier regions indicate that:

- Top 10 outlier regions with net inward migration experience stronger population growth while bottom 10 outlier regions with net outward migration face weaker growth and declining population in some years.

- Top 10 outliers have fewer international migrants, and they comprise a lower share of the population compared to bottom 10 outliers.

- Median weekly rents are higher in top 10 regions compared to bottom 10 regions, although have experienced similar rates of growth.

- Median weekly income growth is higher in top 10 regions compared to bottom 10 regions, although the levels are lower.

- Unemployment rates are slightly higher in top 10 outlier regions compared to bottom 10 outlier regions, although industry growth is similar.

- Bottom 10 outlier regions are warmer and drier on average, with higher average daily temperatures and lower daily levels of precipitation compared top 10 outliers. Persistently low precipitation could also be an indicator of drought.

- Top 10 outlier regions are significantly closer to major urban centres such as capital cities (with many of them also being regions on the fringes of capital cities) and other places with a population of at least 100 000 people. The average distance of top outliers is around 49 kilometres, compared to 621 kilometres for bottom 10 outliers.

- Service provision, which we estimate as people per worker in that industry (due to limited information on service provision across regions), appears higher for bottom 10 outlier regions (with fewer people per worker), although this is potentially offset by the relative proximity to capital cities and other major urban centres which have leading levels of service provision across the country.

4.31 Typical characteristics of outlier regions over time

| Characteristic	Unit	Top 10 outliers			Bottom 10 outliers		
Time period		2016-21	2011-16	2006-11	2016-21	2011-16	2006-11
Town population	No. people	17 285	14 076	12 031	17 550	17 042	18 594
Population annual growth rate	Per cent	4.2	3.2	na	0.6	-1.7	na
International migrants	No. people	330	304	297	816	866	1 024
Median weekly rent	$	368	306	254	284	251	193
Median weekly rent annual growth rate	Per cent	3.8	3.8	na	2.5	5.4	na
Median weekly income	$	1 602	1 308	1 126	1 961	1 700	1 635
Median weekly income annual growth rate	Per cent	4.1	3.0	na	2.9	0.8	na
Unemployment rate	Per cent	4.9	6.3	4.7	4.2	6.0	4.8
Rate of industry growth	Per cent	10.6	12.1	15.2	10.9	16.3	16.5
Average daily precipitation	ml/day	2.3	2.3	2.3	1.0	1.1	1.6
Average daily temperature	degrees Celsius	16.6	17.0	14.6	21.5	21.8	21.1
Distance to major urban centre	km	49	49	49	621	621	621
Provision of services							
Tertiary education	People/worker	1 457	2 308	1 775	287	277	253
Schools	People/worker	53	56	62	31	34	42
Medical services	People/worker	76	94	161	25	30	38
Aged care services	People/worker	324	257	262	346	279	281
Transport	People/worker	193	254	193	47	45	52

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

The population shares of different age groups are broadly similar, although top 10 outlier regions comprise a higher share of older Australians, while bottom 10 regions comprise a higher relative share of younger Australians, as at 2021 (chart 4.32).

4.32 Proportion of population by age — 2021
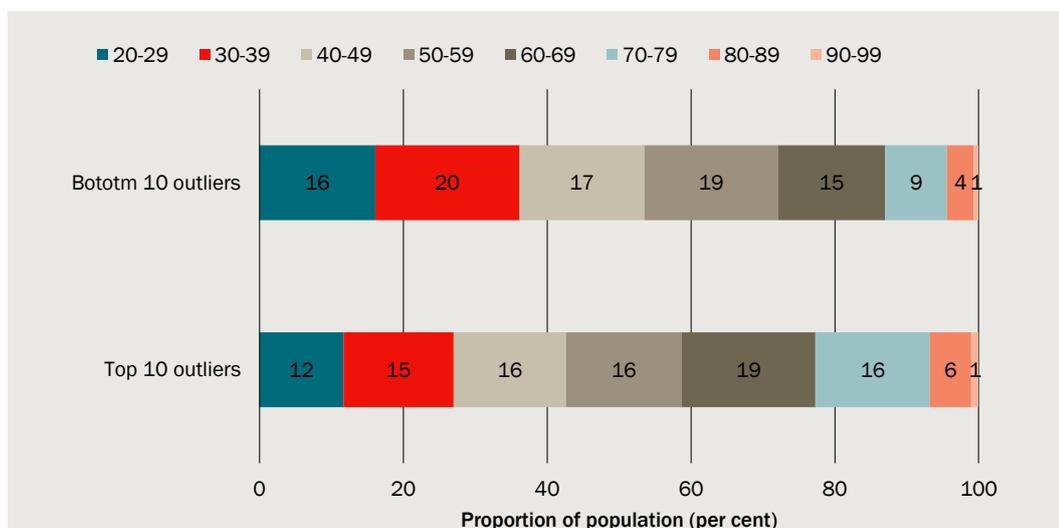
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
*Data source:* CIE analysis based on ABS Census data 2021.

The corresponding net migration rates of the same cohorts however, show net inward movements for all age groups into top 10 outlier regions and net outward movements for bottom 10 outlier regions, with the exception of people aged 80 and over (chart 4.33).

4.33 Net migration rates by outlier regions — 2016-21
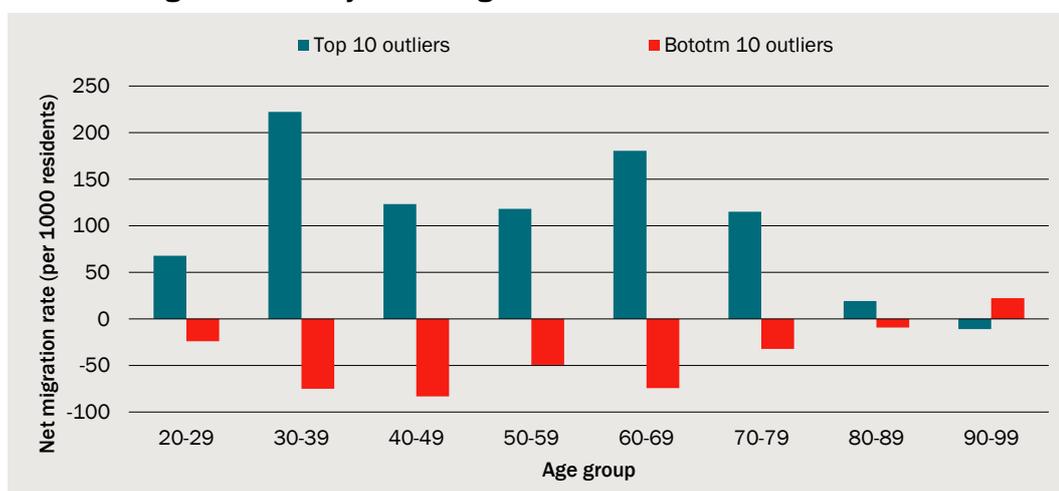
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data 2021.

The industrial mix of top 10 outlier regions comprises higher relative shares of people working in the hospitality and retail sectors, while bottom 10 regions includes 12 per cent of the workforce within the mining sector on average, over the period 2006 to 2021 (charts 4.34 and 4.35).

4.34   Main industries of employment top 10 outliers — 2006-21
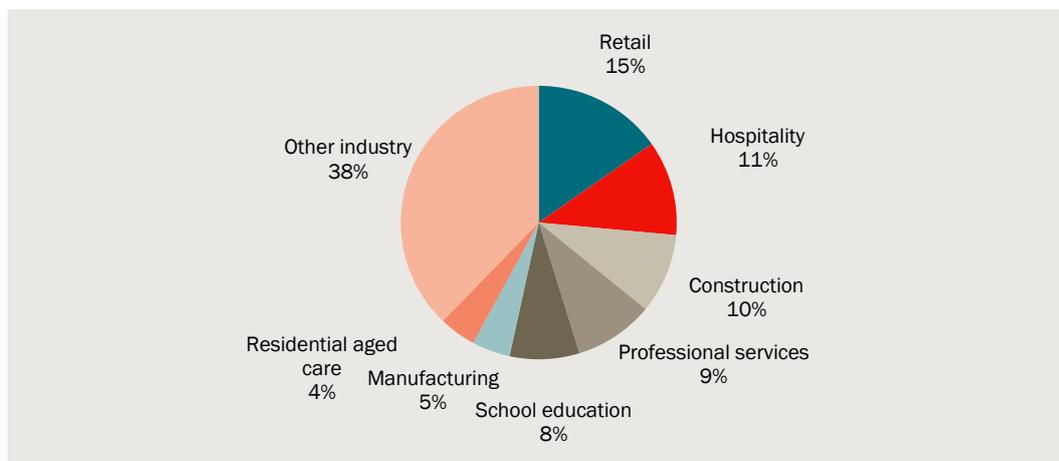
Retail 15%
Hospitality 11%
Construction 10%
Professional services 9%
School education 8%
Manufacturing 5%
Residential aged care 4%
Other industry 38%

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.35   Main industries of employment bottom 10 outliers — 2006-21
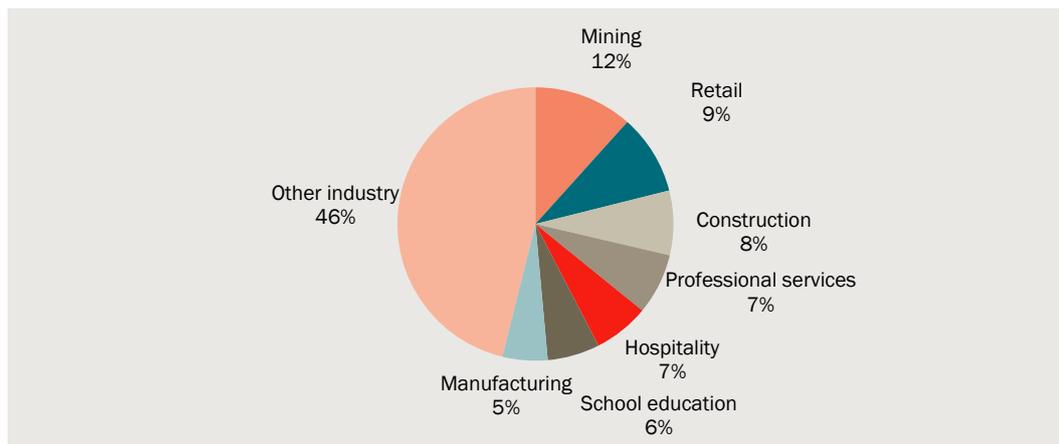
Mining 12%
Retail 9%
Construction 8%
Professional services 7%
Hospitality 7%
School education 6%
Manufacturing 5%
Other industry 46%

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Overall, there does not appear to be a systematic pattern of characteristics associated with growth or decline in net migration rates. The largest difference in characteristics appears to be differences in the composition of industry as well as distance to capital cities and major urban centres. The geographic characteristics appear to be what separates areas of growth and decline, with regions of growth predominantly being located in coastal areas and places on the fringes of capital cities, while areas in decline are further inland and in more remote places and more dependent on mining.

Historical patterns of movement between places

Migration patterns between types of regions

Table 4.36 compares the types of places where people live today to the types of places in which people lived 5 years ago from the most recent wave of census data. Of the people living in capital cities, 97 per cent were living within capital cities 5 years prior. In contrast, of those living within regions on the fringe of capital cities, 21 per cent previously lived within a capital city, highlighting that the mains source of new migrants to fringe regions are people who previously lived within capital cities. Generally, each of the types of regions has relatively high rates of population retention (especially capital cities), and this could signal people either maintaining their place of residence or moving to a region of similar characteristics.

4.36 Place of usual residence today compared to 5 years ago — 2016-21

Place of usual residence (5 years ago)	Coastal Country areas	Inland cities	Inland Country areas	Coastal cities	Capital cities	Capital city fringe	Remote areas
Place of usual residence							
Coastal Country areas	80%	1%	2%	8%	8%	1%	1%
Inland cities	1%	84%	6%	2%	6%	0%	1%
Inland Country areas	1%	4%	84%	2%	6%	1%	1%
Coastal cities	3%	1%	1%	86%	8%	0%	0%
Capital cities	0%	0%	0%	1%	97%	0%	0%
Capital city fringe	1%	1%	1%	2%	21%	74%	0%
Remote areas	2%	1%	2%	4%	6%	0%	84%

Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.
Data source: CIE analysis based on ABS Census data 2021.

Chart 4.37 examines the destination of migrants who have left a certain type of region in place of another (e.g. leaving a capital city and moving somewhere new, other than a capital city). Of those leaving capital cities (and not going to another capital city), a large proportion move to coastal cities, followed by capital city fringe areas and then inland cities. In contrast, for those leaving other types of regions, a large proportion opt to move to capital cities. Of those leaving coastal country areas, almost 40 per cent move to coastal cities, while a similar proportion of those leaving inland cities opt for inland country areas.

4.37   Destination of migrants leaving different places — 2016-21
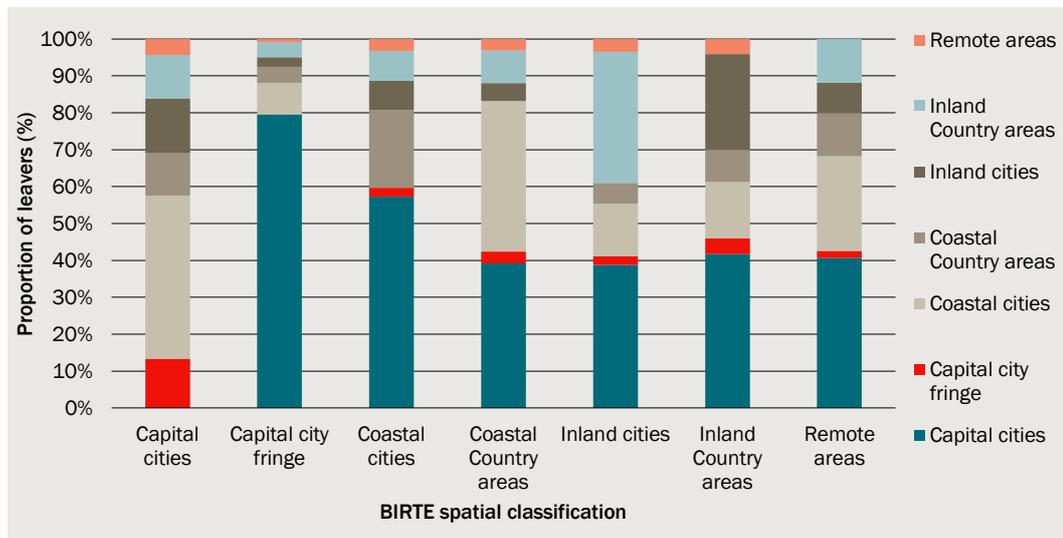
Note: CIE has modified BITRE spatial trends classification to add the capital city fringe criteria, defined previously as a capital city region, but with at least 5 kilometres between the UCL boundary of a capital city and the boundary of the fringe region.

Data source: CIE analysis based on ABS Census data 2021.

Historical migration patterns NSW

The net migration rates of coastal regions across NSW have trended upwards since 2006, while inland regions have generally maintained a steady rate of net outward migration over time. Remote areas of NSW have also maintained strong rates of net outward migration (charts 4.37 to 4.40).

4.38   Net migration spatial patterns 2016-21 — NSW
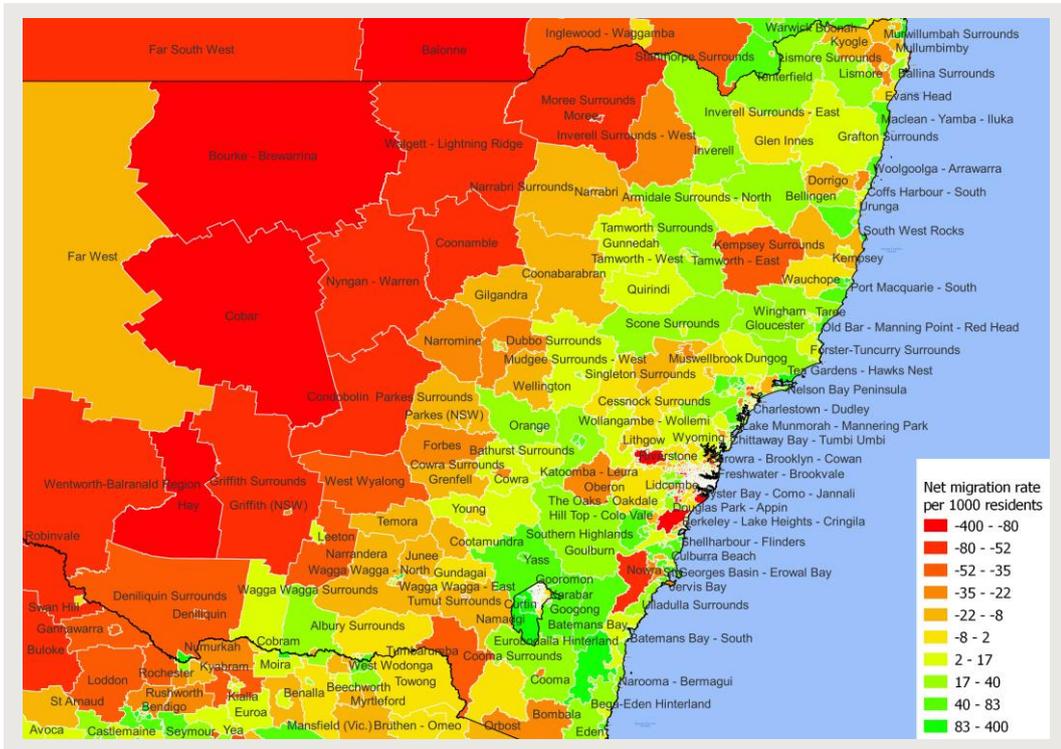
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.39   Net migration spatial patterns 2011-16 — NSW
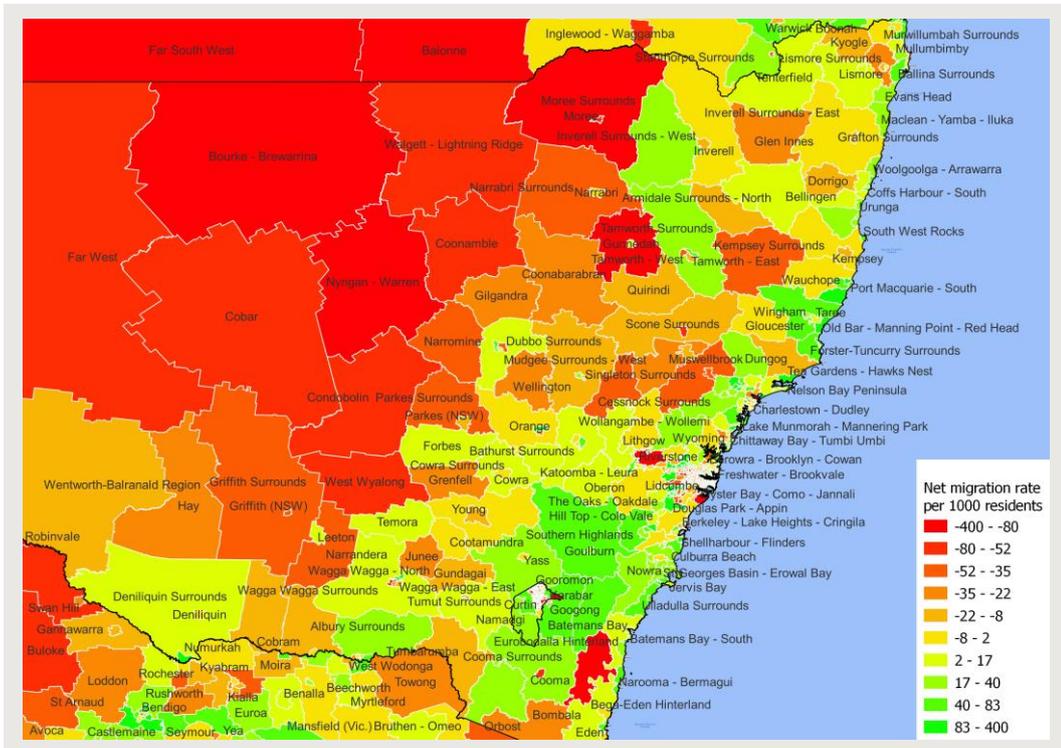
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.40   Net migration spatial patterns 2006-11 — NSW
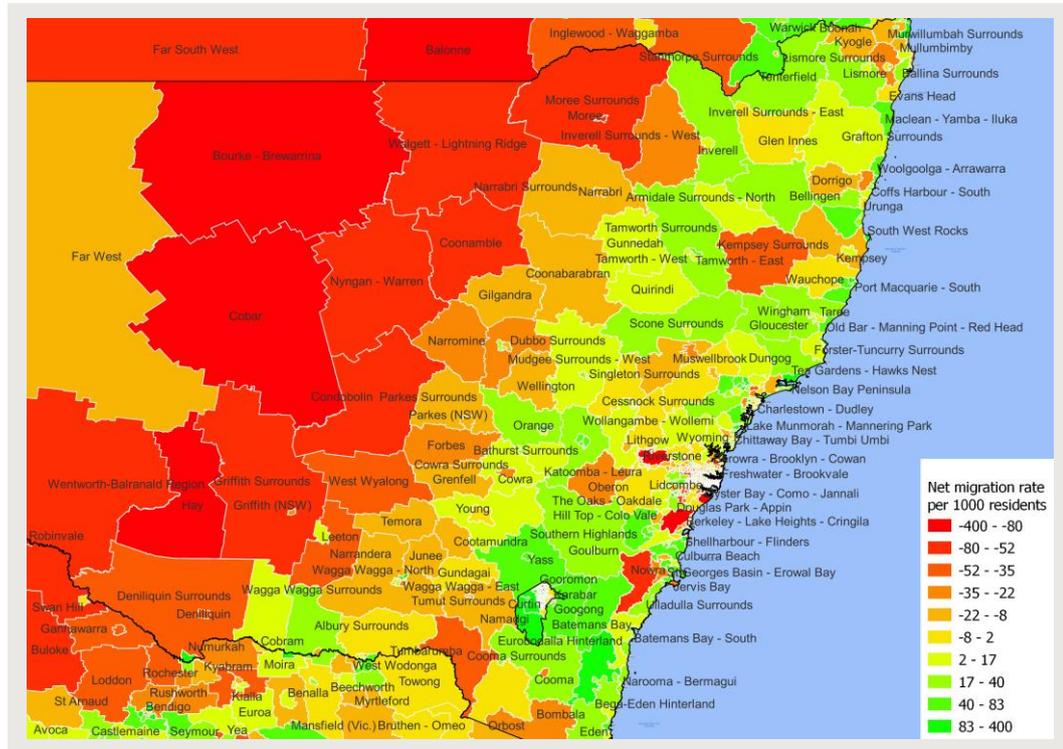
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Historical migration patterns Victoria

The historical migration patterns of Victoria show a gradual increase in net inward migration away from Melbourne and into coastal, country, and inland areas in the immediate fringes surrounding Melbourne and beyond (charts 3.5 to 4.43). More remote inland regions in north-western Victoria, including east of Melbourne and regions on the border of NSW have also seen a slight improvement in net migration over time, although generally still exhibiting net outward migration. Overall, regional areas in Victoria have seen improvements in net migration rates. This is in stark contrast to NSW, which as a significantly more mixed pattern of regional migration that tends to favour only coastal cities.

4.41 Net migration spatial patterns 2016-21 — VIC
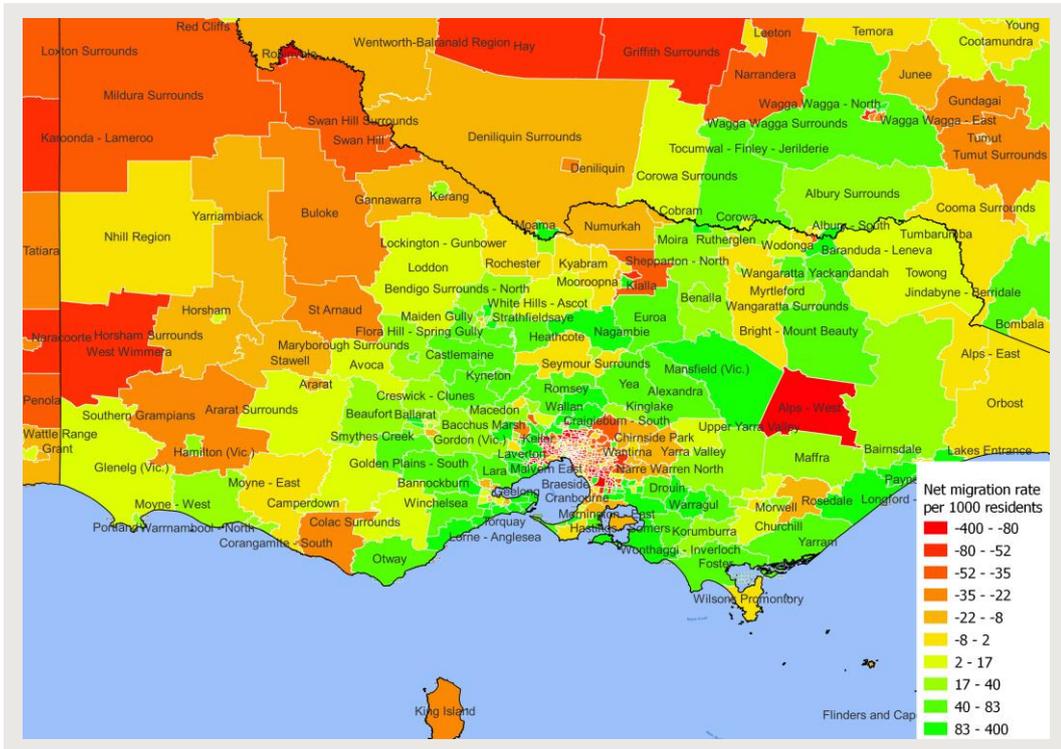
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.42 Net migration spatial patterns 2011-16 — VIC
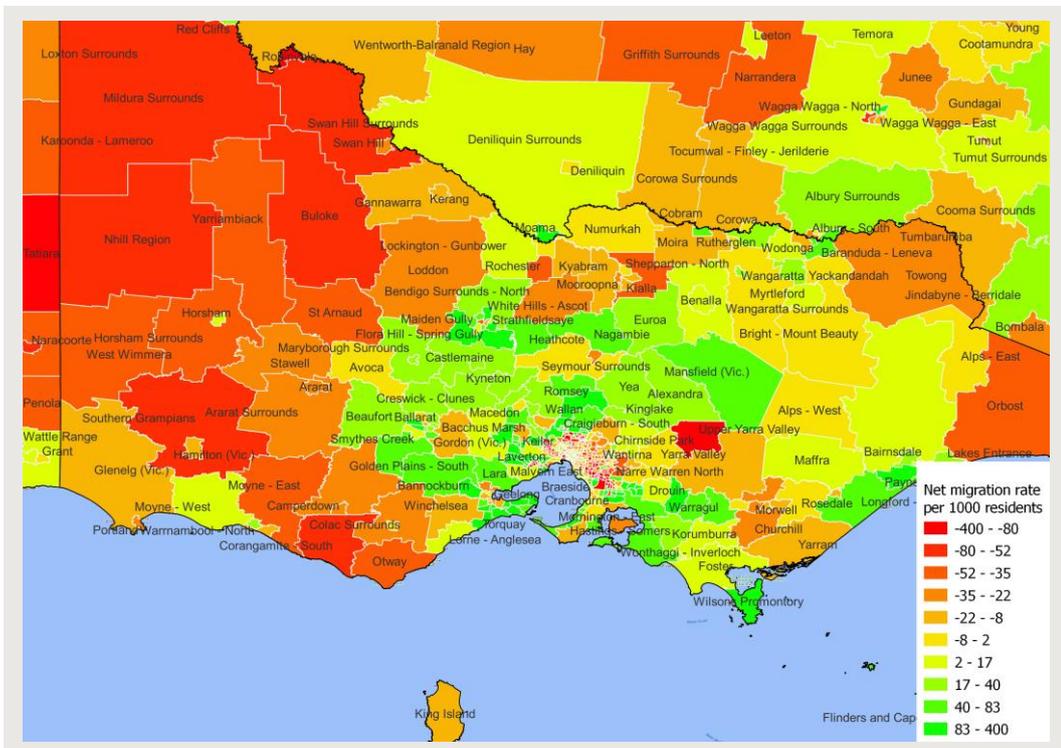
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.43 Net migration spatial patterns 2006-11 — VIC
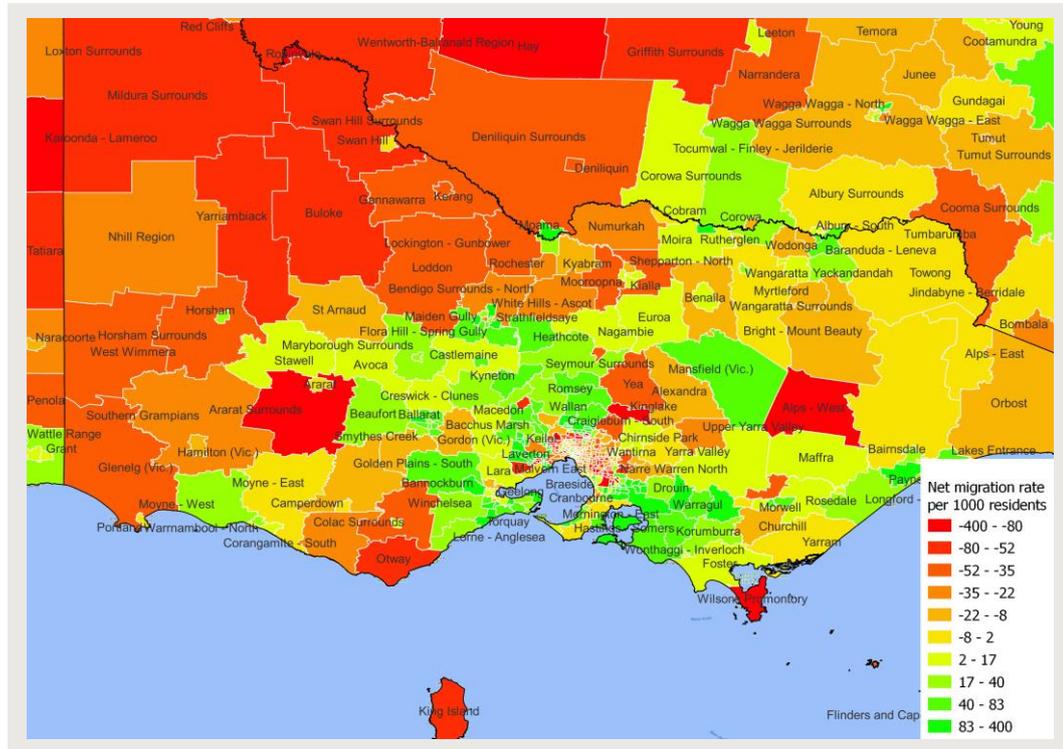
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Historical migration patterns QLD

Net migration in Queensland strongly favours coastal regions as well as Brisbane, which has maintained net inward migration of domestic migrants throughout time. Inland cities and country areas as well as remote regions have seen an increasing rate of outward migration over time in favour of coastal regions (charts 4.44 to 4.46).

4.44   Net migration spatial patterns 2016-21 — QLD
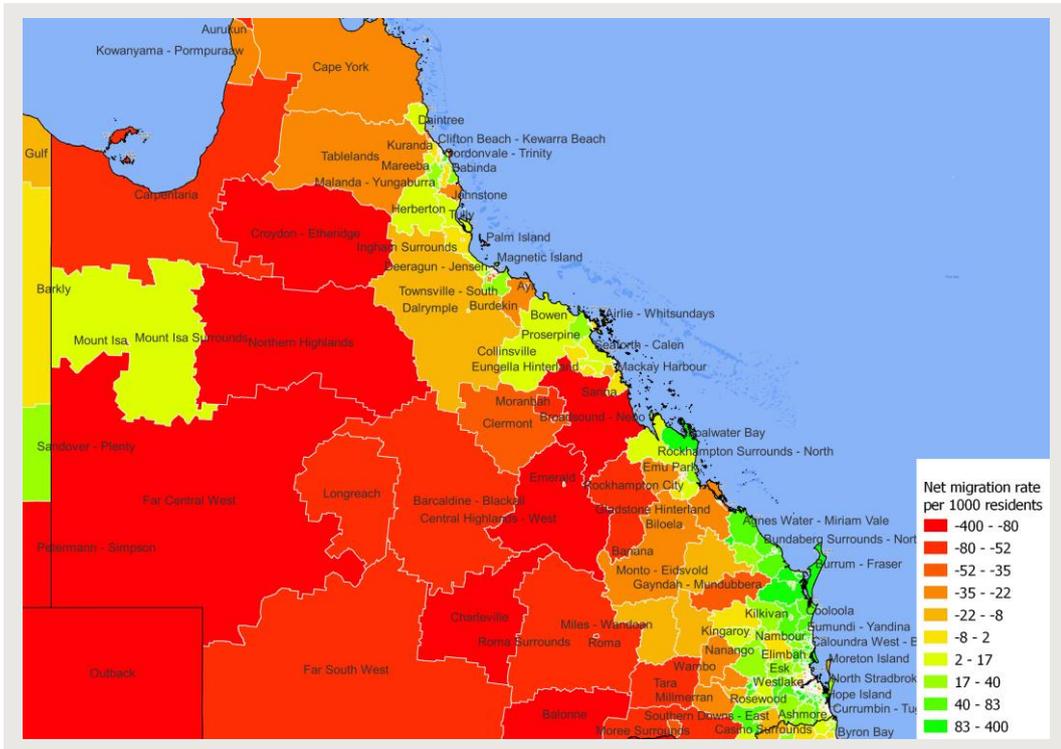
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.45   Net migration spatial patterns 2011-16 — QLD
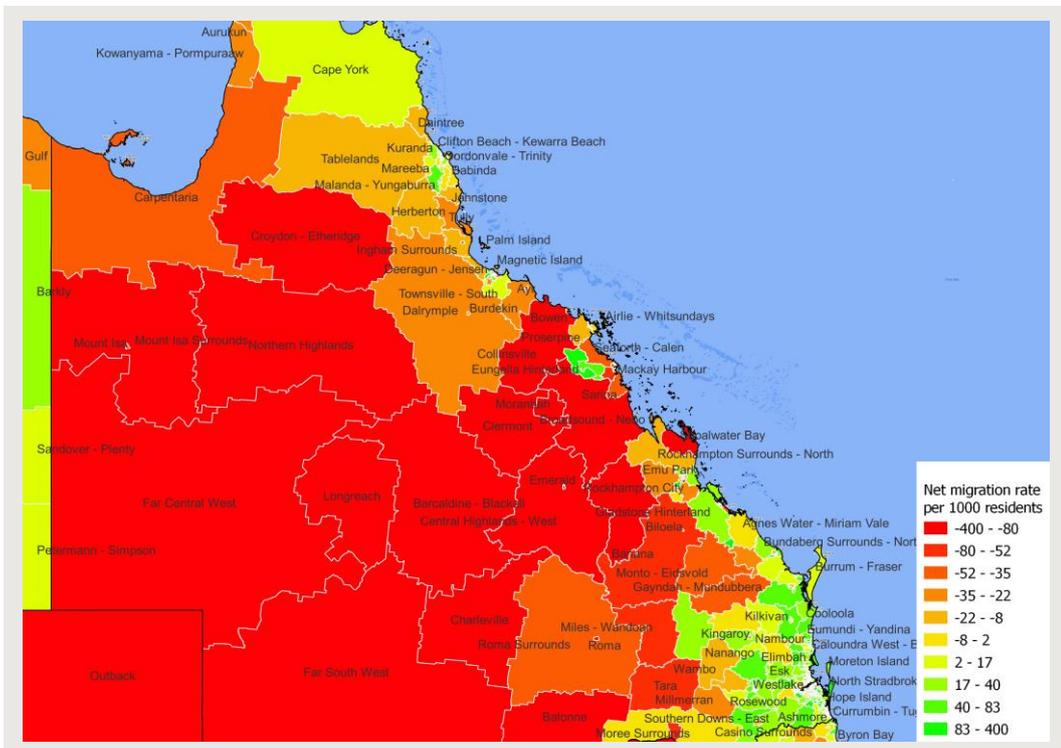
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.46   Net migration spatial patterns 2006-11 — QLD
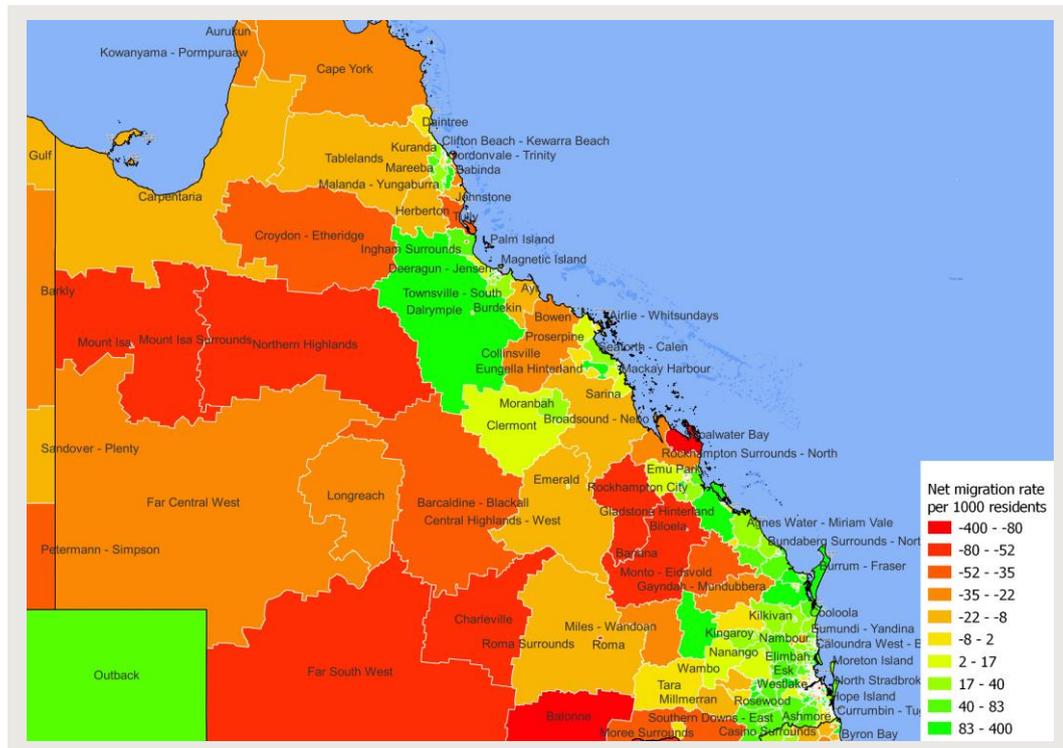
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Historical migration patterns WA

Western Australia has seen a reversal in net migration in inland and remote areas over time. This likely accounts for the fact that many such areas were previously places with a strong mining presence during the mining boom, which has since subsided. Coastal regions, except for those on the fringes of Perth have also experienced declining rates of migration while Perth itself has experienced marginally more inward migrants than it has had outward migrants over time (charts 4.47 to 4.49).

4.47   Net migration spatial patterns 2016-21 — WA
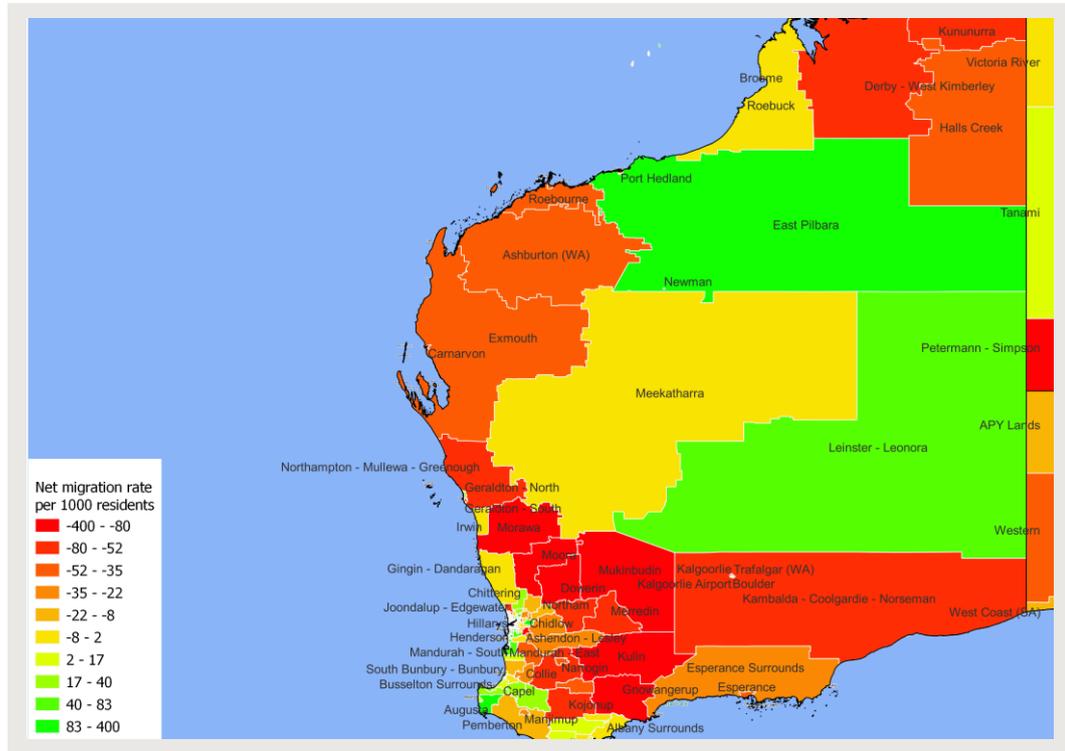
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.48   Net migration spatial patterns 2011-16 — WA
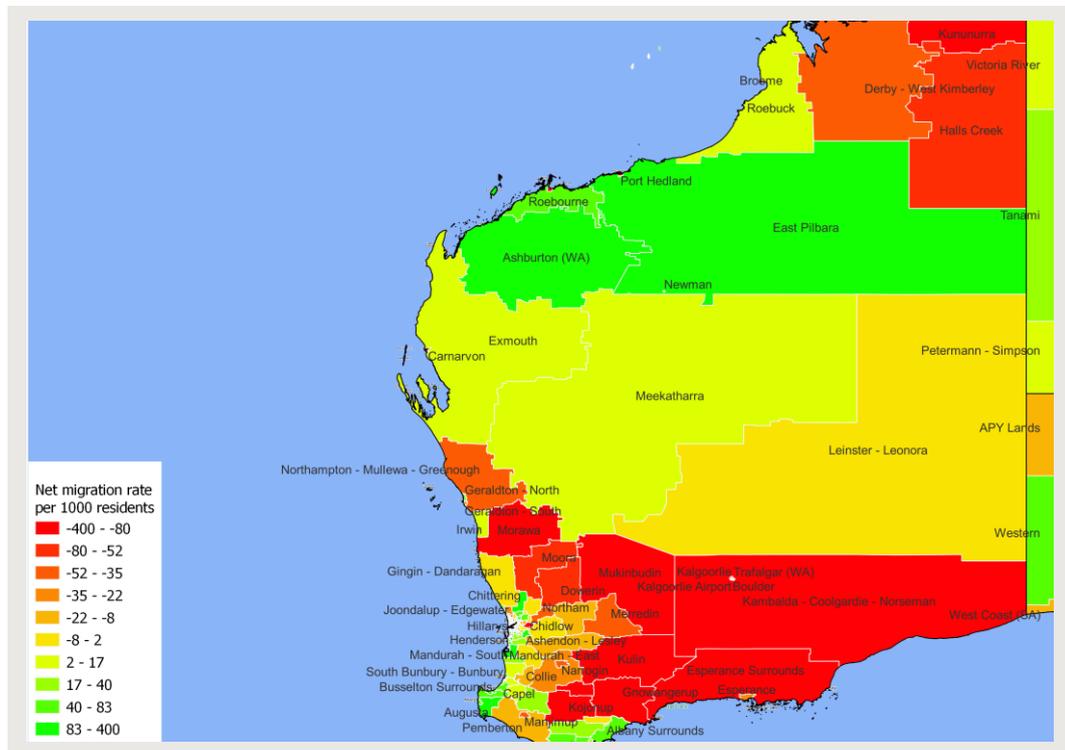
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.49 Net migration spatial patterns 2006-11 — WA
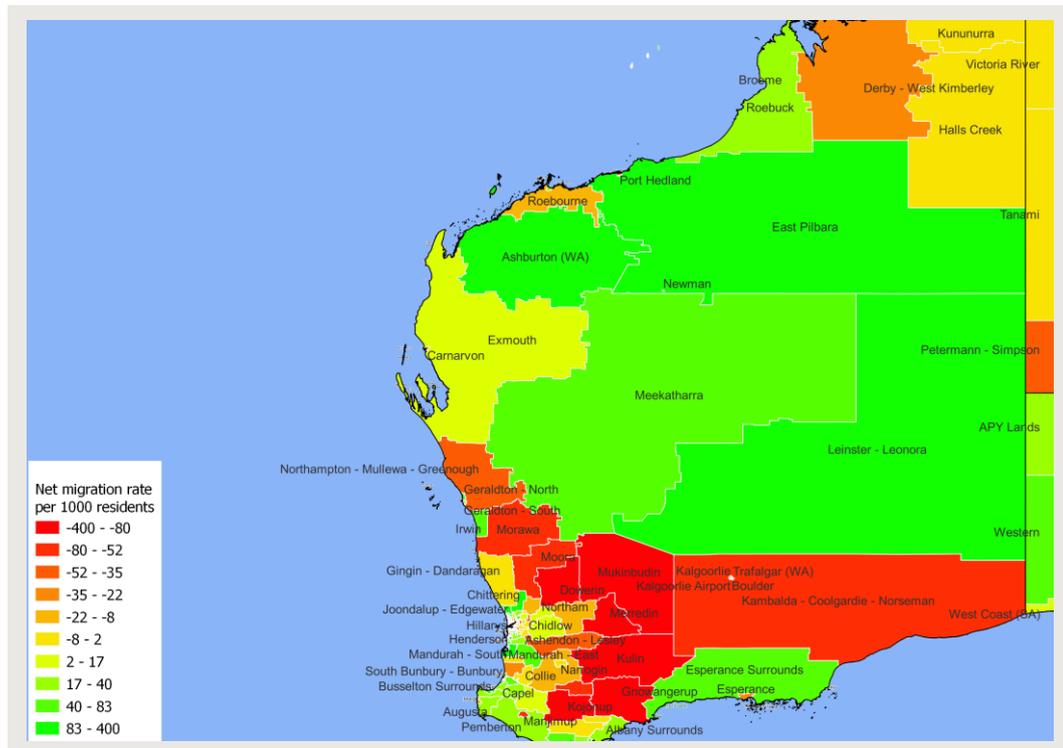
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Historical migration patterns SA

South Australia has generally maintained net inward migration into coastal regions, particularly those within and around Adelaide, while Adelaide itself has had modest but consistent rates of new outward migration of domestic migrants (charts 4.50 to 4.52).

4.50   Net migration spatial patterns 2016-21 — SA
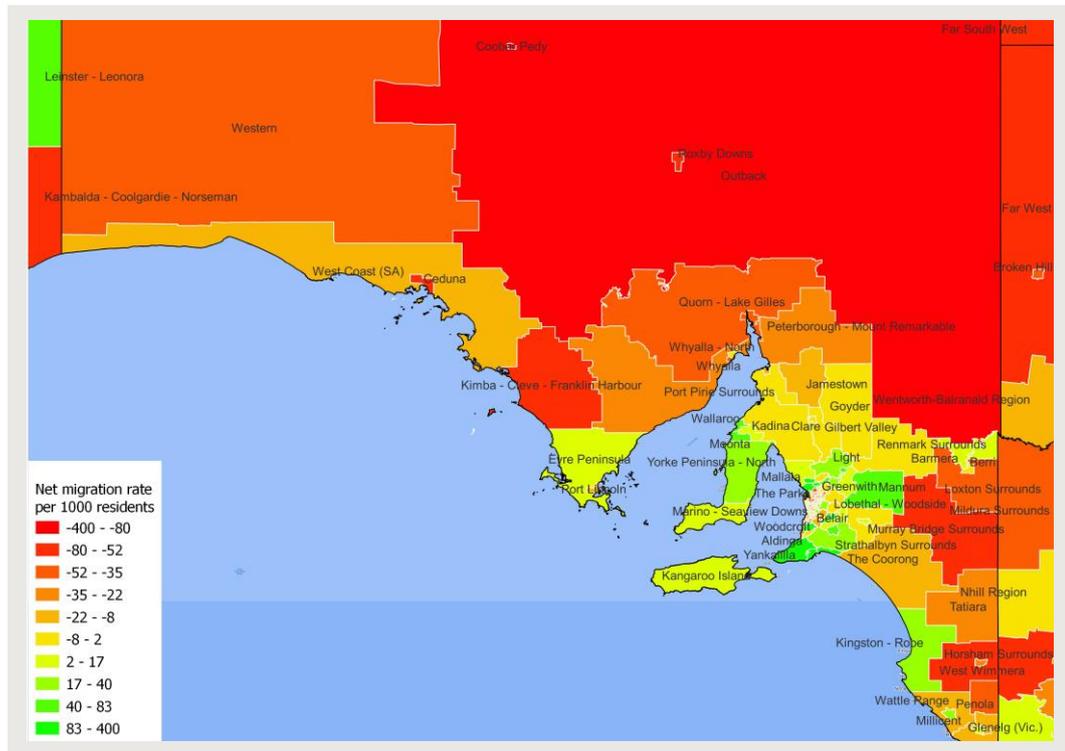
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.51   Net migration spatial patterns 2011-16 — SA
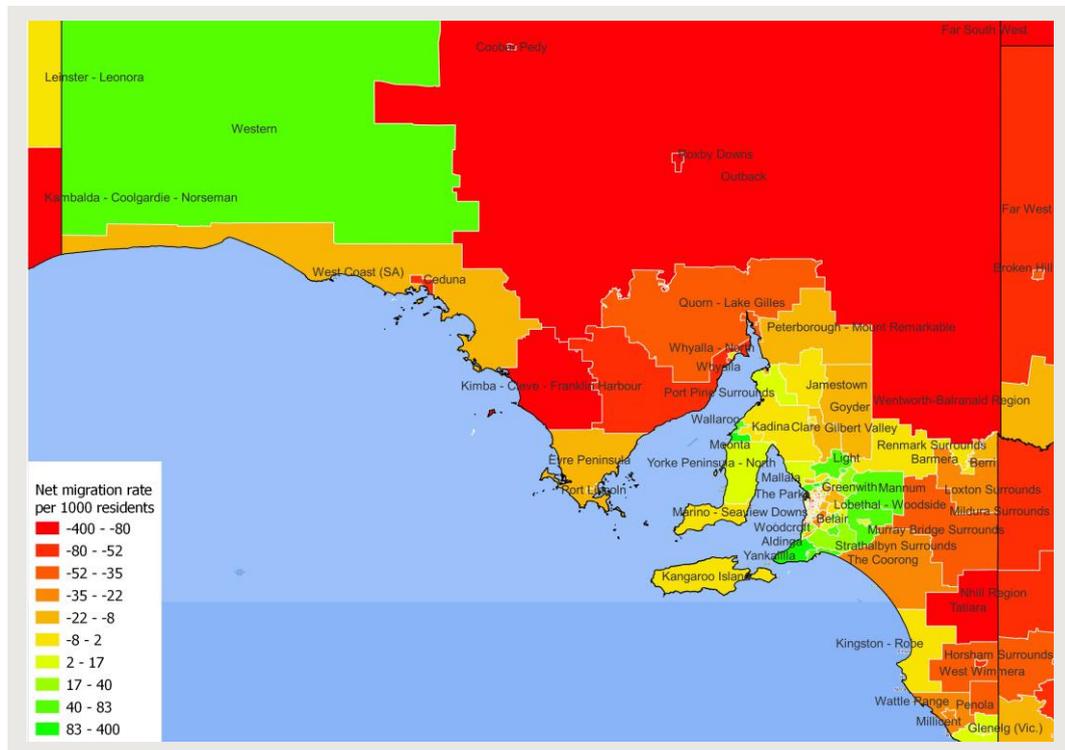
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.52   Net migration spatial patterns 2006-11 — SA

Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

Historical migration patterns TAS

Between 2016 and 2021, many of the coastal and inland regions of Tasmania observed strong uplifts in net inward migration compared to previous years. Hobart, while generally maintaining positive rates of inward migration also observed an uplift in 2021 in addition to regions on the fringe of the city (charts 3.4 to 4.55).

4.53   Net migration spatial patterns 2016-21 — TAS
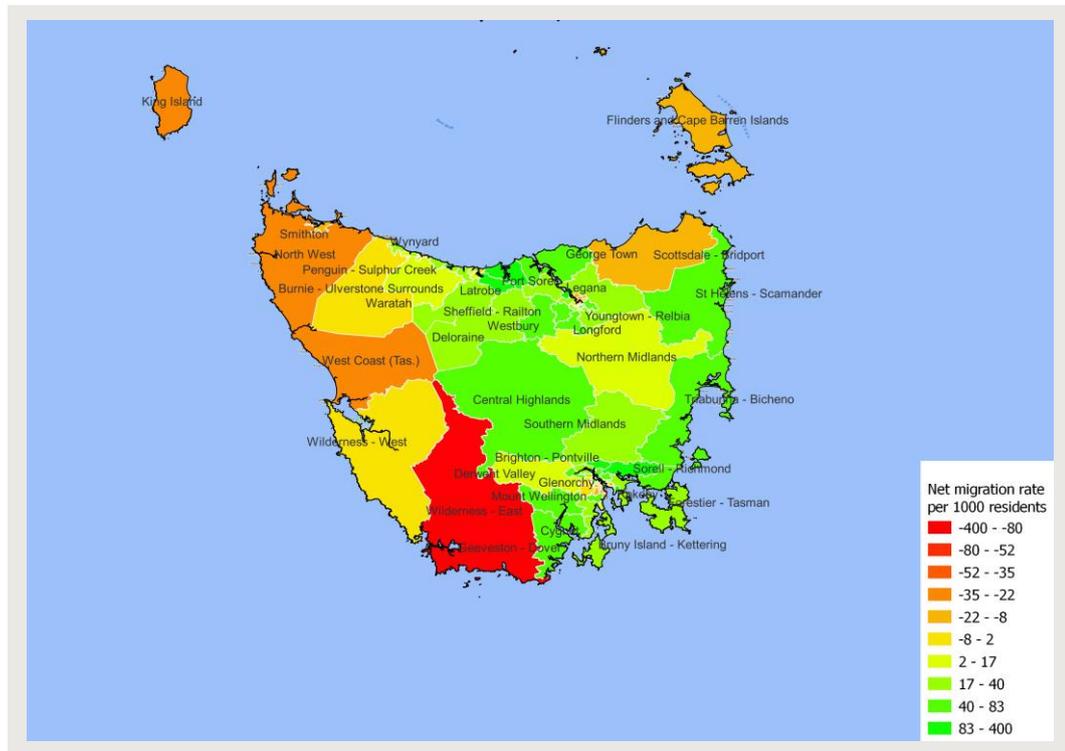
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.54   Net migration spatial patterns 2011-16 — TAS
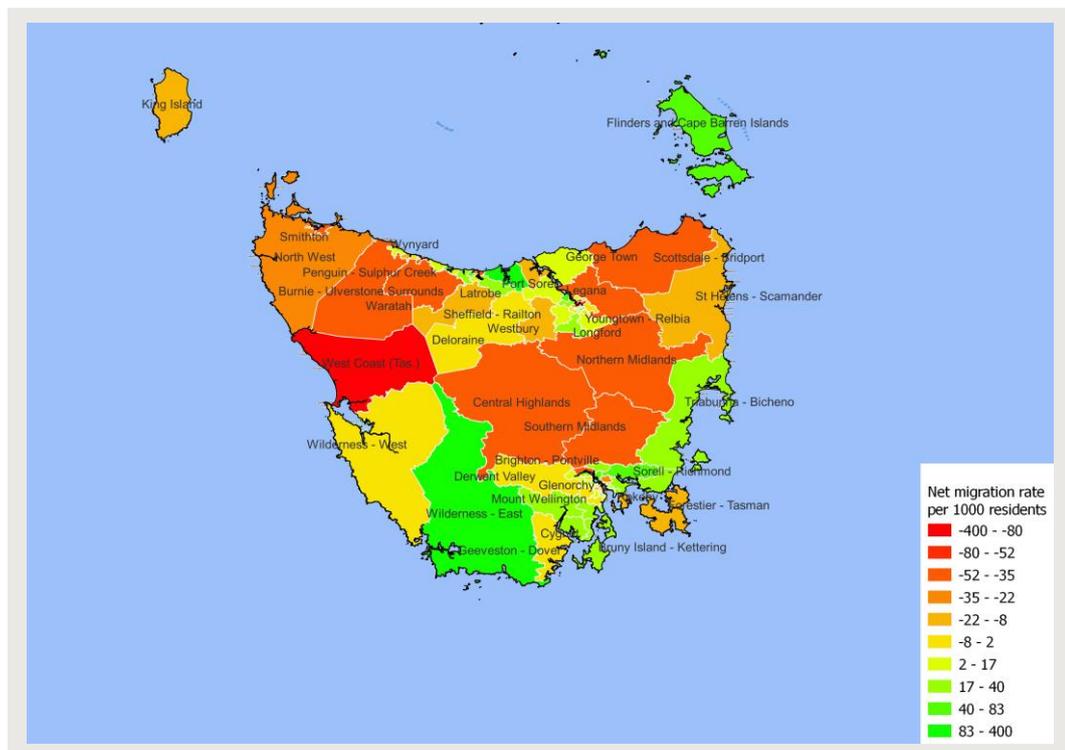
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

4.55   Net migration spatial patterns 2006-11 — TAS
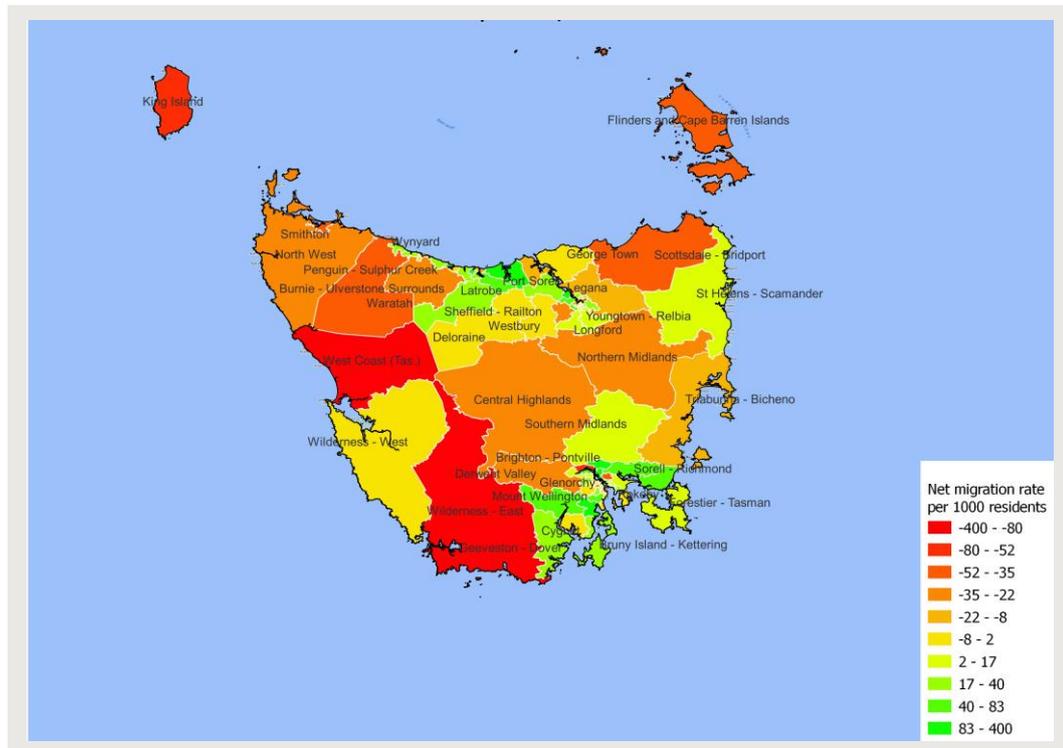
Data source: CIE analysis based on ABS Census data, 2021, 2011 and 2016.

5   Role of government on internal migration

Theory of migration process and role of government

The CIE engaged in consultation with a range of policymakers across different jurisdictions to seek their views on the role of government in influencing migration outcomes. A variety of views were expressed as to the different abilities and levers of government to influence migration and population outcomes. These are summarised in chart 3.1 and discussed further below.

5.1   Framework for the role and effectiveness of government

Theories of what Government can do	Support job creation and economic development	Promote brand and market destination
	Build infrastructure supply services	Place-based initiatives to support a wide range of location specific outcomes
	Limited effectiveness of Government policy	
Theories of what Government should do	Respond to change	Support individual decisions by removing barriers

Data source: CIE Illustration.

Theories on what government can do to influence migration

A wide range of views were expressed as to the capabilities of government to influence migration and population outcomes, ranging from government being a marginal influence, to much more significant roles for government policy. The views are summarised into five broad categories below.

Support job creation and economic development

Some policymakers consider the primary driving force behind migration decisions as relating to employment opportunities residing in the location of choice. Jobs are considered to be the necessary condition and the primary driver of migration decisions. Policymakers that subscribe to this view consider the role of government as a key driving

force that is required to create economic development and job opportunities in regions of interest, in order to attract and retain people and businesses.

Supply services and build infrastructure

A range of policymakers consider the role of government as a key player in providing the necessary infrastructure and services needed to support populations and drive economic activity. In particular, policymakers that focus on regional and remote areas specifically viewed government expenditure on infrastructure and services as necessary to enable remote regions to compete with more developed cities. Some policymakers were of the view that, even in the absence of population, investment in infrastructure and services is justified in order to compete with cities and attract people to regions. Viewed through the lens of regional equity, there were concerns that remote regions would fail to attract investment when valuing government projects using traditional means. This was described as being due to the "chicken and egg problem", whereby a sufficient population is needed to justify major investment, which remote regions lack, while the very existence of such infrastructure and services is a precondition to attracting new people and growing the population.

Limited effectiveness of government policy

A significant number of views expressed the role of government as marginal in terms of driving population and migration outcomes. These views considered that the fundamental drivers of migration were complex and dominant in migration decisions, and largely outside the realm of influence from a policy perspective. In addition, the presence of economic development and jobs was largely attributed to the natural advantages of locations, such as those that provide a comparative advantage to businesses who choose to locate. Where government did intervene to provide economic support to regions, it was believed that regions would fail to sustain their trajectories as soon as government support was withdrawn.

Promote brand and market destination

A subset of views expressed the importance of brand and image of regions as important attractors of migration. The drivers of migration include moving for purposes related to lifestyle and amenity, and it is believed that government can play a role in promoting regions that would attract migrants with such interests. A key example cited was the turnaround in the population trend of Hobart, and this was attributed to a change in marketing strategy of the region to become more attractive to people with an interest in art, culture and fine dining experiences (e.g. the opening of MONA). Key to brand and imaging is the concept of "aspirational alignment", which concerns the compatibility with personal values and interests with the perceived values and characteristics of a region. The role of government is believed to be in the form of marketing a destination as a product in order to target and attract specific demographics.

Place-based initiatives to support a wide range of location specific outcomes

A significant number of policymakers discussed the importance of a destination as a combination of factors that attract and retain people, rather than any one individual characteristic. With respect to policy, a place-based approach was frequently mentioned, meaning that the levers of government should not operate independently (for example, trying to attract population through a transport project alone), but rather consider all of the needs of the region and work in unison. A place-based approach recognises the impact of 'place' on an individual's experiences and outcomes and incorporates this recognition into policies and strategies that aim to improve a wide range of outcomes, be they economic, social or environmental.

Theory of what government should do

While not specifically within the remit of this project, stakeholder consultations also covered a range of views about the appropriate role of government. These ranged from government as responding to people's decisions, removing barriers to business and individuals and driving population outcomes.

Government should respond to change

Some policymakers considered that government is best placed to respond to change by observing trends in population growth and decline and acting accordingly. For instance, infrastructure and service provision should follow population growth, rather than the other way around. Likewise, regions experiencing population decline should be supported through the transition by government, rather than having government intervene to try and reverse the trend.

Government should remove barriers

In a similar fashion, a substantial number of policymakers considered that the role of government should be primarily about supporting choice. It was considered that migration and population change is primarily determined by forces outside of government control, and government can add the most value by removing barriers that would inhibit migration decisions.

Government should drive population outcomes

In stark contrast, a subset of policymakers consider that government should intervene more strongly in driving population and migration outcomes. This could take the form of significant government investment and economic development of regions in decline, in order to reverse those trends.

Types of government levers

A variety of different types of Government levers were identified through consultation and literature review. These include a mixture of past and recent attempts to influence migration and population outcomes, as well as potential levers which have not yet been enacted through government policy that could have a migration effect. Broadly, levers can be categorised as having a focus on people or places, in addition to playing the role of either influencing decisions (through attractors) or supporting decisions by removing barriers:

■ person focused levers — are levers that motivate individual decisions and outcomes unrelated to a specific place (i.e., motivating young people to migrate to encourage labour mobility or take up training and education opportunities where they exist)

■ place focused levers — are levers that are principally concerned with influencing migration and population outcomes attached to a region or set of regions (i.e. trying to reverse population decline of a rural town by creating job opportunities)

Likewise, levers can have different effects on people and places in the form of:

■ levers which attract— are levers which are designed to drive population outcomes through push and pull mechanisms (such as relocation incentives)

■ levers which remove barriers — in contrast, are less interventionist in nature and are designed to support migration decisions by removing the barriers that would prevent or lessen migration from occurring.

The bulk of government levers which are used in practice, are focused on individual places such as rural and regional towns. In contrast, there are fewer levers which a focus on individuals and fewer still which have been successfully implemented (such as spatial tax rate discounts). The range of levers identified through consultation have been mapped according to their characteristics in table 5.2.

5.2   Categories and types of government levers

Lever category	Area of focus	
	Person	Place
Attractors	■ Marketing and advertising campaigns promoting places aimed at specific demographics	■ Regional grants ■ Relocation incentives to businesses and individuals ■ Location of government agencies ■ Spatial tax rate discounts ■ State development areas (e.g. Special Activation Precincts)
Barriers	■ Taxes on transfers (e.g. stamp duty) ■ Occupational licensing and skills recognition ■ Pension eligibility tests	■ Services provision (education, health, transport, aged care, telecommunications) ■ Zoning and supply of land ■ Social housing

Source: CIE.

Examples of government levers in use

An example of the types of government levers in use and how they relate to the drivers of migration is outlined in table 3.3. Of note are the multitude of levers and policies related to employment and services, such as through relocating government agencies, undertaking development programs and direct spending on infrastructure. In contrast, there are drivers such as personal and family drivers in which government has no apparent influence. A more detailed list of policies is discussed below.

5.3   Examples of Government levers

Drivers of migration	Key factors	Government Levers	Examples of policy with a focus on population
Employment	▪ Number of jobs, ▪ Variety of jobs, ▪ Partner employment, ▪ Career progression prospects, ▪ Ease of changing jobs and careers	▪ Decisions on development or mining applications ▪ State development access ▪ Zoning and land supply ▪ Government spending ▪ Location of government agencies	▪ Moving DPI to Orange ▪ Setting up NDIA in Geelong ▪ City and regional deals ▪ Special Activation Precincts NSW (Moree business park)
Economic factors	▪ Cost of living ▪ Other financial	▪ Relocation incentives	▪ Destination Australia – tertiary education scholarship to live and study in regional areas
Lifestyle and amenity	▪ Coastal versus inland, ▪ Natural beauty, ▪ Variety of recreation activities	▪ Promotion and advertising	▪ Evocities program (2010-2013)
Personal and family	▪ Moving based on age and stage of life ▪ Location next to family		
Community and culture	▪ Feelings of inclusion within community, ▪ Shared sense of culture, ▪ Common values (e.g., religion), ▪ Social infrastructure (e.g., networks and peers)	▪ Community engagement	▪ Grow program – supporting refugee settlement in regional areas with a focus on community inclusion
Environmental	▪ Weather and climate, ▪ Natural disasters (floods and bushfires), ▪ Climate change ▪ Resilience	▪ Resilience infrastructure (sea walls, levees)	

Drivers of migration	Key factors	Government Levers	Examples of policy with a focus on population
Housing	▪ Housing affordability ▪ Housing availability ▪ Housing choice (quality and type)	▪ Zoning and land supply ▪ Social housing provision	▪ Regional first home buyers scheme
Availability and quality of services	▪ Education (schools, universities) ▪ Health (both acute and non-acute e.g., emergency departments and GPs) ▪ Childcare services ▪ Aged care and disability services ▪ Telecommunications	▪ Infrastructure spending ▪ Regional grants	▪ Regional Growth Taskforce ($7.1b allocated to infrastructure to support industry in regions) ▪ Building our regions program (QLD Government) – grants to support local government infrastructure in regional areas ▪ Building Better Regions Fund - $1.38 billion allocated to infrastructure and community projects outside of capital cities
Legal and regulatory	▪ Visa requirements ▪ Displacement from government activities (e.g., land acquisition)	▪ Immigration pathways and visa rules	▪ Annual permanent migration program (enables sponsoring of skilled migrants to work in regional areas) ▪ Visa extensions for working in regional areas

Source: CIE.

Government provision of services

Many of the policies identified in Table 3.3 are linked to internal migration through spatial provision of services that impacts the liveability of the regions. These include providing training services and investments in health services, education, communication etc, as well as dedicated regional development grants and programs. There are also policies in place to improve access to higher education attainment for regional and remote students.

- Commonwealth Government policies:
  - Developing Northern Australia White Paper In 2015 the Commonwealth government released the first ever in White Paper on Developing Northern Australia. The government outlined its strategy of streamlining regulatory processes by establishing a 'single point of entry' in Darwin. It focuses on establishing simpler land arrangements to encourage investment, developing water infrastructure, building business and education links with regional partners, funding high priority infrastructure and building a skilled workforce including meeting unmet labour demands by way of foreign workers.

- Regional Growth Fund is an investment program set up to provide grants for major transformational projects which support long term economic growth and create jobs in regions, including those undergoing structural adjustment. The funding program is expected to leverage investment from the private sector, not for profit organisations and other levels of government in the region with the aim of creating jobs, driving economic growth and building stronger regional communities.

- NSW Government:
  - Establishment of Regional Growth Fund by the NSW government in 2017 to help regional communities attract investment, generate jobs, grow local economies, and improve lifestyles. With $2 billion already committed to over 2 700 projects, the fund has been topped up by another $1.3 billion[58].
  - To support the attraction of retention of staff in rural and remote schools in NSW, the state government has accepted all recommendations made by the Review of Rural and Remote Incentives in NSW public schools. This includes a commitment of $15 million[59] to action initiatives such as doubling the targeted recruitment bonuses to $20 000 and the number of teach rural scholarships to 120 places to make it easier for schools located in hardest to staff parts of the state to recruit potential employees.

- Victorian Government:

  Establishment of Regional Development Victoria by the Victorian government in 2003 to facilitate economic, infrastructure and community development throughout regional Victoria.

Creating jobs through relocation of Government agencies

There have been several instances of the government relocating parts or the whole department to regional or rural areas in an effort to aid flow of jobs and opportunities from government agencies to regional, rural and remote Australians. Some of these have been mentioned below:

- Commonwealth Government agencies:
  - the Grains Research & Development established offices in Adelaide, Perth, Dubbo, and Toowoomba with the head office remaining in Canberra
  - Centrelink and ASIC call centres in Traralgon
  - Australian Taxation Office established a regional office in Albury, NSW in 1970s
  - Relocating the Australian Pesticides and Veterinary Medicines Authority (APVMA) from Canberra to Armidale
  - National Disability Insurance Scheme in Geelong

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58 https://www.nsw.gov.au/regional-growth-fund

59 Coade, M. 2021. NSW invests $15 million to place more teachers in rural and remote schools. *The Mandarin.*

- Moving 69 new and relocated positions at the Australian Maritime Safety Authority (AMSA) to a new regional headquarters at Coffs Harbour and a new office in Airlie Beach
- Australian Space Agency located in Adelaide, moving 20 positions from Canberra.
- Fisheries Research and Development Centre established office in Adelaide
- Establishment of CSIRO agricultural research facility near Boorowa, NSW

■ State Government agencies
- Relocation of NSW Department of Primary Industries from Sydney to Orange in early 2000s
- NSW Department of Agriculture moved from Sydney to Orange in 1992
- Victorian Transport Accident Commission moved to Geelong in 2009
- NSW Office of Local Government moved to Nowra
- Work Safe Victoria relocation from Melbourne to Geelong
- the NSW Department of Mineral Resources moved from Sydney to Maitland.

5.4   Examples of government agency relocation

Year	Government	Initiative
1990s	Keating government	■ Regional Development Organisations (RDOs) ■ Area Consultative Committees (ACCs)
2000		Regional Partnership Program
2001	Howard government	Sustainable Regions Program (12 regions identified)
2012	Gillard government	Regional Development Australia (55 committees) replacing RDOs and ACCs
2015	Turnbull government	Smart Cities Plan

Source: 2. Decentralisation of Commonwealth Entities – Parliament of Australia (aph.gov.au)

Policies with a focus on barriers

The NSW government has recently experimented with stamp duty reform, enabling home buyers to substitute paying a lump sum amount as stamp duty for an annual land tax. This may reduce the high transactional cost involved with home ownership, encouraging mobility for households in NSW, allowing people to move as often as they like.

Econometric modelling conducted by AHURI provides support for this assertion, which showed lower mobility rates within the home ownership sector than the private rental sector[60]. The findings may reflect stamp duties' role in acting as a barrier to home purchase and labour market mobility. The evidence provides further support for stamp duty reform to promote general and labour market mobility.

The Victorian government's Windfall gains levy charges a 50 per cent levy to developers and landowners who reap windfall gains when their property is rezoned. The levy is

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[60] https://www.ahuri.edu.au/sites/default/files/documents/2021-10/AHURI-Final-Report-365-Population-growth-and-mobility-in-Australia.pdf

charged when the gain is $500 000 or more, with the tax phasing in from windfalls above $100 000[61]. While there have been concerns raised about such a levy increasing prices for homeowners, Australian evidence suggests that such a charge has no measurable effects on price or quantity of new dwellings and instead is fully incident on the landowner, which is the property developer in this case[62]. Depending on how such a charge interacts with housing prices, it can have an impact on household mobility decisions.

The ACT government has also been levying a similar charge since 1971 where it charges 75 per cent of the market price for new property rights granted through rezoning[63].

Specific population or business location related policies

To support industry growth and economic resilience in regional Australia there are several relocation incentives introduced by both federal and state governments for both businesses and individuals.

Business location related policies

Commonwealth government policies

To progress the Regionalisation Agenda, the former government invested $41 million in 2020-21 on the following two key programs:

- Securing Raw Materials Program grants offered to support research and development activities associated with securing a reliable and commercially viable raw material supply for businesses that relocate or expand to regional Australia from a metropolitan area or expand from a different regional area. The program targets businesses that enter into research businesses partnerships with regional universities or other regionally based research organisations.
- Regional Cooperative Research Centre Project provided grant funding to eligible businesses for industry-led collaborations to tackle issues in prominent regional industries.

Population location related policies

Commonwealth government policies

- Regional First Home Buyer Support Scheme scheduled to start from January 2023 will help 10 000 first home buyers in regional Australia each year.
- Visa pathways:
  - Regional visas:
    - Skilled Work Regional Visa (subclass 491) exists for those wanting to live and work in regional Australia. There is a pathway to permanent residency after three years from the date of visa grant.

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61 Coates, B. 2021. *Victoria's property tax hikes: two out of three ain't bad.* The Conversation.

62 Murray, C. *Developers pay developer charges.* Cities. Volume 74. Pages 1-6.

63 Murray, C. 2020. *Our states are crying poor.* The Conversation.

⋯ Skilled Employer Sponsored Regional visa (subclass 494) enables regional employers to address identified labour shortages within their region by sponsoring skilled workers where employers are unable to source an appropriately skilled Australian worker. Subclass 494 provides for visas to be granted once Labour agreements are developed, thus enabling approved businesses to sponsor skilled overseas workers when there is a demonstrated need that cannot be met in the Australian labour market and where standard temporary or permanent visa programs are unavailable.

– Working Holiday Maker (WHM) visas:

⋯ Working Holiday visa (subclass 417) and Work and Holiday visa (subclass 462) allows young adults to have an extended holiday in Australia while working in the country to fund their trip. WHMs get incentives to work in regional Australia in industries 'experiencing critical labour shortages' in exchange for eligibility to stay longer in the country. Applicants who currently hold or have previously held such a visa can get a second working holiday visa for a period of 12 months if they complete 3 months of specified subclass 417 or 462 work in regional Australia. Applicants are also eligible for a third working holiday visa for another 12 months if they work for another 6 months in the specified subclass in regional Australia.

– Temporary graduate visas:

⋯ A Second Temporary Graduate visa (subclass 485) under the Post Study Work stream is granted to holders of the first Temporary Graduate visa for 1-2 years conditional on graduating from a CRICOS[64] registered education provider in a designated regional area and continued residence in a designated regional area

– Pacific and seasonal work visas:

⋯ The Temporary Work (International Relations) visa (subclass 403) granted under The Pacific Australia Labour Mobility (PALM) scheme allows eligible Australian businesses to hire workers from 9 Pacific islands and Timor-Leste when local workers are not sufficient. Eligible businesses are able to fill labour gaps in rural and regional Australia by recruiting workers for seasonal jobs for up to 9 months or for longer term roles between one and 4 years in unskilled, low-skilled and semi-skilled positions.

New South Wales population related policies

■ NSW government offered Regional Relocation Grants to assist people moving from metropolitan NSW to take up or look for employment in regional NSW;

■ Regional Relocation Home buyers Grant (worth $7 000) offered to those who moved to regional NSW and bought a home; and

■ Skilled Regional Relocation Incentive (worth $ 10 000) offered to those who started a new job or moving their small business to a regional area.

■ NSW Growing Regions of Welcome (GROW) pilot program launched in June 2021 provides an opportunity for refugees and migrants with under-utilised skills and

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64 CRICOS – Commonwealth Register of Institutions and Courses for Overseas Students

experience to relocate to regional areas. This includes a regional employment hub in Western Sydney to create referral pathways between Western Sydney and the pilot regions, place-based partnerships in the Murray and Riverina regions with regional taskforces in place to develop and carry out local attraction and retention strategies.

South Australia population related policies

- Using the Jobs and Economic Growth the SA government plans to deliver a destination marketing campaign to increase awareness in eastern states about lifestyle available in SA, an integrated graduate program to connect companies with young South Australians, focused engagement with young global talent interstate, continued recognition of young talent in SA through the ForceForty program and focused skill development through apprenticeship and traineeship in new sectors [65].

Role of government levers on international migration

As noted in the previous chapter, there are close linkages between international and internal migration, because international migrants subsequently make location decisions within Australia. The role of government in shaping international migration is through the use of visa requirements. The skilled migration visa and humanitarian visas are the two main international migration pathways into Australia.

A key example of government levers in use on international migration settlement is through regional visas such as those in subclass 491 or subclass 191. These visas have an initial compulsory regional settlement period of 2 to 3 years (conditional on visa type), however migrants can move anywhere after its completion. The Grattan Institute reported that more than a quarter of recent arrivals who were living in regional and remote areas in 2011 had moved to major cities by 2016[66]. This highlights the limited role of these levers in driving long term settlement patterns of international migrants.

The regional aspect is not just limited to skilled visas but, over time, has been integrated into other visa streams. For instance, humanitarian visa holders are being placed in regional areas that have services and employment opportunities while work and holiday makers can stay longer if they work in regional areas. While no explicit evaluation of such regional migration initiatives has taken place, cities continue to experience high growth in employment while attracting majority of immigrants[67].

The release of the Australian Census and Migrants Integrated Dataset (ACMID) provides a link between visa class and census data giving a unique opportunity to observe settlement patterns by visa type. The study reveals that skilled migrants are more likely to settle in regions with a lower unemployment rate rather than places with similar ethnic

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[65] Magnet State – attracting and retaining young people in South Australia to grow population, jobs, and economy | Mirage News; CEDA - How South Australia is reversing its brain drain

[66] Mackey W, Coates B and Sherrell H. 2022. Migrants in the Australian workforce: A guidebook for policy makers. *Grattan Institute*.

[67] McDonald, P. (2017). International migration and employment growth in Australia, 2011–2016. *Australian Population Studies, 1*(1), 3–12. https://doi.org/10.37970/aps.v1i1.8

compositions. In contrast, evidence from Sweden and the Netherlands indicates a level of ethnic segregation with regards to foreign migrants, with humanitarian migrants more likely to reside in suburbs with a higher proportion of foreign born people. The difference in observed patterns in Australia is potentially due to the role of government in prioritising humanitarian migrants to settle and live in regional areas.

Retention and attractiveness of areas within Australia were examined by comparing Australian-born out-migration proportions with those of migrant populations. The latter were observed to have greater and increased out-migration proportions from non-capital city or regional areas, particularly Chinese-born and Indian-born populations[68]. State capital cities, particularly Sydney and Melbourne have not just successfully attracted both immigrants and internal migrants, but also maintained increased retention.

Studies on possible displacement impacts of immigration on native born populations show varied results. While some studies have found strong associations between areas of high immigration and areas of negative net migration of low skilled native-born internal migrants, others have found that after controlling for population size, both foreign- and native-born migrants respond to various opportunities in similar ways[69]. The differences in findings are likely caused by differences in sample design, methodologies used and the way comparable skill groups are constructed.

It is important to understand various pathways of entry into Australia, even for temporary migrants since an overwhelming majority of permanent skilled visas are granted to people who are onshore in Australia[70]. Most temporary migrants such as international students and skilled workers either move on to a permanent visa or eventually leave Australia. In fact, more than half of migrants granted permanent residency are already in Australia on a temporary visa[71]. 86 per cent of employer nominated visas and 90 per cent of 'Skilled Independent' permanent visas were granted to people already in Australia[72].

The following is a list of visa/immigration policies currently in place to motivate internal migration of international immigrants, usually towards regional Australia:

- Second Post-study Work stream (subclass 485)
- Designated Area Migration Agreement
- Skilled Work Regional Provisional Visa (subclass 491)
- Skilled Employer Sponsored Regional Provisional Visa (subclass 494)

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[68] Raymer, J., Baffour, B. Subsequent Migration of Immigrants Within Australia, 1981–2016. *Popul Res Policy Rev* **37,** 1053–1077 (2018). https://doi.org/10.1007/s11113-018-9482-4

[69] Raymer, J., Baffour, B. Subsequent Migration of Immigrants Within Australia, 1981–2016. *Popul Res Policy Rev* **37,** 1053–1077 (2018). https://doi.org/10.1007/s11113-018-9482-4

[70] Mackey, W., Coates, B., and Sherrell, H. (2022). *Migrants in the Australian workforce*. Grattan Institute.

[71] Mackey, W., Coates, B., and Sherrell, H. (2022). *Migrants in the Australian workforce*. Grattan Institute.

[72] Mackey, W., Coates, B., and Sherrell, H. (2022). *Migrants in the Australian workforce*. Grattan Institute.

- Permanent Residence Skilled Regional Visa (subclass 191)
- Working in agriculture Visa

Visa pathways mentioned above have been discussed in detail Chapter 2 under the population related policies at the federal level.

Evidence of the impact of government on migration

There has been limited analysis of the effectiveness of government levers on migration. Useful work includes, BITRE 2014, which examined the evolution of Australian towns. It concluded that underlying economic factors are the main drivers of population outcomes, suggesting a limited role for government[73]. BITRE also noted that expectations of what could be achieved through decentralisation type programs were often much inflated to what actually occurred. More recently, NSW Treasury modelling found that government could influence migration through its role in housing supply[74].

The limited evidence on the impact of government reflects that there are many levers through which influence can be had, but also many drivers that are not within the sphere of government influence. Further, impacts can be very slow to take effect if they do occur and the level of interest in examining long distant policies is limited and could suffer from whether impacts 30 years ago are still relevant today.

Consultations with organisations engaged in policies and programs with either a primary objective or secondary objective of influencing internal migration acknowledge the large gaps in knowledge. It was evident that effort mainly went into considering whether future policies would be effective rather than in examining past policies.

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[73] BTRE (2014), *The evolution of Australian towns,* Research Report 136, p. 167.

[74] NSW Treasury 2017, Intergeneration report, Technical Note, Chapter 5, https://www.treasury.nsw.gov.au/sites/default/files/2017-02/Technical%20note.pdf.

6   Empirical analysis of migration flows

Empirical modelling can explain only a part of the reasons why migration outcomes differ across regions.

- The factor that most consistently is shown to lead to net inward migration to a region is low unemployment.
- Different explanators do appear to be more or less important for migration patterns for different age groups.
- The clearest predictor of future net migration is historical net migration, showing that there is considerable persistence in migration patterns.
- Changes that could be made by government, such as through improved services, are likely to have only modest impacts at best on migration outcomes.
- The large amount of unexplained variation in migration patterns means that it is not possible to determine if government levers that have not been able to be specifically defined and measured are influential.
- However, given the persistence of migration patterns and relatively small size compared to existing populations, any impacts through government are likely to be modest and slow to accrue.

Empirical framework

The main objective of empirical analysis is to use quantitative methods to establish the relationships between observed patterns of migration and the various influences on migration such as drivers and government levers. By attempting to explain the variation in migration patterns, we can identify the relevant channels for government influence.

Variables included in the modelling and their data sources

We have identified a range of variables to include within the empirical model that are associated with the drivers of migration, as well as those to which Government may have a policy lever. These include economic variables such as unemployment, income and housing costs, physical regional characteristics (e.g., coastal versus inland), levels of both domestic and international population, climate as well as a range of different Government services. A key gap in the model are variables that relate to personal drivers, such as the desire to be closer to family or certain cultural characteristics (excluding those that can be controlled for by separately measuring net migration on ancestry subgroups).

The variables included in the model, how they are measured and their data source are represented in table 6.1.

6.1   Variables included within empirical modelling

Variable	Description	Data source
Dependent variable		
Net internal migration rate	Rate of population change as measured by inflows less outflows in proportion to the population level.	Census 2011, 2016, 2021
Key drivers		
Time effects	Period specific/trend effects between 2006 and 2011, 2011 and 2016 and 2016 and 2020 census).	N/A
Town population (lag)	Population size is an indicator of the push and pull factors associated with agglomeration effects. A one time period lag has been included, to reflect the fact that current period migration decisions may respond with a delay to these effects.	Census 2011, 2016, 2021
International population level (lag)	Number of people residing within a place that lived overseas prior to census night.	Census 2011, 2016, 2021
BITRE region classification indicator	Indicator variables which identify whether a place is a capital city, a coastal city, an inland city, a coastal country area, inland country is or a remote region.	BITRE spatial classifications (SOURCE)
Unemployment rate differential to average	Calculated as the difference between the unemployment rate of a place and the average unemployment rate of Australia within a given time period. This captures the relative strength of the local economy and job opportunities compared to other places.	Census 2006, 2011, 2016, 2021
Median weekly income (lag)	Refers to the median income associated with people that live within a UCL as an indicator for the earning potential for people living within the region. A one time period lag is included to account for the fact that migration decisions will respond to potential changes in earning potential, rather than occurring at the same time.	Census 2011, 2016, 2021

Variable	Description	Data source
Median weekly rent (lag)	Refers to the median weekly rent associated living in each UCL as an indicator the cost of housing in the region. A one time period lag is included to account for the fact that migration decisions will respond to potential changes housing costs, rather than occurring at the same time.	Census 2011, 2016, 2021
Industry growth rate	Calculated as the weighted average of the gross value added of each industry which employs people in a given UCL. Industry growth is weighted by the proportion of the workforce for a given industry compared to the total workforce. The industry growth rate measures the overall strength (in terms of growth or decline) of the mix of industries within a place.	Census 2011, 2016, 2021, ABS National Accounts
Average daily temperature	Calculated as the average daily temperature (in degrees Celsius) across observations at each weather station recorded by the BoM. UCLs with multiple weather stations within their boundary take the average across all observations, while UCLs without weather stations take the observations for the nearest weather station .	Bureau of Meteorology custom data request
Average daily precipitation	Calculated as the average of daily precipitation values (mm) across observations at each weather station recorded by the BoM. UCLs with multiple weather stations within their boundary take the average across all observations, while UCLs without weather stations take the observations for the nearest weather station.	Bureau of Meteorology custom data request
Service provision		
Transport services	This is calculated as the share of the workforce of a given UCL as working within service sectors. This is used as an indicator for the provision of services (a low to zero proportion indicates no service, while a higher proportion indicates a higher provision of service).	
Residential aged care		
Hospitals		
Tertiary education		
Schools		
Early childhood/preschool		

Variable	Description	Data source
Government jobs		
Defence	Measured as the proportion of the local workforce working within the defence sector. Defence towns can be associated with job relocation for defence personal themselves, their families as well as population supporting growth.	
State government jobs	Measured as the proportion of the local workforce working within the state government sector. A higher proportion of the workforce working can imply the presence of state agencies in a location.	

Source: CIE.

Geographic coverage and time period

Urban Centres and Localities (UCLs), as defined by the ABS *Australian Statistical Geography Standard 2021*, are the geographies used to define regions in the empirical model. UCLs represent areas of concentrated urban development within the Census and are designed to facilitate the visualisation and analysis of population. For the purposes of empirical modelling, we set a population threshold of at least 10 000 people in at least one of the census periods to be included in the model, resulting in 126 UCLs being included. This is to reduce volatility that results from small areas and the resulting boundary changes between census waves.

Because the geographical boundaries of UCLs have changed over time, we use the 2021 boundaries to define UCLs in each time period of our sample and use correspondences provided by the ABS to convert relevant data to the same time period classification.

While the majority of the variables of interest are produced by the ABS on a UCL basis, internal migration statistics are published on a Statistical Area basis, with the lowest level of aggregation being Statistical Area Level 2 (SA2). We have utilised spatial mapping techniques to align and create a correspondence between SA2s and UCLs utilising a boundary and population weighting method to determine in which UCLs migrants have moved to or from. Further detail on this approach is provided in the technical appendix.

The census periods used within the empirical model are 2006-11, 2011-16 and the most recent 2016-21 waves. The 2006 internal migration statistics are published at a different and higher level of spatial aggregation known as Statistical Local Area (SLA), which has since been replaced by the statistical area classification. We attempted to convert SLAs to UCLs using a similar method, although the results were not robust. We have excluded this census wave from the analysis as a result.

Estimation approach

The estimation approach utilises a multiple linear regression model with time effects that capture unique influences on migration that are specific to a particular year, but applicable to all urban localities in the sample for that year. This model relates the net migration rate of a UCL in a particular time period to a range of explanatory variables including a constant. The coefficients on the explanators β_2 relate in a statistical fashion, the extent to which changes in a given variable (in relation to changes in all other variables) leads to a change in the net migration rate to a place. The goal of the regression model is to explain variation in net migration rates over time and different regions. The regression model is set out below:

$$Net\ migration\ rate_{UCL,year} = \beta_1 + \beta_2 X_{UCL,year} + T_{year} + \epsilon_{UCL,year}$$

Empirical results for aggregate model

The empirical model was estimated 32 different times on a variety of different population subgroups in order to test whether different relationships existed according to the characteristics of those that moved, rather than just the characteristics of the place.

Total population model

The first model to be estimated related changes in the net migration rate across the total populations of each UCL to a range of explanatory variables representing place-based characteristics that are associated with the drivers of migration, as well as those to which government may have a policy lever (table 6.2).

The model indicates a statistically significant positive relationship between net migration rate and a one time period lag in median weekly rental levels. Likewise, higher income levels are associated with a negative impact on net migration rates, such as capital cities which typically have better paying jobs but experience net outward domestic migration. The signs are the opposite of what would be expected, as economic drivers should induce migration as people seek more affordable housing and better paying jobs. One potential reason for this observed relationship is the fact that higher inward migration is associated with higher rent and lower wages (due to demand and supply constraints). A lag of rent and income was used to attempt to remove any contemporaneous effects between moving into a region and bidding up rent and lowering wages, however it is possible that people respond to changes at a higher frequency than the census 5-year interval, meaning it is not possible to detect the true dynamics in this model.

There is a statistically significant relationship between the difference in the unemployment rate of a region compared to the national average in any time period. The coefficient implies that if the unemployment rate in any given region is 1 per cent higher than the national average, then net migration declines by 0.44 per cent. This result implies a strong relationship between migration decisions and employment opportunities, which are one of the drivers of migration.

The model also predicts a strong positive relationship between the provision of early childhood education and preschool services and net inward migration, with a 1 per cent increase in service provision levels associated with a 2.29 per cent increase in the net migration rate.

Overall, the total population model has an R-squared of 0.57, meaning that it explains 57 per cent of the variation in net migration rates. This would indicate that there is a substantial amount of variation in net migration rates that are not explained by this model. It is possible that different population subgroups respond to different drivers and government levers in different ways. In which case, many of these effects may be offset in a total population model.

6.2   Migration model across total population

Explanator	Coefficient	Standard error	P-value
	Net migration rate /1000 residents	Net migration rate /1000 residents	No.
Median weekly rent (lag)	0.3	0.1	0.00
Median weekly income (lag)	-0.1	0.0	0.00
Unemployment rate difference	-444.6	196.0	0.02
Coastal cities	-17.1	17.5	0.33
Inland cities	-34.5	17.0	0.04
Coastal country areas	-41.7	32.0	0.20
Inland country areas	-55.6	30.9	0.07
Remote areas	0.0	0.0	
Capital city fringe	-2.5	20.3	0.90
Transport services workforce	-95.9	122.5	0.43
Residential aged care workforce	272.1	212.9	0.20
Hospitals workforce	-99.7	134.1	0.46
Tertiary education workforce	-103.2	166.7	0.54
School education workforce	30.8	160.4	0.85
Preschool workforce	2290.5	926.5	0.01
Defence jobs	110.8	142.8	0.44
State government jobs	-783.4	285.2	0.01
Town population (lag)	0.00002	0.00003	0.52
Overseas migrants (lag)	-0.00038	0.00032	0.25
Growth rate of local industry	-254.6	171.4	0.14
Average daily temperature	-1.1	1.0	0.28
Average daily precipitation	0.1	2.5	0.97
Indicator variable (2016)	Omitted	Omitted	
Indicator variable (2021)	-3.6	7.4	0.63
Constant	83.5	32.3	0.01

Source: CIE analysis.

Total population model with alternate specification

The total population model has been estimated with an alternate specification which includes a one-time-period lag of the net migration rate (i.e., the net migration rate in the previous census period). The coefficient value of 0.69 means that every one percentage point increase in the net migration rate in the previous time period is associated with a 0.69 percentage point increase in the net migration rate in the current period (all else being equal). This is a strong indicator that trends in net migration rates across Australia are persistent. The lag of net migration rate is also highly significant and increases the R-squared of the model from 0.57 to 0.76, meaning it explains a substantial proportion of the variation (table 6.3).

The inclusion of this variable also changes the results for other explanators in the regression such as the impacts of median weekly rent and income, which are not significant in the alternate specification. The impact of a higher unemployment rate differential as well services such as preschools have been minimised and are no longer significant. This is likely explained due to the fact that the underlying drivers of net migration have been captured by the lag of the net migration rate in this model. While trends in net migration may explain variation, they do not explain the underlying reasons for those observed trends.

6.3   Migration model across total population — alternate specification

Explanator	Original model		Alternate specification	
	Coefficient	P-value	Coefficient	P-value
	Net migration rate /1000 residents	No.	Net migration rate /1000 residents	No.
R-squared	0.57	n/a	0.76	n/a
Net migration rate (lag)	n/a	n/a	0.69	0.00
Median weekly rent (lag)	0.3	0.00	0.04	0.42
Median weekly income (lag)	-0.1	0.00	-0.01	0.25
Unemployment rate difference	-444.6	0.02	-15.80	0.92
Coastal cities	-17.1	0.33	-9.55	0.47
Inland cities	-34.5	0.04	-18.57	0.15
Coastal country areas	-41.7	0.20	-12.35	0.61
Inland country areas	-55.6	0.07	-46.22	0.05
Remote areas	0.0		0.00	
Capital city fringe	-2.5	0.90	12.33	0.42
Transport services workforce	-95.9	0.43	-382.44	0.00
Residential aged care workforce	272.1	0.20	132.33	0.41
Hospitals workforce	-99.7	0.46	19.90	0.84
Tertiary education workforce	-103.2	0.54	-116.47	0.35

Explanator	Original model		Alternate specification	
	Coefficient	P-value	Coefficient	P-value
	Net migration rate /1000 residents	No.	Net migration rate /1000 residents	No.
School education workforce	30.8	0.85	-178.76	0.14
Preschool workforce	2290.5	0.01	-105.02	0.88
Defence jobs	110.8	0.44	-5.34	0.96
State government jobs	-783.4	0.01	-351.16	0.11
Town population (lag)	0.00002	0.52	0.00	0.27
Overseas migrants (lag)	-0.00038	0.25	0.00	0.15
Growth rate of local industry	-254.6	0.14	-510.38	0.00
Average daily temperature	-1.1	0.28	-0.64	0.38
Average daily precipitation	0.1	0.97	-0.45	0.81
Indicator variable (2016)	Omitted		Omitted	
Indicator variable (2021)	-3.6	0.63	17.3	0.63
Constant	83.5	0.01	112.9	0.01

Source: CIE analysis.

To put into context the high explanatory power of past trends in net migration rates, charts 6.4 and 6.5 show the visual relationship between the net migration rates of the 2011-16 and 2016-21 census periods as well as the 2006-11 and 2011-16 census periods. Both scatter plots show a linear relationship between net migration rates over time around a line of best fit indicating a high degree of persistence, explaining around 60 per cent of the variation in isolation. The use of previous period net migration rates to explain current and future period net migration rates does little to explain the underlying drivers of migration but can be an effective explanator for forecasting purposes.

6.4 Relationship between 2011-16 NIM rates and 2016-21 NIM rates
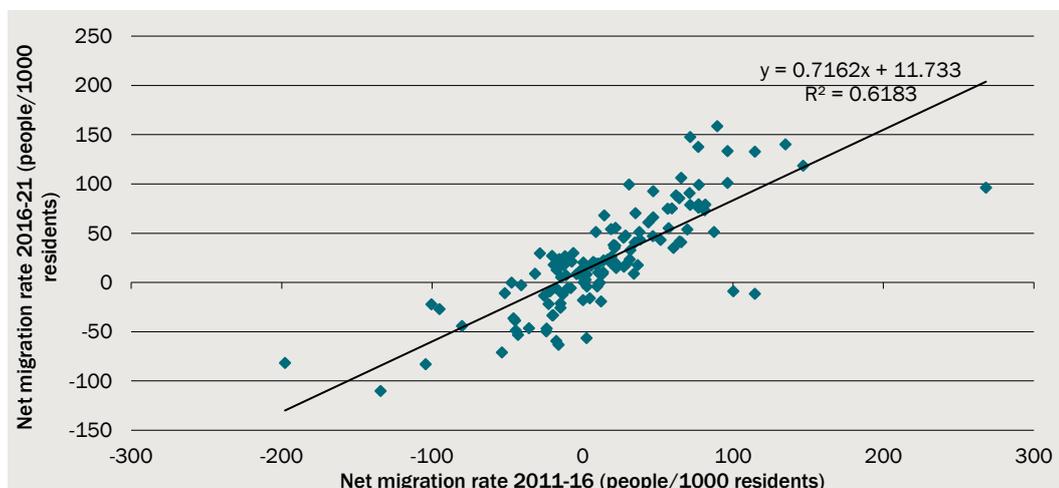
Data source: CIE.

6.5   Relationship between 2006-11 NIM rates and 2011-16 NIM rates

Net migration rate 2011-16 (people/1000 residents) [y-axis]

Net migration rate 2006-11 (people/1000 residents) [x-axis]

$y = 1.0406x - 13.122$
$R^2 = 0.5908$
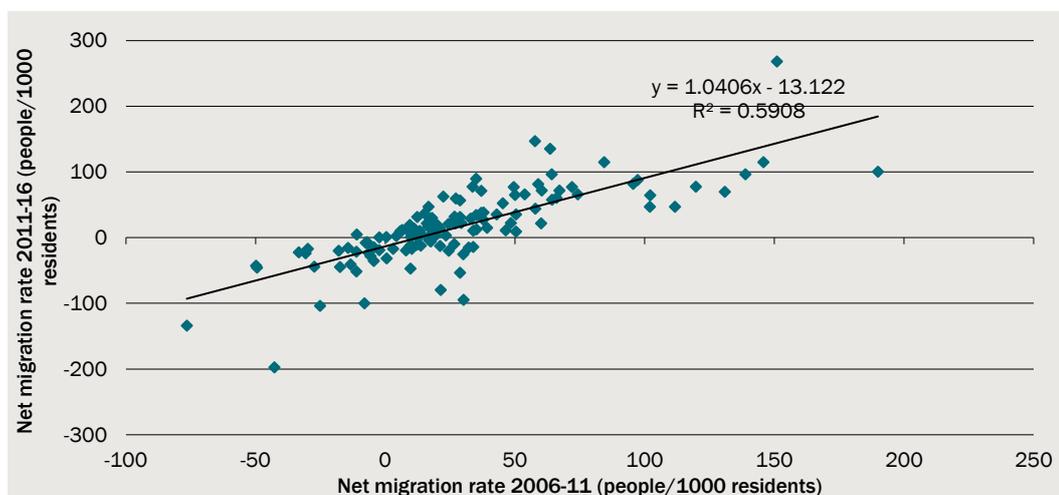
Data source: CIE.

Age

In order to capture potential differences in migration behaviour in response to different characteristics, we have estimated the same model for a variety of different age population subgroups (table 6.6). The model does predict differences in the relationships between some variables and the net migration rates of different age subgroups. These include:

- A decrease in the net migration rate in response to an increase in median weekly rent for young people aged between 20-29 and older people aged over 80. This compares to a positive relationship for other aged brackets, which could indicate that younger and retirement aged Australians are more sensitive to the cost of housing.

- A consistent negative relationship between higher unemployment in a region and net migration across all age groups, although these effects are statistically significant predominantly for those of working age (30-59).

- A positive and statistically significant relationship between the provision of transport services and net migration for those aged 20-29, with no significant relationship detected for other aged groups.

- A positive and statistically significant relationship between the provision of early childhood and preschool services and net migration for those aged between 20 and 49, and a negative (non-significant) relationship for older Australians. This would indicate that younger Australians who are more likely to have young children care about preschool availability in the regions where they live, while this is not a driver for older people.

- A positive and statistically significant relationship between the provision of residential aged care services and net migration for older Australians and a negative (non-significant) relationship for younger people.

The explanatory power of the individual age regressions are higher than the total model for some age groups and lower in others. The key difference between the age models is the detection of a relationship between migration and services such as preschool, aged care and transport, which have different relationships between younger and older Australians.

6.6 Age demographic regression results

Variable	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99
R-squared	0.30	0.61	0.70	0.65	0.78	0.53	0.22	0.29
Median weekly rent (lag)	-0.5**	0.7***	0.5***	0.3***	0.7***	0.3***	-0.2***	-0.6***
Median weekly income (lag)	0.1	0*	-0.1***	-0.1***	-0.2***	-0.1***	0	0.1**
Unemployment rate difference	-925	-771.5**	-494**	-409.2**	-421.8*	-138.5	-279.6	-915.6**
Coastal cities	-16.4	6.7	-0.1	-19.7	-18	-17.4	9.5	5.4
Inland cities	-50.1	-41.9	-28.5	-25.7	-12.7	1.3	7	-10.7
Coastal country areas	-50.6	51.6	-3.4	-46.1	-109.7***	-108.1***	-31	15.5
Inland country areas	-33.8	-73.2	-62.8*	-63.8*	-37	-33.1	-39.8	12.3
Remote areas	0	0	0	0	0	0	0	0
Capital city fringe	-56.3	51.5	24.4	0.6	-13.8	-31.3	-8.9	-41.6
Transport services workforce	825**	-438.3*	-196	8.6	-155.6	276.9*	-15.5	-213.4
Residential aged care workforce	-122.9	-79.5	-226.2	623.6***	839.5***	148.4	460.2*	1829.9***
Hospitals workforce	471.5	-276.5	-9.9	-247.9*	-279.1	-158.9	331.2**	576.2**
Tertiary education workforce	509	-541.4*	-76.9	-182.3	-802.1***	-457.2**	49.5	-141.2
School education workforce	-901.9*	204.2	184.9	122.3	204.1	310.5	-232.8	-225.2
Preschool workforce	13682.9***	5862.9***	2439.6**	258.5	-883.3	-154.8	-121.6	-4833.2**
Defence jobs	-201.5	201.8	21.9	122.6	177.6	118.2	38.2	395.9
State government jobs	1678.9*	-1284.6**	-413.1	-316.4	-692.8*	-196.6	222.2	-590.5
Town population (lag)	0**	0	0	0	0	0	0	0
Overseas migrants (lag)	0*	0	0	0	0	0	0	0
Growth rate of local industry	269.1	-611.4*	-470.7***	-384**	-325.4	512.7**	-245.9	-433
Average daily temperature	2.6	-4.8**	-2.9***	0.1	-1.1	-3.5***	-0.4	2
Average daily precipitation	-3.6	0.8	-0.2	-1.7	-4.2	2.5	2.2	6
Indicator variable (2016)	0***	0***	0***	0***	0***	0***	0***	0***
Indicator variable (2021)	-3.6	-32.2**	-14.4*	5.9	-0.2	9.8	5.4	10
Constant	-169.2	102.6*	112.2***	112.4***	165.9***	72.6*	77.1**	37.6

Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level.

Source: CIE analysis.

Occupation

We have estimated the same model for a variety of different occupation subgroups, ranging from managers and professionals to skilled trades people, sales people and labourers (table 6.6). Overall, the patterns of impacts of different drivers and leavers across occupations are more aligned compared to the age model. This is likely reflecting the fact that some segments of the population such as younger and older Australians, which are observed to have different migration patterns, are less likely to be part of the workforce captured by many of these occupation types. Fewer variables explain net migration in the model, with the model detecting:

- A consistent negative relationship between higher unemployment in a region and net migration across all occupation subgroups.

- A positive and statistically significant relationship between the provision of early childhood and preschool services and net migration for all occupations except managers.

- A positive and statistically significant relationship between the provision of tertiary education services and net migration professionals and people working in sales. This could indicate the value of higher education for professionals seeking further qualification (e.g. masters degrees, chartered accountancy etc…) as well as those working in relatively unskilled settings such as retail, who may be studying at the same time.

- There is no significant relationship between the rate of growth of industry in a locality and the net migration of people of different occupations to a region. The one exception being managers, although this relationship appears to be negative, meaning a higher growth rate of local industry is associated with a lower migration rate into the area.

The explanatory power of the occupation regressions are lower than the total and age models, with fewer explanators having been estimated as being statistically significant. This would indicate that it is harder to predict migration decisions when comparing characteristics of people based on the type of work in which they are employed.

6.7 Occupation regression results

Variable	Managers	Professionals	Technicians	Community	Clerical	Sales	Machinery	Labourers
R-squared	0.51	0.43	0.25	0.26	0.37	0.25	0.31	0.28
Median weekly rent (lag)	0.4***	0.3**	0.1	0.1	0.2**	0.1	0	-0.1
Median weekly income (lag)	-0.1***	0*	0	0**	-0.1***	0**	0	0
Unemployment rate difference	-631.2***	-1168.5***	-654.8**	-681.9**	-912.3***	-742.2***	-450.2	-269
Coastal cities	-2.3	1.9	7.6	-3.4	11.9	-2.5	-2.7	-16.8
Inland cities	-28	-24.1	-14.5	-32.6	-13.5	-16	-25.1	-32.9
Coastal country areas	-12.9	-7.9	18	-53.2	32.1	-65.8	7.9	8.5
Inland country areas	-34.3	-62.4	-38.6	-84.3*	-55.6	-8.8	-47.6	-20.5
Remote areas	0	0	0	0	0	0	0	0
Capital city fringe	21.1	8.8	14.2	9.6	46.4*	-6	-5.9	9.3
Transport services workforce	-1.5	-281.3	-24	317.5	68.9	226	224.3	233.1
Residential aged care workforce	119.3	-99.7	-143.8	91.7	160.2	57.7	34.9	612.2**
Hospitals workforce	-33.1	-195.9	-62.3	79.6	-148.3	36.2	-34.5	200.8
Tertiary education workforce	-268.9	-1362.3***	116.5	46.5	-169.9	670.3***	-98	132.6
School education workforce	33.9	4.9	77.9	-92.5	-54.5	53.1	524.2**	-366.5*
Preschool workforce	2005.9*	3121.8**	4694***	4369***	2677.1**	4305.5***	6319.4***	4510.8***
Defence jobs	-87.5	-73.4	63.4	401*	109.4	-176.4	115.3	-41.4
State government jobs	-414.9	-389	154.6	542.2	437.7	280.9	390.7	-86.2
Town population (lag)	0	0	0	0	0	0	0	0
Overseas migrants (lag)	0	0	0	0	0	0	0	0
Growth rate of local industry	-414.1**	-79.7	-212	260.6	-240.8	-403	-54.1	-531.6**
Average daily temperature	-2.4**	-0.6	-1.1	-1.6	-0.8	0.1	-1.5	-1.3
Average daily precipitation	-0.2	-0.9	-0.4	0.8	-3.3	1	-3.7	-2.3
Indicator variable (2016)	0***	0***	0***	0***	0***	0***	0***	0***
Indicator variable (2021)	-4.8	-3.8	-9.2	-0.8	-6.6	-12.2	-9.3	-13
Constant	57.7	60	31.7	-16.1	33.2	16.5	-0.9	108.8**

Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level.

Source: CIE analysis.

Education

The education models estimate the same relationship on population subgroups with different levels of education, ranging from those with secondary school level education as being their highest through to postgraduates.

- A consistently negative and statistically significant relationship between higher unemployment rates and net migration across all education levels, with the exception of secondary school level education.
- A consistently positive and statistically significant relationship between higher levels of preschool services and net migration across all education levels.
- A positive and statistically significant relationship between those with a higher level of education is secondary school and the provision of tertiary education services, while this relationship is negative for those with existing tertiary level qualifications. Younger people in particular, who have graduated high school and are intending on undertaking tertiary education, likely form part of this cohort.

The explanatory power of the education regressions are higher than the occupation regressions, although lower overall compared to the age regressions and lower on average compared to the total model.

6.8 Education regression results

Variable	Postgraduate	Graduate diploma	Bachelor degree	Advanced diploma	Certificate level	Secondary school
R-squared	0.39	0.30	0.54	0.59	0.42	0.45
Median weekly rent (lag)	0.5***	0.3**	0.4***	0.4***	0.2**	0.2**
Median weekly income (lag)	-0.1***	-0.1***	-0.1***	-0.1***	-0.1***	-0.1***
Unemployment rate difference	-1825.8***	-1101.8***	-1593.4***	-669.7***	-592.2**	-214
Coastal cities	-20.1	14.9	-0.6	0.8	-14.3	-12
Inland cities	-45.3	-13	-46	-27.8	-34.8	-23.1
Coastal country areas	-1.3	8.3	-20.9	-35.1	-48	-47.9
Inland country areas	-290.4***	-91.5*	-58.8	-7.8	-59.6	-35.7
Remote areas	0	0	0	0	0	0
Capital city fringe	10.9	5.8	6.4	23.2	5.5	4.2
Transport services workforce	-744**	260.1	-502.5**	42.1	-81.1	164.8
Residential aged care workforce	82.7	-811**	51	211.8	597.1**	533.1**
Hospitals workforce	159.2	-342	64.5	-145.7	-138.1	-49.3
Tertiary education workforce	-685.1	-812.2***	-1536.4***	-219.2	34.6	686***
School education workforce	128.2	-27.3	37.9	291.1	57.8	47.6
Preschool workforce	7488.5***	1499.2	4235.5***	3682.2***	3006.4**	3131.8***
Defence jobs	-302.6	167	-112.6	121.4	133.9	269.7
State government jobs	-374.6	-400.3	-37.6	74	-489	-183.3
Town population (lag)	0	0	0	0	0	0
Overseas migrants (lag)	0	0	0	0	0	0
Growth rate of local industry	-918.6*	305.1	-622.3**	-303.1	-362.6	-418.8**
Average daily temperature	2.1	-1.8	-0.1	-2.2*	-0.2	-1.7
Average daily precipitation	-7.3	2	-1.3	-2.2	-2.4	-0.8
Indicator variable (2016)	0***	0***	0***	0***	0***	0***
Indicator variable (2021)	-21.5	-8.6	-3.3	-0.9	-5.4	-7.5
Constant	129.5	52.6	119.8**	81.2*	79*	71.3*

Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level.

Source: CIE analysis.

Ancestry

Ancestry refers to information collected within the census that provides an indication of a person's ethnic background. While not necessarily associated with their birthplace, it instead relates to the cultural groups with which they most closely identify. By performing a regression on ancestry population subgroups, we attempt to account for some of the variation in personal characteristics aside from directly observable place indicators that might otherwise influence a migration decision (table 6.9). The model estimates:

- A consistent negative relationship between higher unemployment in a region and net migration across all ancestry groups, however this relationship is not significant across many of the model runs.
- A consistently positive relationship between median weekly rent and net migration and a negative relationship between median weekly income and net migration.
- A significant positive relationship between transport services and net migration for those with ancestry from South-east Europe, South east Asia and South and Central Asia.
- A negative relationship between higher average daily temperature and migrants with an ancestry from South-East Europe and the Americas.

The ancestry regressions tend to have weak explanatory power, with low R-squared values across many of the results, with the exception of ancestry subgroups Oceania and European ancestries. This is likely due to the fact that other ancestry groups comprise a relatively smaller proportion of the overall population and, leading to smaller samples and less robust estimates.

6.9 Ancestry regression results

Variable	Oceania	North-West European	South-East European	North Africa & Middle East	South East Asia	North East Asia	South and Central Asia	Americas	Subsaharan Africa
R-squared	0.47	0.61	0.51	0.07	0.30	0.16	0.28	0.22	0.16
Median weekly rent (lag)	0.3***	0.4***	0.6***	0.3	0.5**	0.6*	1.9**	0.6	0.4
Median weekly income (lag)	-0.1***	-0.1***	-0.1***	0	-0.1**	0	-0.1**	0	0
Unemployment rate difference	-361.9*	-410.7*	-497.9	-379.6	-672.9	162.1	-1448.2	452.5	-3373.4
Coastal cities	-11.4	-24.6	0.9	232.1	-67.3	3.6	119.5	69.8	27
Inland cities	-28.8	-36.9*	-6.8	161.9	-33.4	-11.2	10.5	75.6	-2.3
Coastal country areas	-40	-62.2	-47.5	530.7	-145	-46.8	65.6	96.8	149.6
Inland country areas	-46.7	-71.5*	28.2	300.3	-291.2**	-108.3	-304.8**	78.1	193.9
Remote areas	0	0	0	0	0	0	0	0	0
Capital city fringe	-7	-18.3	37	378.6	18.4	83.9	74	108.7	209.7
Transport services workforce	-90.9	-62.9	593.1***	-2312.3	1063.5**	-142.9	115.9**	337.1	-646.1
Residential aged care workforce	333.5	358	590.3	-3365.5	-297.9	-142.1	-4844.8	2931.7**	4656.7**
Hospitals workforce	-62.6	-54.3	152	-2560.4	507	-55.4	-947.6	1470.4*	1435.7
Tertiary education workforce	-108.7	-62.7	-650.9**	1047.6	-1433**	-321.8	656.2**	749.5	1832.8
School education workforce	144.2	-41.7	301.2	-1535.5	130.2	-256.8	262	221.7	4708.3***
Preschool workforce	1514.1	1549.7	2602.8*	8606.5	10160.8***	-2017.1	11175.3***	4754.4	8809.4
Defence jobs	119.9	146.3	249.8	1385.1	823	1487.1**	-570.8	1525*	840.9
State government jobs	-626.1**	-1095.7***	-281.1	1973.5	-827	-1889.6	1185.9	2633.4	798.2
Town population (lag)	0	0	0	0	0	0	0	0	0
Overseas migrants (lag)	0	0	0	0	0	0	0	0	0
Growth rate of local industry	-425.3**	-393.9*	-30.1	2935.5	-32.3	-800	350.7	-2746.5***	-1274.4
Average daily temperature	-0.6	-1.8	-5.1***	-5.4	-3.8	-3.6	-25.8	-11.1**	8.8
Average daily precipitation	-0.6	1.6	2.3	7	0.4	10.9	13.9	-4.9	15.2
Indicator variable (2016)	0***	0***	0***	0***	0***	0***	0***	0***	0***
Indicator variable (2021)	-13.1	-2.1	-7.3	76.3	-35	-1.9	-115.6	-69.9	-101.6
Constant	59.6*	137.2***	-21.7	-311	34.9	0.2	-36.1	152.7	-879.9**

Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level.

Source: CIE analysis.

6.10   International migrants regression results

Variable	Coefficient	Standard error	P-value
Median weekly rent (lag)	-0.9	0.5	0.07
Median weekly income (lag)	-0.3	0.1	0.02
Unemployment rate difference	-2724.5	1486.6	0.07
Coastal cities	-127.9	132.4	0.34
Inland cities	-137.4	129.0	0.29
Coastal country areas	-46.2	243.1	0.85
Inland country areas	-362.2	234.5	0.12
Remote areas	0.0	0.0	na
Capital city fringe	-103.0	154.1	0.50
Transport services workforce	-845.4	929.2	0.36
Residential aged care workforce	134.2	1615.1	0.93
Hospitals workforce	250.7	1017.6	0.81
Tertiary education workforce	1453.1	1264.8	0.25
School education workforce	-4209.3	1216.8	0.00
Preschool workforce	31802.4	7028.7	0.00
Defence jobs	-36.5	1083.7	0.97
State government jobs	1271.1	2163.3	0.56
Town population (lag)	0.0	0.0	0.35
Overseas migrants (lag)	0.0	0.0	0.33
Growth rate of local industry	-170.6	1300.5	0.90
Average daily temperature	2.1	7.5	0.78
Average daily precipitation	3.2	18.8	0.86
Indicator variable (2016)	0.0	0.0	ba
Indicator variable (2021)	83.0	56.2	0.14
Constant	653.0	244.8	0.01

Source: CIE analysis.

Implied impacts on migration from the empirical model

The results of the empirical model indicate that the availability of services, such as transport, tertiary education, early childhood and preschool as well as residential aged care services can significantly influence migration decisions across different cohorts of migrants. The coefficient estimates from the regression models can be used to predict whether a change in service levels for a particular region will lead to a turnaround in the migration patterns, and to what extent.

It must be noted that variables which are not estimated to be statistically significant are, in essence, indistinguishable from having no impact. This exercise therefore considers the

modelling predictions under a best-case scenario to provide context around the overall quantum of Government impacts on migration, if such levers were proven to exist.

Potential migration impact from improving services

Using the empirical model results, we can estimate the potential impact from improving service levels from a typical locality within the 25th percentile of service provision to the rates enjoyed by localities within the 75th percentile. Chart 6.11 compares:

- the baseline migration in terms of number of people over a 5-year period for a 25th percentile region without any change,
- the number of new inward or outward migrants associated with a change in service level to match regions in the 75th percentile, as predicted by the model
- the total (cumulative) migration impact that result from changes in all services, and
- the net impact compared to baseline migration changes

Across the total population, a typical 25th percentile region has a population of around 13 500 and experiences a net outward migration of around 82 people between census periods (i.e. a net migration are of around 6 people per thousand residents). The empirical model predicts strong net inward migration resulting from higher provision of preschools and residential aged care services, although only preschools are statistically significant. The total impact from improving services is associated with 127 new migrants over a 5-year period, resulting in a net change of 45 migrants and offsetting the decline.

6.11   Number of new migrants resulting from an improvement in services — Total population
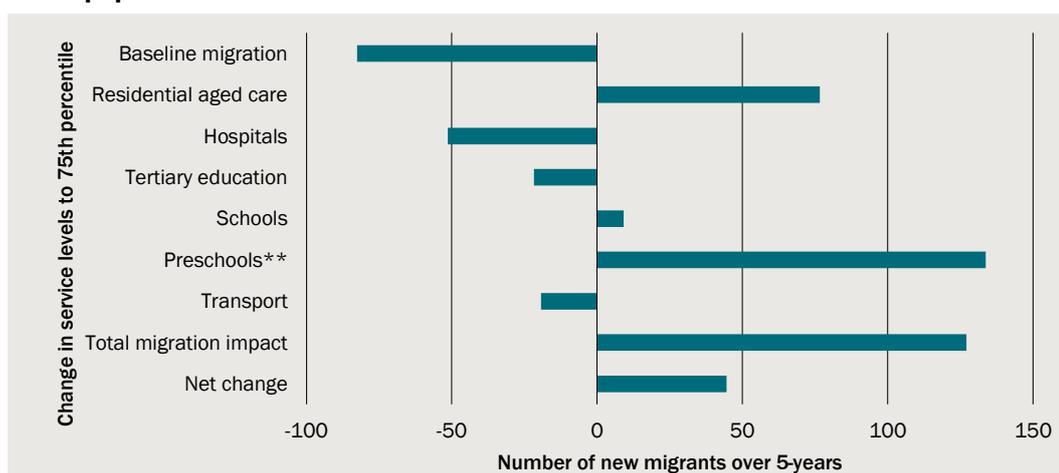
Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level. Total and net change represents the sum of all impacts across modelled parameters and therefore does not include a measure of statistical significance.
Source: CIE analysis.

The same analysis for the population of people aged between 20 and 29 indicates a stronger positive migration impact from improving preschool and transport services, both of which are estimated to be statistically significant at the 1 per cent and 5 per cent levels respectively. The combined impacts of improved services on inward migration does not

offset the strong baseline net outward migration of younger people from 25th percentile regions, however (chart 6.12).

6.12   Number of new migrants resulting from an improvement in services — Aged 20-29
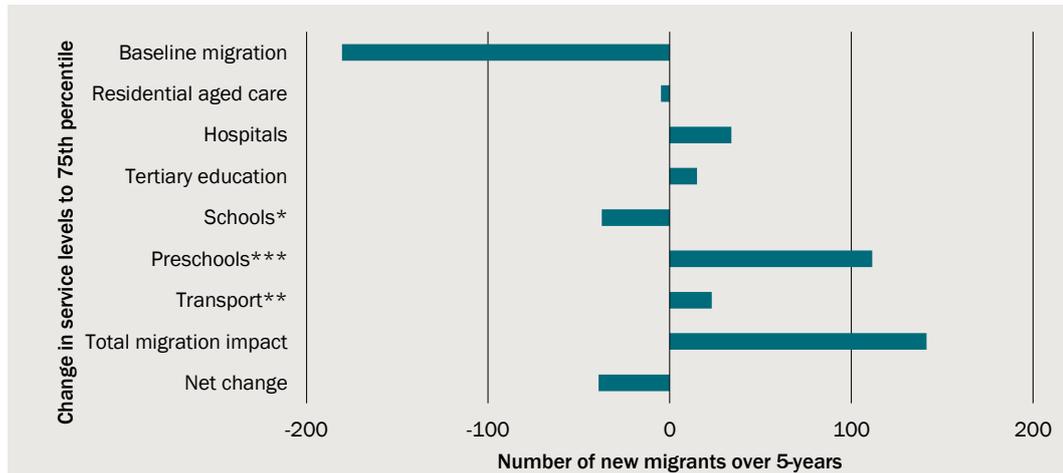
Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level. Total and net change represents the sum of all impacts across modelled parameters and therefore does not include a measure of statistical significance.
Source: CIE analysis.

There is a similar impact on net inward migration of improvements in preschool services on the population aged between 40 and 49, leading to an overall increase in net inward migration. Although this too does not completely offset baseline trends of outward migration from 25th percentile regions (chart 6.13).

6.13   Number of new migrants resulting from an improvement in services — Aged 40-49
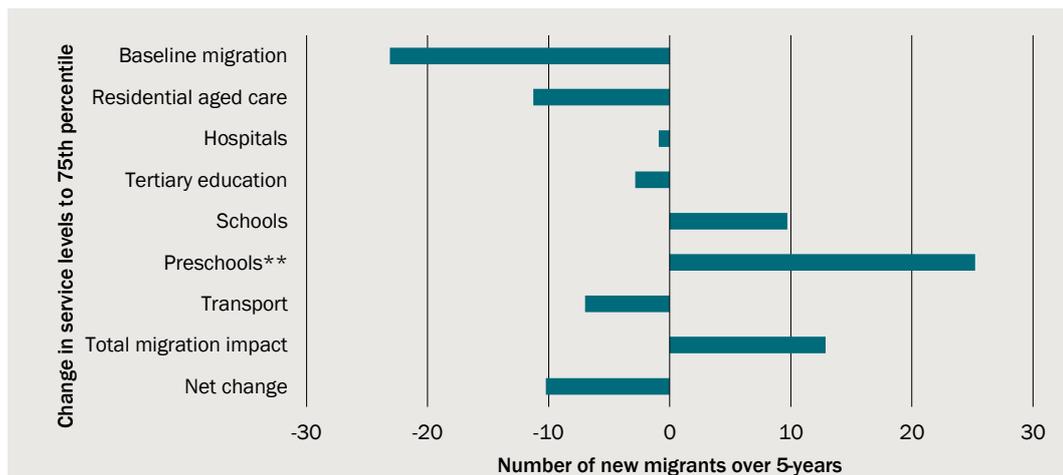
Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level. Total and net change represents the sum of all impacts across modelled parameters and therefore does not include a measure of statistical significance.
Source: CIE analysis.

Older people aged 80 to 89 experience relatively stronger positive migration effects resulting from higher provision of residential aged care services and hospitals. This leads

to an increase in net inward migration for 25th percentile regions off of an existing positive, but small baseline (chart 6.14).

6.14   Number of new migrants resulting from an improvement in services — Aged 80-89
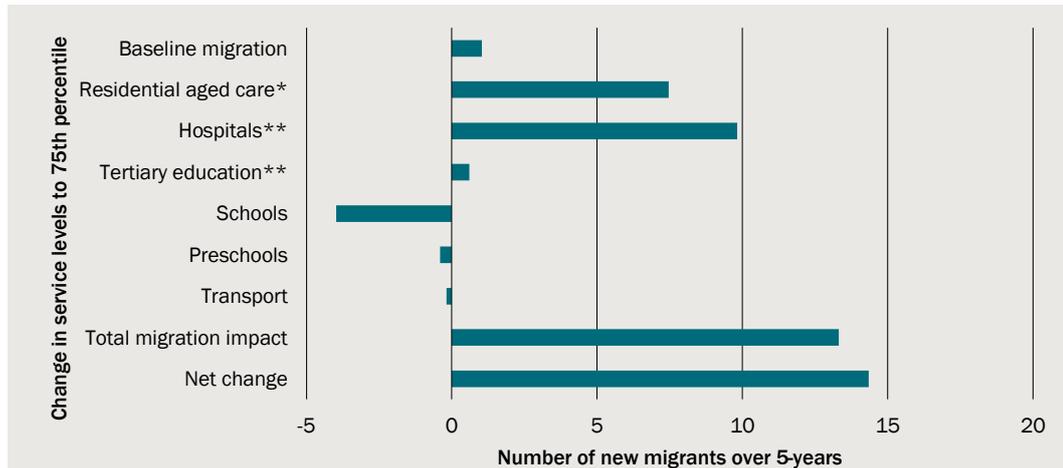
Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level. Total and net change represents the sum of all impacts across modelled parameters and therefore does not include a measure of statistical significance.
Source: CIE analysis.

The same analysis can be performed for subsets of the population of various levels of educational attainment. For those with certificate level education being the highest level of educational attainment, the provision of preschools and residential aged care services most strongly impact net migration, both of which are statistically significant. The total service impact is around 75 new people over a 5-year period, offsetting a baseline net outward migration of over 20 people over the same period (chart 6.18).

6.15   Number of new migrants resulting from an improvement in services — Certificate level
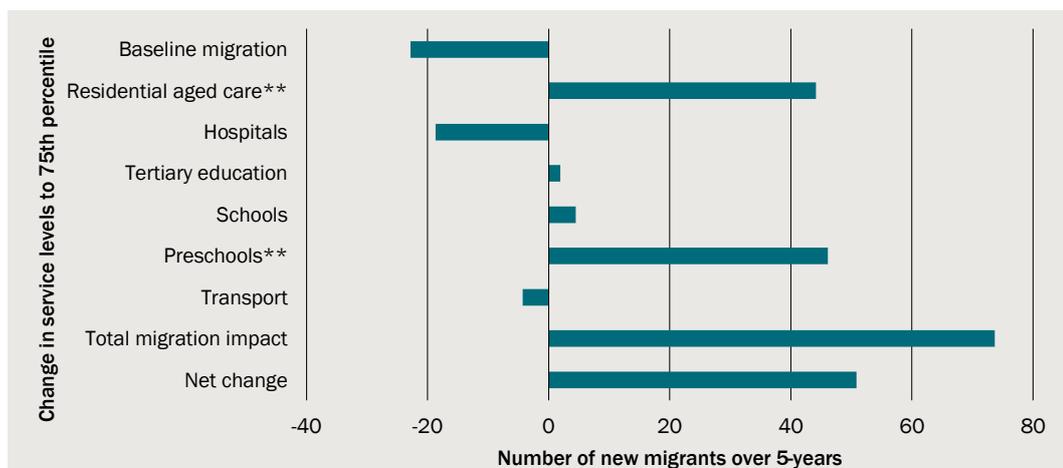

Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level. Total and net change represents the sum of all impacts across modelled parameters and therefore does not include a measure of statistical significance.
Source: CIE analysis.

Across the population whose highest level of educational attainment is a secondary school level education, the strongest impacts on net migration are the provision of residential aged care services, tertiary education and preschools (all of which are statistically significant). The combined impact from improving these service levels from 25th percentile levels to 75th percentile levels leads to a migration impact of over 300 people over a 5-year period, off of a small baseline of net outward migration (chart 6.16).

**6.16   Number of new migrants resulting from an improvement in services —
   Secondary school**
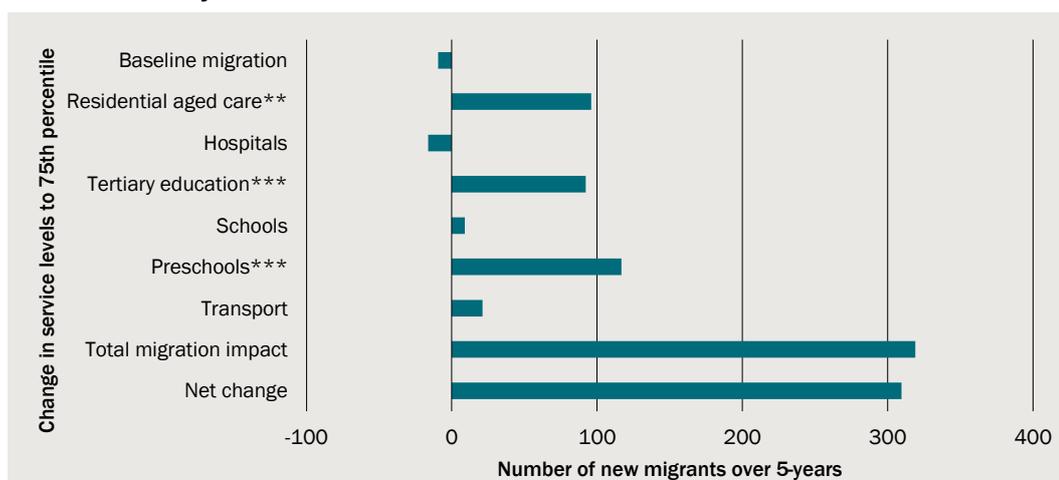
Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level. Total and net change represents the sum of all impacts across modelled parameters and therefore does not include a measure of statistical significance.
Source: CIE analysis.

Potential migration impact from reducing unemployment

The most consistent finding from the empirical analysis was a negative relationship between a higher unemployment rate differential to the national average and the net migration rate (i.e. a higher unemployment differential associated with lower net migration). To further contextualise the role of Government and its potential impacts, we consider the empirical model predictions of changing the unemployment rate differential from 25th percentile rates to 75th percentile rates.

The 25th percentile region has an unemployment rate that is 0.43 percentage points higher than the average across UCLs, while the 75th percentile is 2 percentage points below the average. The overall impacts of reducing unemployment tend to create stronger impacts on net migration, leading to a reversal in the baseline net outward migration of 82 people over a 5-year period to a net inward migration of just under 150 across the total population of a 25th percentile region. The unemployment impacts tend to decline with age, however (chart 6.17).

6.17 Number of new migrants due to a decrease in the unemployment rate
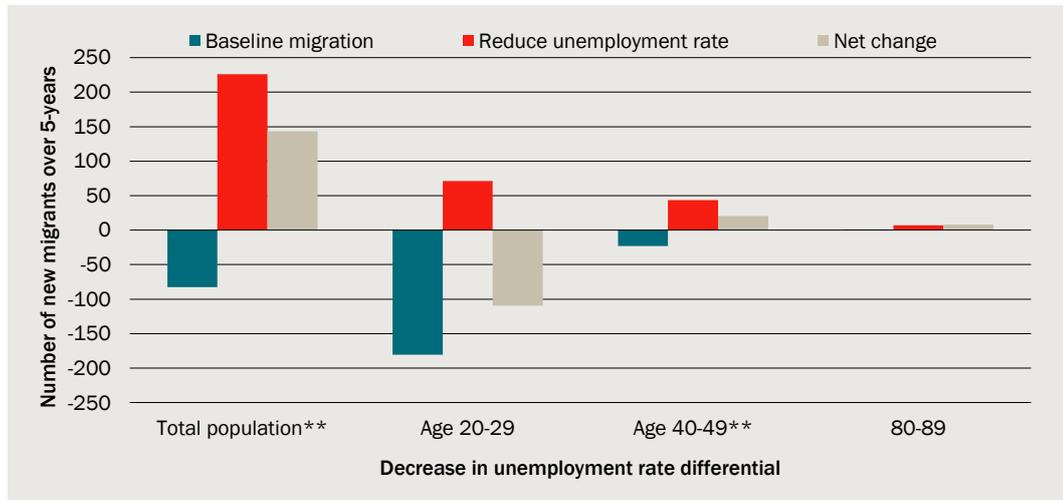
Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level.
Source: CIE analysis.

The impacts of creating lower unemployment are similarly positive across a range of education types, with statistically significant results for those with a highest level of education being either Bachelor's degree, a certificate level education or a secondary school level education (chart 6.18).

6.18 Number of new migrants due to a decrease in the unemployment rate by education
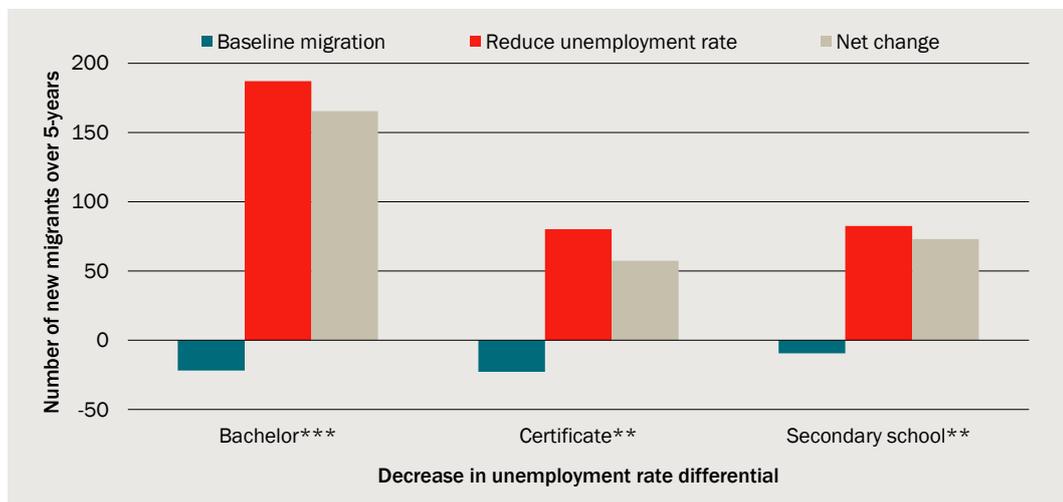
Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level.
Source: CIE analysis.

Different occupations similarly respond to lower unemployment rate differentials, with the impacts on professionals and technicians being statistically significant and positive, sales people being statistically significant and neutral and labourers relatively neutral and not statistically significant (chart 6.19).

6.19   Number of new migrants due to a decrease in the unemployment rate by occupation
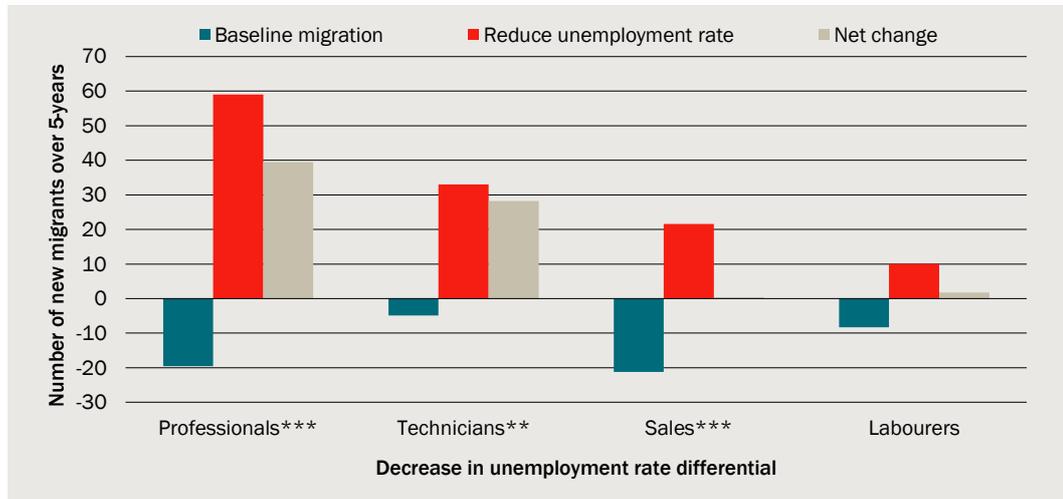
Note: *** refers to statistical significance at the 1% level, ** at the 5% level and * at the 10% level.
Source: CIE analysis.

Model conclusions

The empirical modelling of net migration rates across UCLs has overall low explanatory power, with limited success in predicting a high proportion of the variation in net migration rates across the different population subgroups. The most consistent finding across all of the model runs was a significant relationship between higher unemployment and lower rates of migration, highlighting the importance of the strength of local job markets on migration decisions. In contrast, the growth rate of local industry (as measured by the weighted average of the growth in gross value added of various industries that exist within a locality) did not appear to drive migration decisions. This would seem to indicate that the expansion of industry in a location only matters insofar as it creates jobs for residents.

Other economic variables such as rent and income, appeared inversely related to migration rates. Although this may instead reflect the explanators responding to migration trends (e.g. rents being higher in areas where more people tend to move), which could be a feature of the relative low frequency of census observations and our ability to control for contemporaneous influences in the model.

The availability of services, such as transport, tertiary education, early childhood and preschool as well as residential aged care services were found to significantly influence migration decisions across different cohorts of migrants and in predictable ways. Younger Australians are more likely to migrate to a region with higher availability of transport services and education services, while older Australians are driven more strongly by residential aged care and hospitals. To the extent that Government can influence the provision of services in a region, would indicate a role of Government in influencing migration outcomes for that region.

A key finding from the empirical analysis would indicate that, even if the migration effects of Government levers on service levels are to be taken at face value (i.e. irrespective of their magnitudes or levels of statistical significance), the overall volumes of people that move as a result are relatively small (typically not exceeding a few hundred over a 5-year period). This would indicate that, relative to expected baseline migration patterns, the role of government in driving change is limited. These impacts are also potentially disproportionate when compared to the costs of providing such services in many cases (such as building a hospital in a town only to attract 200 new residents).

Finally, both modelling and descriptive analysis also indicates that trends in net migration rates are highly persistent, meaning that the net migration rate in any given place or year is most likely to reflect what those rates were in previous years. The goal of empirical modelling was to understand the drivers behind such trends, and so the inclusion of net migration rate lags does not offer any new insights into the underlying causes behind observed trends. The persistence does however enable forecasters to more easily predict future trends in population change.

Comparison of findings to recent empirical studies

These include a 2022 study by AHURI on understanding what attracts new residents to smaller cities, as well as a 2020 study by the Australian Government Centre for Population in 2020 on anticipating the impact of COVID-19 on internal migration.

Comparison to AHURI model

The approach undertaken by AHURI is the one most similar to the approach taken in this report and included performing a regression of net migration rates across UCLs against a range of explanators that resemble the drivers of migration. Overall, the AHURI model found relatively low levels of explanatory power, with an R-squared of 0.239 for its model on the general population. This is lower than the R-squared of 0.57 for our total population model, which appears to do better at explaining variation due to the inclusion of more explanators. Coefficients on similar variables to the ones included in our model indicate:

- A negative relationship between a higher unemployment rate and net migration, which is consistent with our model. The AHURI model estimates that a 1 percentage point increase in the unemployment rate is associated with a 0.28 percentage point fall in the net migration rate, although this was not statistically significant.

- A positive relationship between transport services and net migration (statistically significant), while other services such as preschool and education, tertiary education, hospitals and food and beverage services were omitted from the model. This differs to our approach, which modelled relationships over many of the same service variables, although only finding a significant relationship between more preschool and educations services and net migration.

The AHURI study also performed the same analysis on population subgroups. A similar relationship was found between unemployment and the net migration rates of people

aged between 18 and 29, while no relationship was detected for other aged cohorts. This is a departure from our results, which found a consistent negative relationship between the unemployment rate and all cohorts (although with a declining effect on older Australians). Similarly, our model detected different relationships between services and different age subgroups, while the AHURI model only detected a relationship between transport services and tertiary education services on younger people.

While the approach used in our model is similar to the employed by AHURI, there are some significant differences, including:

- Our model includes the most recent census year, while AHURI uses the previous three census periods (2006, 2011 and 2016).

- Our model includes more explanators, including spatial variables, environmental and climate variables as well as indicators of industry growth and other economic characteristics.

- We have developed a more robust method of converting SA2 internal migration data to UCLs. This method is discussed in the technical appendix.

Comparison to University of Queensland / Centre for Population model

The Centre for Population commissioned researchers from the University of Queensland to study interstate migration patterns. This work modelled inward and outward migration rates as functions of a state's socio-economic conditions relative to other states. It also attempted to model these impacts in terms of both short-run and long-run impacts.

In the short run, the model estimates a negative relationship between inward migration and higher unemployment and a positive relationship for outward migration[75]. These results are consistent with our findings. Both estimates are also statistically significant. In contrast, the long-run model estimates a positive (but not significant) relationship between higher unemployment and inward migration, and the opposite for outward migration.

The model has a small selection of explanators, none of which aside from the unemployment rate differential are comparable to the ones included in our model.

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[75] Anticipating the impact of COVID-19 on Internal Migration, Australian Government: Centre for Population December 2020, p28

7   Case studies of government initiatives

The ability of government to influence migration outcomes can also be examined through case studies of places where government has made a concerted effort to achieve this. Two case studies have been examined for this report:

- Geelong — Geelong has been the focus of government effort through relocating government agencies and, more recently, a City Deal.
- Townsville — Townsville was the first City Deal in Australia, started in 2016.

The evidence related to the first case study suggests that the direct relocation of government jobs to Geelong has impacted on migration outcomes and economic outcomes in the region. For the second case study, there is little to suggest that Townsville has achieved higher inward migration or improved economic outcomes as a result of the City Deal to date. However, the activities undertaken so far are less likely to impact on migration directly and are more recent than the activities undertaken in Geelong.

There are also older examples that have previously been examined, such as BITRE (2014), who examined spatial trends for Australian towns including discussion of Whitlam era and state decentralisation policies.[76] They found that expectations of what could be achieved through government were not necessarily achieved, but that there were likely some impacts in some regions. They concluded that:

> Government initiatives that tended to be more successful were those that fundamentally changed the economic characteristics of a region and worked with the underlying economic forces. In general, government was not able to significantly influence the overall settlement pattern, largely due to the fundamental nature of the forces effecting change.[77]

Geelong

Geelong, which is 75km South West of Melbourne, has been chosen as a case study for government decentralisation policies following a series of interventions:

- In 2009, the Victorian Government relocated the Transport Accident Commission (TAC) to Geelong.
- In 2014, the interim headquarters of the National Disability Insurance Agency (NDIA) were relocated to Geelong Central Business District and subsequently a new head office was opened in 2019.
- In 2017, the Victorian Government relocated WorkSafe to Geelong.

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76 BTRE (2014), *The evolution of Australian towns,* Research Report 136.

77 BTRE (2014), *The evolution of Australian towns,* Research Report 136, p. 167.

- In 2019, the Geelong City Deal was signed by the Australian Government, Victorian Government and the City of Greater Geelong. This provides funding for a range of city improvement projects.

Reasons for government intervention

Government interventions were directed to Geelong to seek to counter the decline in the local areas as a result of closure of manufacturing facilities such as Ford's car manufacturing. Ford's downsizing caused direct job losses and impacted other auto related companies.

A coordinated approach to economic diversification was undertaken to seek to help Geelong transform from an economy heavily reliant on traditional manufacturing to be focused on the professional services sector.

Government interventions undertaken

NDIA relocation

Geelong was a key trial site for the National Disability Insurance Scheme (NDIS). It gained bi-partisan support from the federal government in 2013 and led to the relocation of the NDIA interim headquarters to Geelong Central Business District (CBD) in 2014. A $120 million head office opened in 2019 to house the 560 staff. The following direct benefits have been estimated with the relocation:

- 450 direct jobs were generated for Greater Geelong in 2019-2020[78] .
- A $34 million boost[79] to the local economy was provided as NDIS fully rolled out.

TAC relocation

As part of the Victorian Government's Moving Forward $502 million blueprint to make regional and rural Victoria the best place to live, work, invest and raise a family, TAC headquarters relocated from Melbourne to Geelong in January 2009 accompanied with 650 employees[80]. Completed on time and on budget, TAC relocation was the largest relocation of any government department or agency in Victoria[81].

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[78] Johnson, L. and Mundell, M. 2023. Regional Resilience and an Interventionist State: The Case of Geelong, Victoria, 1990-2020.

[79] Johnson, L. and Mundell, M. 2023. Regional Resilience and an Interventionist State: The Case of Geelong, Victoria, 1990-2020.

[80] Jackson, Ruth, Jatrana, Santosh, Johnson, Louise, Kilpatrick, Sue and King, Tanya 2013, 'Everybody has settled in so well': How migrants make connections and build social capital in Geelong, Alfred Deakin Research Institute, Deakin University, Geelong, Vic.

[81] Johnson, L., Mundell, M., Bartel, R. (2020). Resilient Geelong: Reasons for Success and Challenges for a post-COVID-19 Future. Geelong: Committee for Geelong

Generous relocation packages were offered to people moving from Melbourne to Geelong, although not all staff took up the offer. Those who did not take up the offer were offered redundancy or redeployment packages.

TAC estimated that the following direct impacts from the relocation:

- 200 employees were recruited from the Geelong region between 2007 and 2017 with at least 75 per cent of those recruited externally now living in Greater Geelong

- The relocation is estimated to have generated more than 850 jobs and $59 million each year in economic benefits to Greater Geelong. In 2017, TAC had 921 employees[82].

- 200 homes have been purchased locally by TAC employees

- improved function and effectiveness with TAC reporting that the move has had significant impact on both service delivery and their financial position

- 800 individuals were directly involved for the fit out and construction activities for the new TAC building.

Work Safe relocation

The Victorian government relocated WorkSafe headquarters to Geelong in 2017, thus transferring 700 jobs and providing an estimated $50 million impact to the area[83]. Also, 250 workers were employed during the construction of the new headquarters[84].

Geelong City Deal

The Geelong City Deal is a 10-year plan to revitalise Geelong and unlock the potential of the Great Ocean Road visitor economy, signed in 2019. The Australian and Victorian Governments, together with the City of Greater Geelong, are delivering $500 million in investment to the region, supporting Geelong's economic diversification, growth of the visitor economy and improved city centre. Only a small part of the projects that are part of the City Deal are currently complete.

Claimed observable impacts of government interventions

Relocation policies have resulted in an estimated 1 871 ongoing jobs in the local economy[85]. This includes both direct jobs, flow on impacts and impact of family relocation. This indicated an employment multiplier of 3, indicating that for every direct job created by the relocation, flow-on supply-chain and household consumption effects resulted in an estimated two jobs in the local economy.

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82 Johnson, L., Mundell, M., Bartel, R. (2020). Resilient Geelong: Reasons for Success and Challenges for a post-COVID-19 Future. Geelong: Committee for Geelong

83 Johnson, L., Mundell, M., Bartel, R. (2020). Resilient Geelong: Reasons for Success and Challenges for a post-COVID-19 Future. Geelong: Committee for Geelong

84 Johnson, L. and Mundell, M. 2023. Regional Resilience and an Interventionist State: The Case of Geelong, Victoria, 1990-2020.

85 See sections above.

Each relocation of a government agency was estimated to generate an impact of around $50 million into the Greater Geelong economy while increasing Gross Regional Product or local added-value by $20 million for the duration of the construction.

Characteristics of the region and the town

Located in south-western Victoria, the City of Greater Geelong is Victoria's second largest city. The city has a temperate oceanic climate with modern precipitation, warm summers and mild to cool winters.

Geelong has the sixth largest port in Australia by tonnage, rail lines to Melbourne, Ballarat and Western District and connectivity to South Australia and Great Ocean Road through road networks.

Historically, Geelong was known as the 'wool centre for the world' as European settlement in the 1800s laid emphasis on sheep farming and wool production. Manufacturing became a major driver of the Geelong economy over time, with Ford opening a car factory in 1925. This closed in 2016. Peak employment in the Ford plant was over 4000 in the mid-1980s, but down to 500 by 2013[86].

Deakin University has also played a key role in Geelong's economic transformation through direct employment, capital works, attracting students, securing specialist schools, and undertaking applied research. Waurn Ponds and Waterfront campuses contributed over $426 million annually to the city's economy, an equivalent of 5.3 per cent of Gross Regional Product while supporting three 124 Full Time Equivalent (FTE) jobs[87].

Geelong's population

Geelong has had a rapidly growing population, particularly from 2016 to 2021. There has been growth across all age groups, but particularly 20-40 year olds (chart 4.25)

[86] Geelong Advertiser September 30, 2016, https://www.geelongadvertiser.com.au/news/geelong/ford-geelong-workers-decline-broadmeadows-plants-farewell-to-stay-home/news-story/4d9e68ba31f44ca918d93b0477fba2ea.

[87] Johnson, L. and Mundell, M. 2023. Regional Resilience and an Interventionist State: The Case of Geelong, Victoria, 1990-2020.

7.1 Geelong's population by age groups across 2011 to 2021
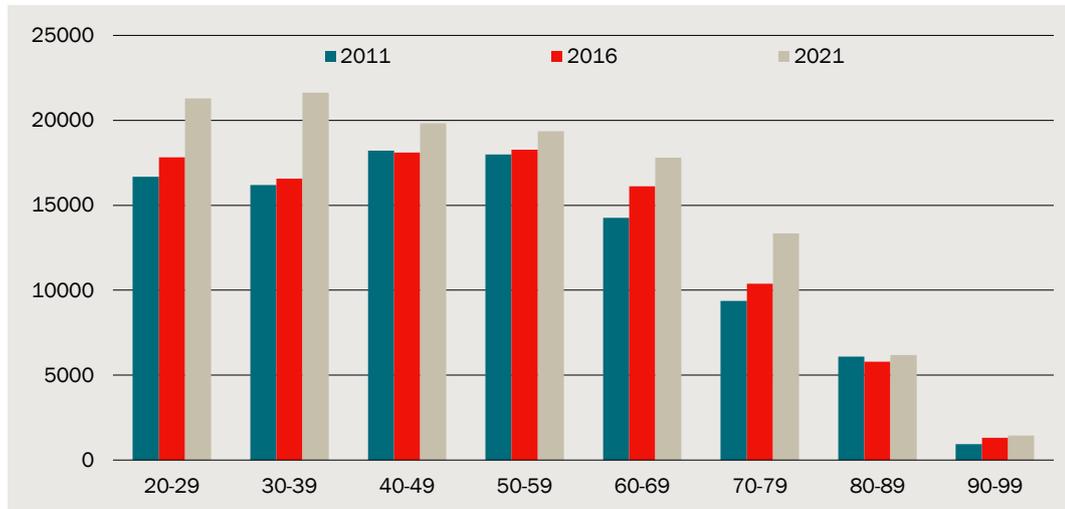
Data source: CIE analysis based on ABS Census data.

Source of Geelong's migrants and destination of leavers

The major source of new migrants into Geelong are people who have moved from Melbourne, with around 3 500 people having relocated between 2016 and 2021. Geelong has also drawn in migrants from neighbouring regions (chart 7.2)

7.2 Inflow of migrants into Geelong between 2016 and 2021
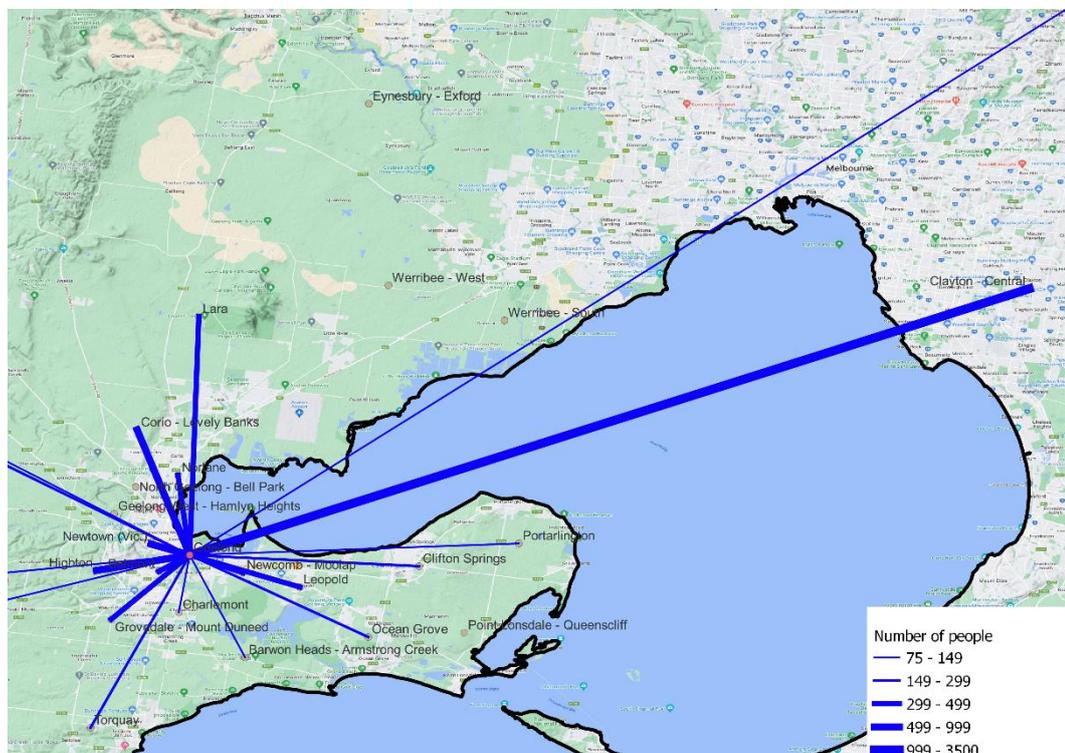
Data source: CIE analysis based on ABS Census data.

The migration inflows into Geelong can also be represented in terms of the proportion of the origin population, providing an indicator of migration propensity into the region. Overall, the share of migrants moving into Geelong is higher for those places in closer proximity, meaning nearby places have a higher propensity to migrate (chart 7.3).

7.3   Migration propensity into Geelong between 2016 and 2021
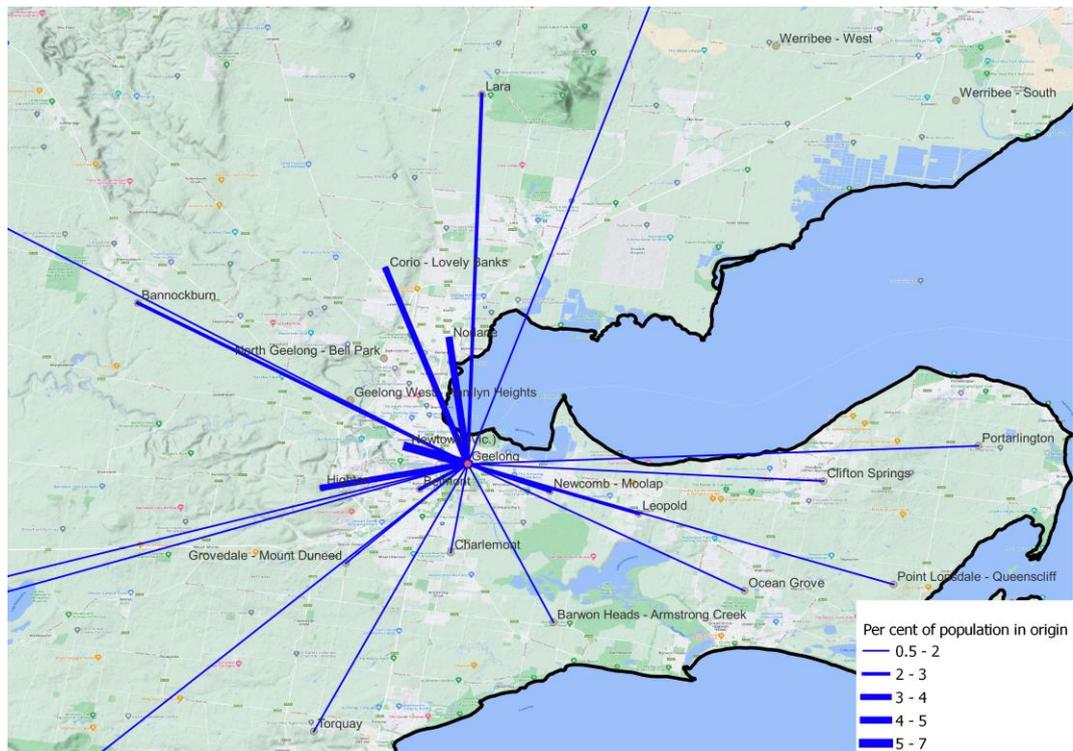
Data source: CIE analysis based on ABS Census data.

The outflows of migrants from Geelong largely mirrors the regions from which Geelong receives inward migration, with Melbourne being the largest source of outward migration (chart 7.4)

7.4   Outflow of migrants from Geelong between 2016 and 2021
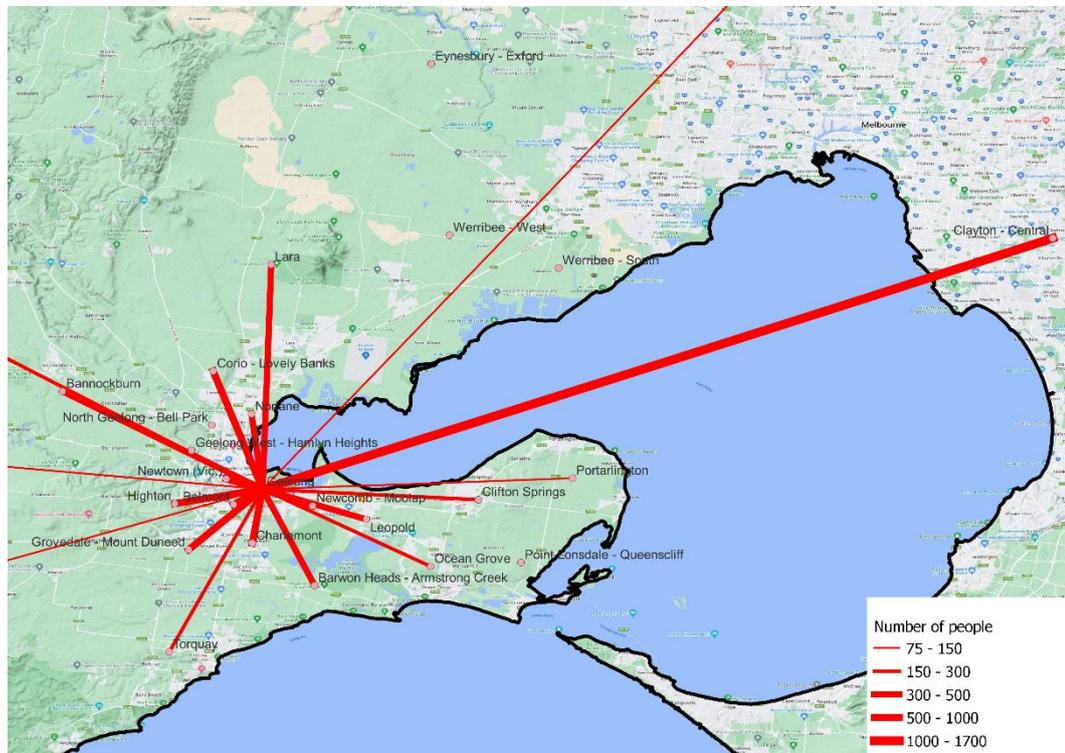
Data source: CIE analysis based on ABS Census data.

Education status of residents

About 23 per cent of Geelong's population has a bachelor's degree. An advanced diploma or an education that is higher than that has been earned by nearly half of the city's population.

7.5   Education status of population in Geelong – 2021 census
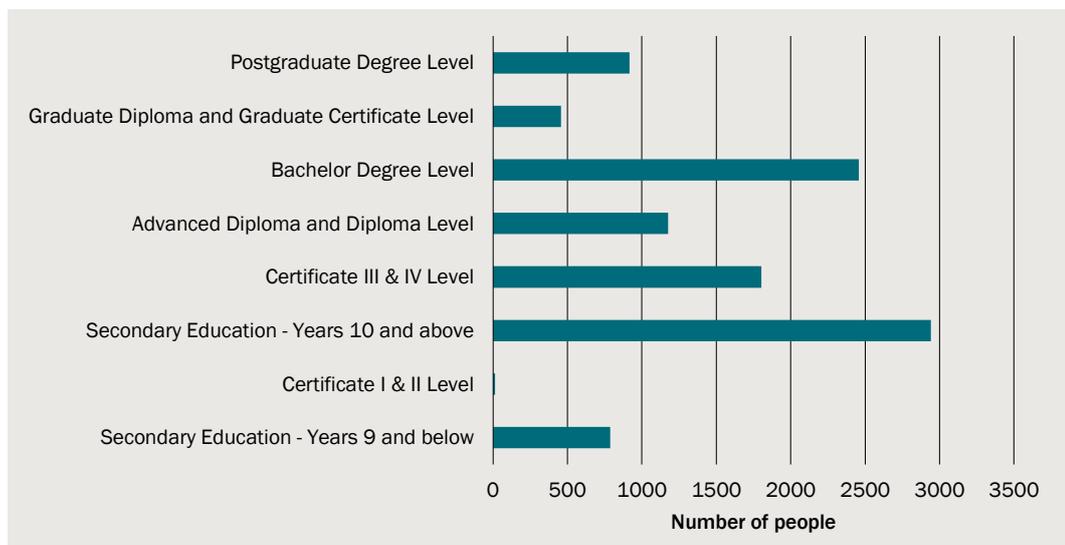
Data source: ABS place of usual residence 2021 census data.

Geelong's economy

Health care and social assistance (15 per cent) and construction (14 per cent) make up the biggest share of Geelong's economy (chart 7.6). This is followed by manufacturing (9 per cent) and education and training (8 per cent).

7.6   Industry share of Geelong 2021
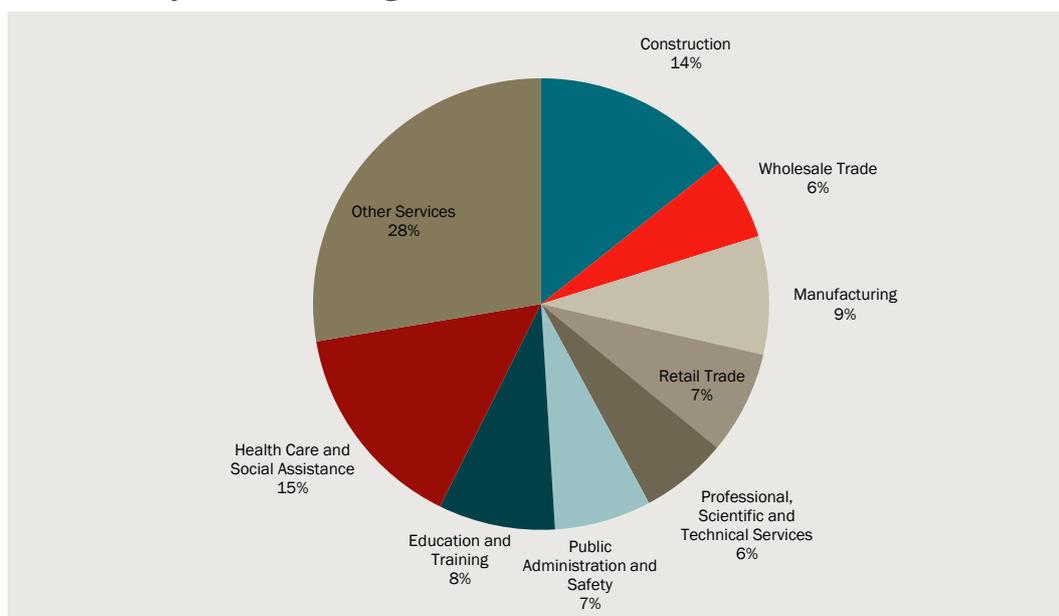
Data source: CIE analysis based on .id consulting industry sector analysis data.

Geelong's infrastructure

Table 7.7 summarises the state of physical and social infrastructure in Geelong and compares it with similar big regional areas such as Ballarat and Melton and surrounding regions such as Leopold, Lara, and Ocean Grove. Geelong has the highest number of educational institutions, public and private hospitals, and railway stations.

7.7   Infrastructure in Geelong and similar cities

	Education facilities	Rail stops	Public hospital	Private hospital	Airport	Landing ground
	No.	No.	No.	No.	No.	No.
Geelong	73	10	3	3	0	1
Ballarat	47	5	3	2	1	0
Lara	4	1	0	0	0	0
Leopold	1	0	0	0	0	0
Melton	14	1	1	0	0	0
Ocean Grove	2	0	0	0	0	0
Warragul	6	1	2	0	0	0

Source: CIE analysis.

Did government intervention make a difference to migration patterns in Geelong?

Assessments of whether government intervention has impacted on Geelong economically and in terms of population outcomes support a positive impact.

■ Johnson and Mundell (2023) concluded that government intervention has played an important role in Geelong's resilience to the decline of manufacturing[88].

■ Population trends show Geelong achieving substantial population growth — although this is also evident for similar major cities and towns surrounding Melbourne.
  – Geelong achieved the most significant increase in net inward migration from the 2021 Census as compared to the 2016 Census
  – Geelong is in a favourable location for growth even absent the significant government interventions made, because it is relatively closer to Melbourne, has more affordable housing and can benefit from working from home arrangements that reduce commuting costs

■ Economic outcomes such as unemployment suggest a potential impact from the interventions, with Geelong achieving a larger reduction in its unemployment rate from 2016 to 2021 than other areas. There are not noticeable differences in earnings

■ The pattern of jobs that have increased are focused on professional and manager jobs, consistent with the objectives of the interventions.

Population trends

Geelong's population has grown by 16 per cent from 2011 to 2021. In particular, Geelong has witnessed a substantial increase in population aged between 20 and 40 years (chart 7.1). A comparison of population growth rates with similar large regional areas and towns in close to Geelong across the three census periods shows that Geelong grew steadily since 2016, much like other regional towns. Ballarat and Leopold are the only towns that showed a lower growth rate than Geelong (table 7.8).

7.8   Compounded annual population growth rate across cities comparable to Geelong

	2011-2016	2016-2021	Over a decade (2011-2021)
	per cent	per cent	per cent
Geelong	0.4	2.7	1.5
Ballarat	1.0	2.2	1.6
Lara	2.6	2.8	2.7
Leopold	4.3	0.7	2.5
Melton	3.6	5.2	4.4

[88] Johnson, L. and Mundell, M. 2023. Regional Resilience and an Interventionist State: The Case of Geelong, Victoria, 1990-2020; Johnson, L., Mundell, M., Bartel, R. (2020). Resilient Geelong: Reasons for Success and Challenges for a post-COVID-19 Future. Geelong: Committee for Geelong.

| Ocean Grove | 4.5 | 4.5 | 4.5 |
| Warragul | 1.8 | 4.1 | 2.9 |

Source: CIE analysis based on ABS Census data.

Unemployment and other economic indicators

Unemployment rates are an important driver of migration. If government activities had led to a reduced unemployment rate then this would tend to increase inward migration. Unemployment rates in Geelong are relatively high compared to comparable areas, but have not followed a different trend to most of these areas (chart 7.9).

7.9   Unemployment rate across cities comparable to Geelong
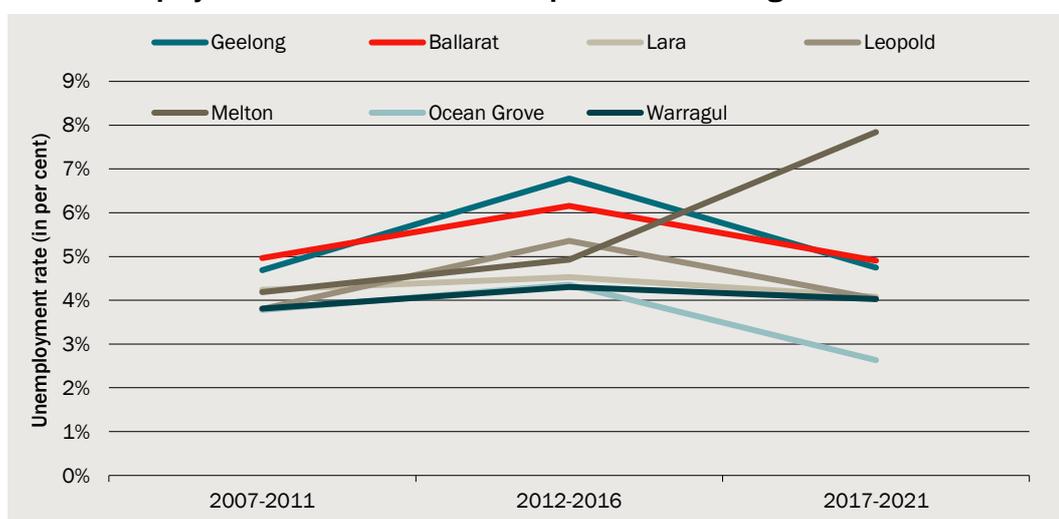
Data source: CIE analysis.

Geelong does not stand out as a high-income regional town when compared to other regional towns, based on median income (table 7.10). Also, in comparison to Greater Melbourne, Geelong has a smaller proportion of high-income households and a higher proportion of low income households.

7.10 Median weekly income across cities comparable to Geelong

City/UCL	2011	2016	2021
	$/week	$/week	$/week
Geelong	1044	1210	1575
Ballarat	990	1159	1406
Lara	1373	1556	1938
Leopold	1229	1369	1629
Melton	1127	1288	1537
Ocean Grove	1226	1499	1957
Warragul	1016	1189	1548

Source: CIE analysis based on ABS Census data.

Migration rates and sources of migration

Geelong's net migration rate picked up steadily after 2016 (chart 7.11). This aligns well with Worksafe and NDIA headquarters opening in 2017 and 2019 respectively. Other initiatives which may have aided in enabling the regional economy and attracting a younger population include the presence of Deakin University's two campuses and government initiatives such as Regional Jobs and Infrastructure Fund[89] and Geelong Innovation and Investment Fund.

Chart 7.11 also shows the net migration rate trajectory of comparable towns during the same period. Warragul displays a similar trajectory to Geelong and is the only town that has grown faster than Geelong. Geelong has had the most significant increase in its net migration rate for 2016 to 2021 as compared to 2011 to 2016 (chart 7.12).

7.11   Net migration rates across cities comparable to Geelong
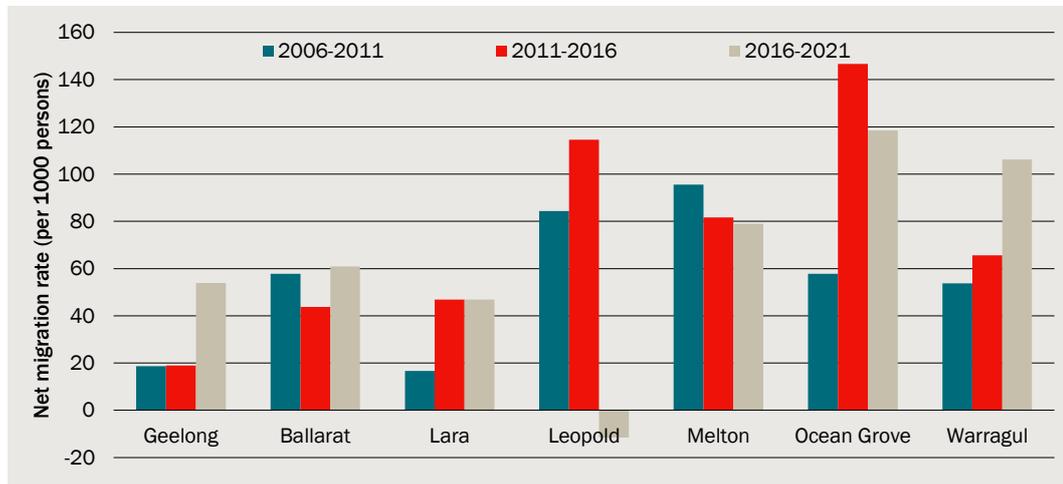
Data source: CIE analysis based on ABS Census data.

7.12   Change in net migration rates across cities comparable to Geelong
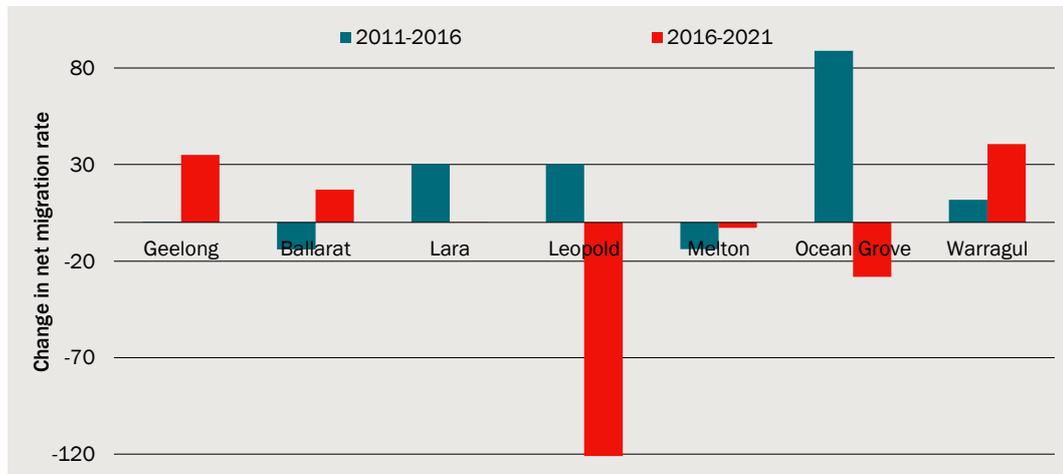
Data source: CIE analysis based on ABS Census data.

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89   Regional Jobs and Infrastructure Fund was not specific to Geelong.

People aged between 20 and 40 years have migrated the most to Geelong indicating that young and unattached individuals are most likely to relocate (chart 7.13).

7.13   Net migration rate by age groups across 2011, 2016 and 2021 census periods
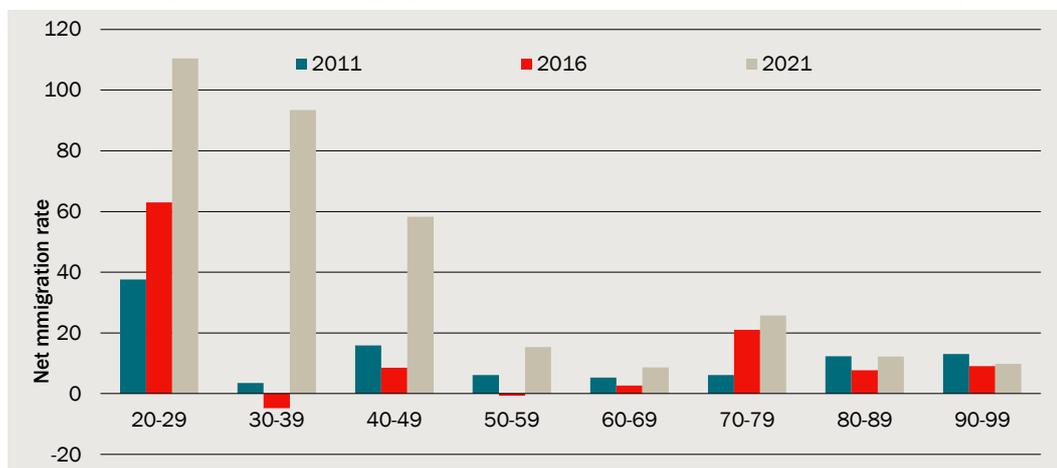
Data source: CIE analysis based on ABS Census data.

Occupations and diversification

To analyse if relocation initiatives led to a change in the composition of occupations and helped diversify the regional economy from a manufacturing to a service industry, occupation data was analysed by place of work and place of usual residence in chart 7.14 and chart 7.15 respectively.

- Since 2016, the share of professionals and managers living and working in Geelong has consistently climbed. This includes education, health, ICT and social and welfare professionals.

- This is consistent with the intentions of the government programs and the types of jobs they would be expected to lead to.

7.14   Geelong occupation by place of work for 2011, 2016 and 2021 census periods
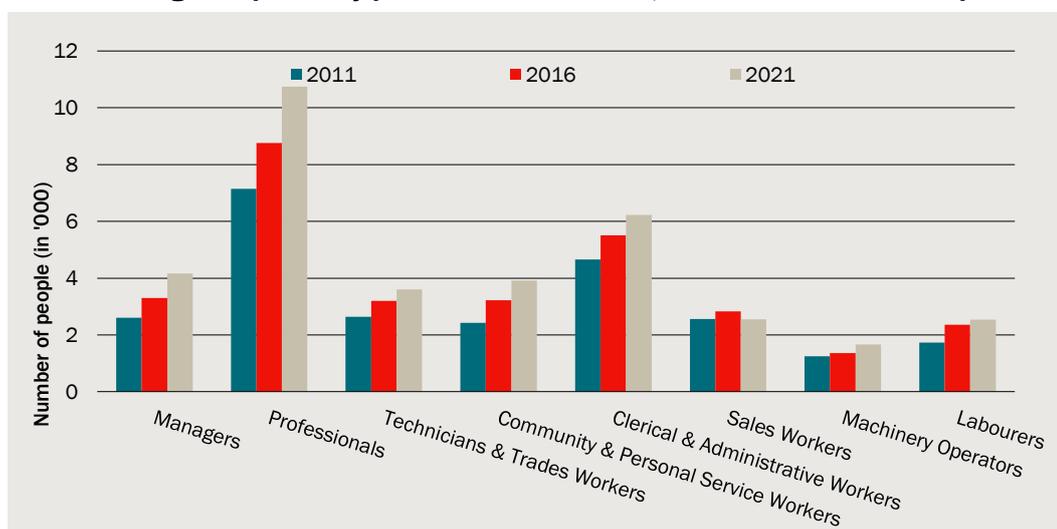
Note: Machinery Operators also includes drivers.

Data source: ABS table builder.

7.15   Occupation by place of usual residence for 2011, 2016 and 2021 census periods
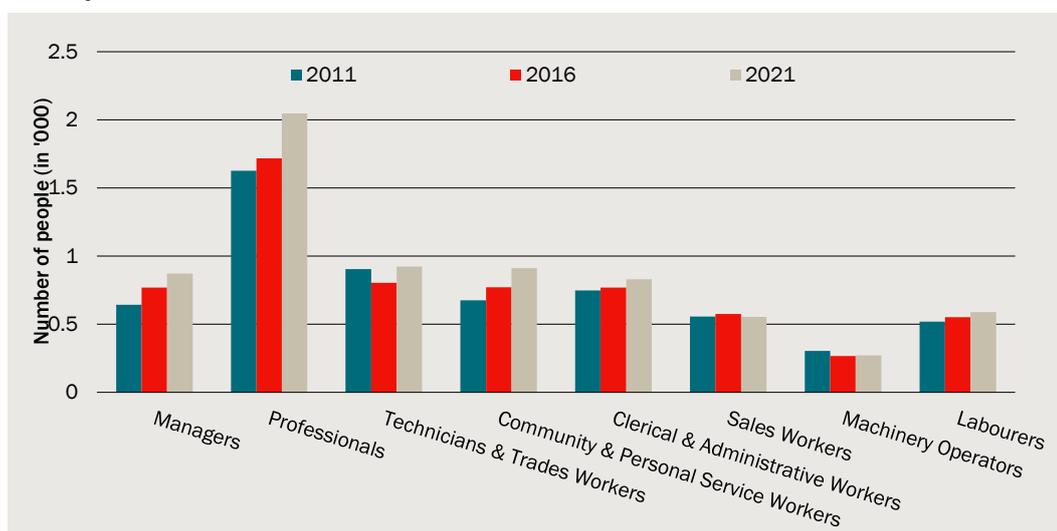
Note: Machinery Operators also includes drivers.

Data source: ABS table builder.

Increased worker mobility often does not mean increased jobs in the economy. Long distance commuting is an alternative to residential mobility. To examine if relocation interventions have resulted in people moving to Geelong, we analysed place of work and place of usual residence census data across three census periods. Table 7.16 shows that Geelong has seen a noticeable increase (22 per cent) in the share of people who have shifted their base to Geelong. Long distance commuting has seen an even bigger increase (33 per cent) pointing to a spill over effect. People commuting out of Geelong has increased by 8 per cent. This could be people who have moved their base to Geelong but retained their jobs elsewhere such as in Melbourne.

7.16   Number of people commuting into and out of Geelong for work

	2011	2016	2021	per cent change from 2016-2021
Living in Geelong and working outside Geelong	28 209	24 677	26 711	8
Living and working in Geelong	67 190	78 907	96 343	22
Living outside Geelong and working in Geelong	11 966	16 151	21 491	33

Source: CIE analysis. ABS tablebuilder,

Townsville

Townsville is a useful case study for the impact of government intervention because it was the first City Deal. The City Deal serves as a partnership between the Australian Government, the Queensland Government, and the Townsville City Council, with the aim of fostering development and prosperity in the region. Spanning a period of up to 15 years, the City Deal encompasses a range of initiatives and projects designed to bring about positive change. The City Deal has been in force since 2016.

Reasons for government intervention

The economy of Townsville has had to undergo mining boom and bust cycles, natural disasters and structural shifts. Townsville has historically relied on industries such as mining and defence. However, mining has declined in the region over the years (chart 4.26).

7.17   Mining as a per cent of Townsville GDP
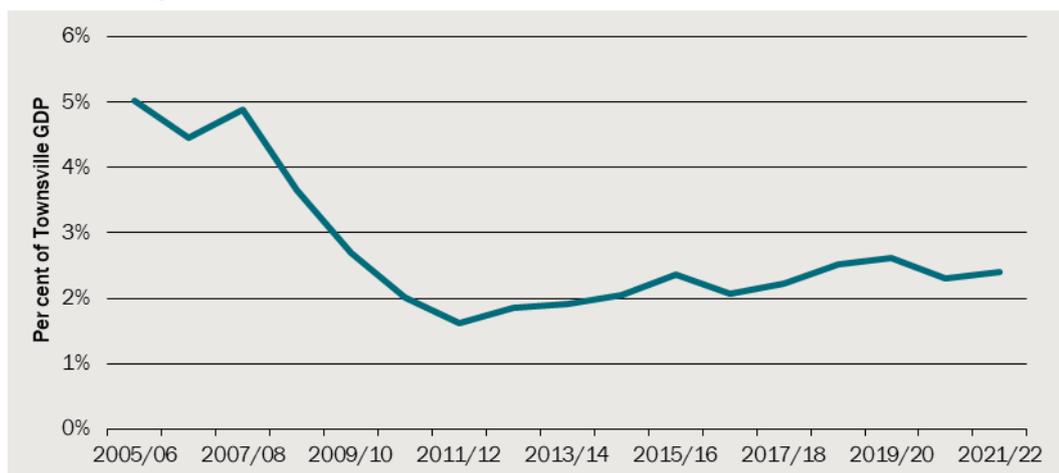
Data source: CIE analysis based on .id consulting industry sector analysis data.

The City Deal aims to diversify the local economy by attracting new industries and investment. This is intended to create a more resilient and sustainable economy for the region.

Defence is expected to continue to be a significant contributor to the Townsville economy. Therefore, there is provision in the City Deal for developing Townsville as a significant Defence hub in the country. As one of Australia's prime strategic Defence regions, Townsville is situated on the north-eastern coast of Queensland, uniquely positioned for mounting operations into Southeast Asia and the Pacific.

Government interventions undertaken

In Townsville, significant government interventions are in place to drive economic growth, create jobs, and address various regional challenges. The City Deal serves as a comprehensive partnership between the Australian Government, the Queensland Government, and the Townsville City Council, with the aim of fostering development

and prosperity in the region. Spanning a period of up to 15 years, the City Deal encompasses a range of initiatives and projects designed to bring about positive change. The City Deal has been in force since 2016.

The Townsville City Deal will be delivered through a range of commitments which are grouped into the following six key initiatives developed by the Townsville community:

- Capital of North Queensland
- Innovative and Connected City
- Industry Powerhouse of the North
- Defence Hub
- Port City
- Enabling Infrastructure.

One notable aspect of the City Deal is the commitment to key infrastructure projects:

- the North Queensland Stadium project is a flagship development for the City Deal, aiming to contribute to the growth of the local economy and enhance the region's sporting and entertainment capabilities.
- significant upgrades to the Bruce Highway are underway, aiming to improve connectivity and transportation links within Townsville and beyond.
- the construction of a new port and the establishment of a new rail line aim to improve the city's infrastructure, facilitating trade, industry, and transportation efficiency.

Recognising the importance of water security and its impact on the region's prosperity, the City Deal also includes initiatives aimed at improving water management. This includes establishing a water taskforce to work to improve Townsville's water security, supply and water usage. This would cover agricultural activities, supporting local businesses, and maintaining the quality of life for Townsville's residents.

Furthermore, the City Deal places emphasis on fostering innovation and research. By investing in research and innovation, the partnership aims to stimulate growth in knowledge-based industries, attract investment, and create high-value jobs. This focus on research and innovation aligns with the broader vision of creating a sustainable and diversified economy for the region.

Other activities through the City Deal include:

- the Townsville Jobs Hub — a resource connecting job seekers with employment opportunities and supporting workforce development.
- Jobs Queensland has been tasked with delivery of a workforce development plan for Townsville.
- the Townsville North Queensland Defence Industry Strategy — this aims to leverage the city's strategic location and bolster the defence industry, creating defence-related jobs and contributing to the local economy, and
- the establishment of a mental health and drug and alcohol rehabilitation centre. This facility aims to provide support and resources to individuals facing mental health challenges and substance abuse issues, ensuring their well-being and facilitating their reintegration into the community.

To date, key projects completed under the Townsville City Deal include:

- Queensland Country Bank Stadium
- Haughton Pipeline Stage 1
- Port of Townsville Channel Upgrade.
- Townsville Workforce Development Plan, and the
- Townsville Health and Knowledge Development Strategy.

Intended impact of government intervention

The Townsville City Deal is a long-term partnership that focuses on driving economic growth, creating jobs, and addressing various regional needs.

Through a range of initiatives spanning infrastructure, water security, research and innovation, job creation, and social welfare, the City Deal aims to deliver significant benefits to Townsville and the surrounding region for years to come. The intended impacts of the City Deal intervention in Townsville were:

- **Revitalisation:** The intervention aimed to revitalize the CBD and Waterfront PDA (priority development area) by improving infrastructure, enhancing aesthetics, attracting businesses, and creating a vibrant commercial environment.
- **Activation of industry and export growth:** The intervention sought to stimulate industry growth and expand export opportunities by providing support to existing industries, attracting new businesses, and leveraging the region's competitive advantages.
- **Support for long-term growth of local businesses:** The intervention aimed to support the growth and sustainability of local businesses by providing resources, access to finance, and business development opportunities.
- **Enhancement of liveability:** The intervention aimed to improve the quality of life for residents by investing in infrastructure, amenities, and public spaces, and enhancing access to essential services and recreational opportunities.

Characteristics of the region and the town

Townsville is located within North Queensland region and is one of the five major regional centres in the area. North Queensland has one of the most diverse economic bases in Australia and encompasses a natural environment of reef, rainforest and outback, which provide tourism growth opportunities and an attractive lifestyle for the residents[90]. It is situated near the UNESCO World Heritage-listed Great Barrier Reef.

Townsville was established principally as a port city to support the growth of mining and agricultural production in the region. However, the mining industry has not sustained in the area and agriculture is only a small industry in Townsville. It is a coastal town with a large military presence in the area.

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90 See, https://www.statedevelopment.qld.gov.au/regions/queensland/north-qld

The Port of Townsville is a multi-purpose port that handles predominantly bulk and general cargo through nine operational berths. The port serves a geographically large hinterland region, and the significant mining and mineral processing industries within the region have shaped the development of the port and underpin its significance. The port plays an important role in the economy in a local, regional and State context and this is recognised under the Northern Economic Triangle Infrastructure Plan 2007-2012 and the Townsville Economic Gateway Strategy (2006). Upgrades to the Port of Townsville and its efficient operation is ingrained as part of the Townsville City Deal. The current annual trade through the port amounts to approximately 10 million tonnes[91]. Current trade forecasts predict a fourfold increase in this trade tonnage throughput by 2040. This increase is expected to result from increases in existing trades (particularly those linked with the mining and industrial sectors) and new bulk trades.

Table 7.18 shows the average temperature and precipitation in Townsville over the years. The city has a tropical savanna climate, with hot, humid summers and warm, dry winters.

7.18 Townsville climate

	Unit	2011	2016	2021
Maximum temperature	Celsius	28.63	30.10	29.49
Minimum temperature	Celsius	19.39	21.58	21.01
temperature volatility	Celsius	9.24	8.52	8.49
average temperature	Celsius	24.01	25.84	25.25
precipitation	mm	4.03	2.60	2.36

Source: Bureau of Meteorology.

Townsville's population

The population of Townsville is around 160 000 people. It has grown by 4 percent from 2011 to 2021 (chart 7.19).

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91 See, https://www.statedevelopment.qld.gov.au/__data/assets/pdf_file/0019/17713/port-townsville-ias.pdf

7.19 Townsville Population in each census period
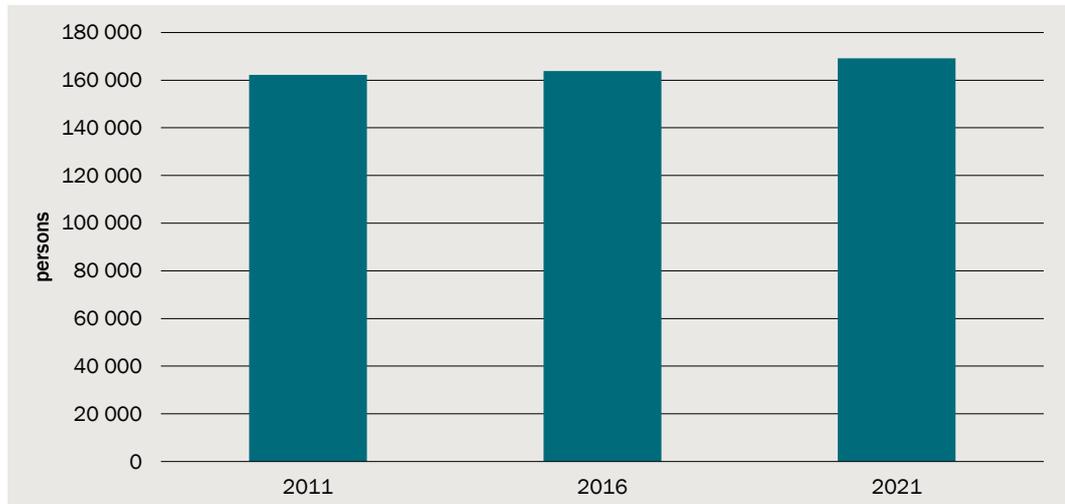
Source of Townsville's migrants and destination of leavers

The source of Townsville's inward migration is largely from neighbouring regions such as Annandale, Burdell and Oonoonba, although it also receives migrants from Brisbane (chart 7.20)

7.20 Inflow of migrants into Townsville between 2016 and 2021
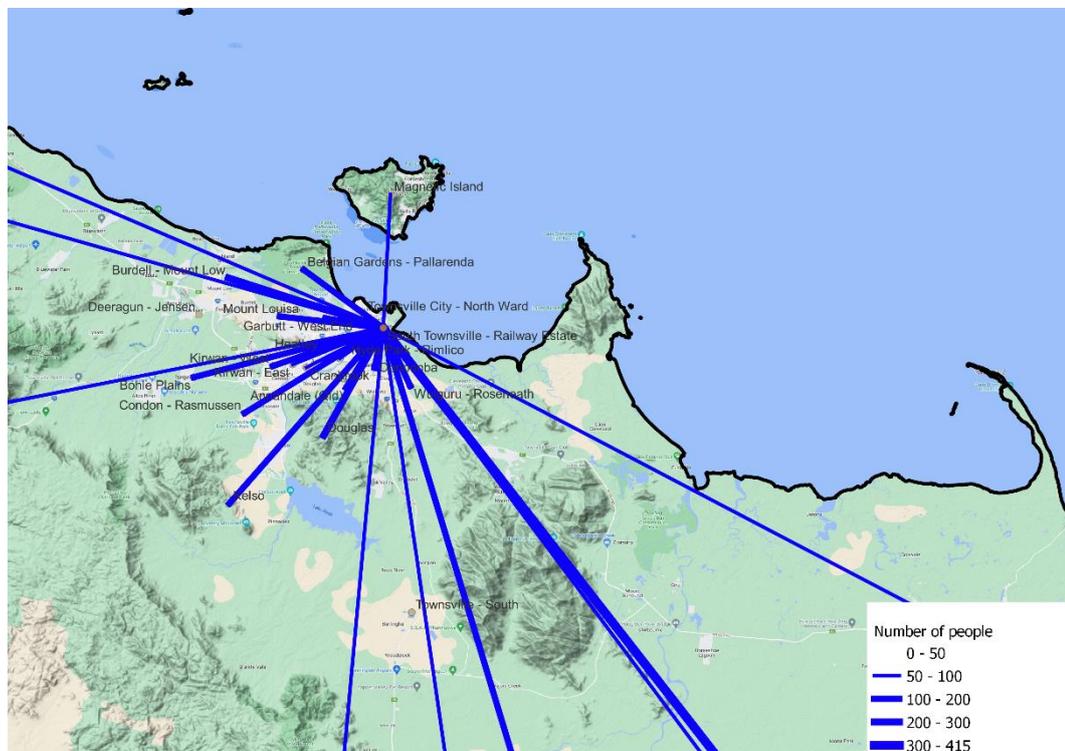
The inward migration propensity, as a share of origin population largely mirrors the gross measures of inward migration, with regions in closer proximity to be more likely to move to Townsville compared to other places (chart 7.21)

7.21 Migration propensity into Townsville between 2016 and 2021
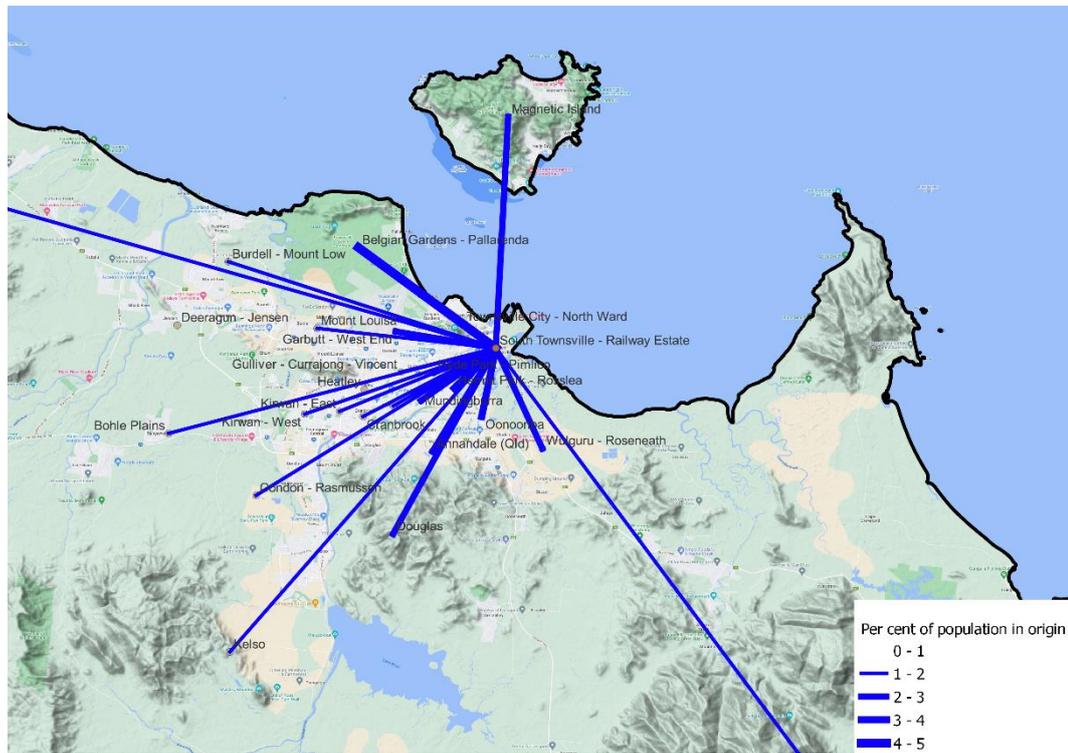
Data source: CIE analysis based on ABS Census data.

Of those leaving Townsville, almost 800 people moved to Brisbane over the period 2016 to 2021, which is the top destination in terms of number of people for those who left the region. Other destinations also included neighbouring coastal cities such as Oonoonba, Garbutt and Burndell. There appears to be two-way flows between Townsville and its neighbouring regions, although these flows tend to yield net outward migration (chart 7.22)

7.22 Outflow of migrants from Townsville between 2016 and 2021
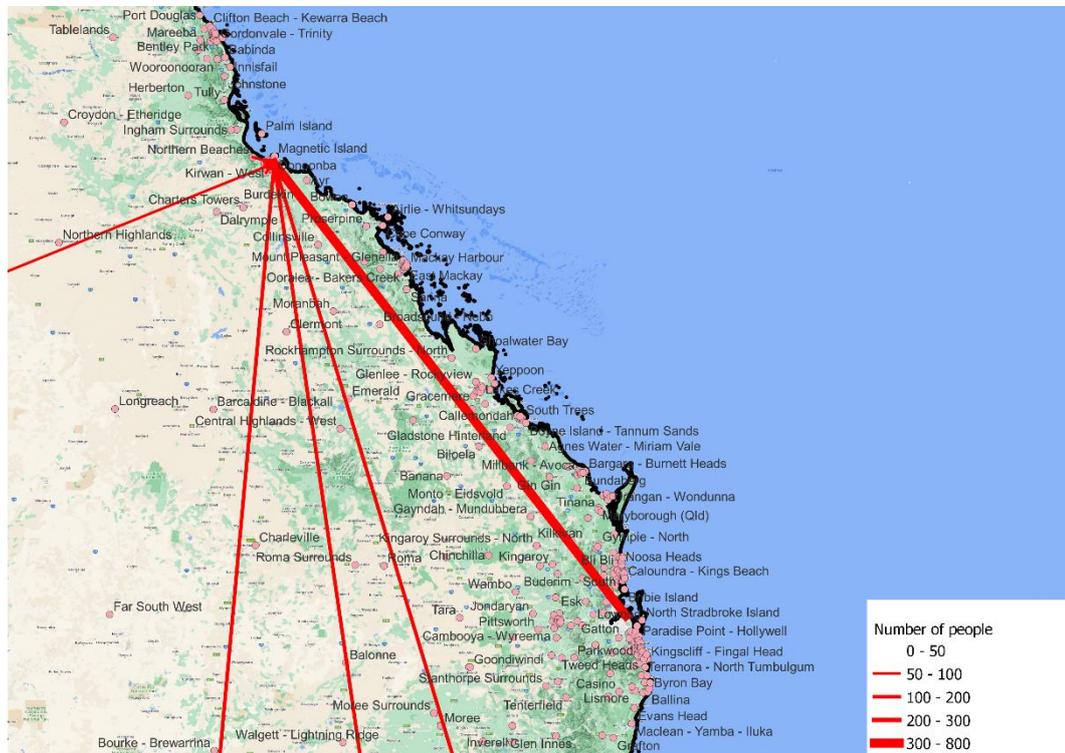
Data source: CIE analysis based on ABS Census data.

Education status of residents

Approximately 27 per cent of the Townsville population is Secondary education (Year 10 and above) educated, followed by 16.5 per cent being educated at the Certificate 3 and 4 Level. Only 10.5 per cent of the Townsville population held a Bachelor degree (chart 7.23).

7.23 Education level of Townsville population according to 2021 Census
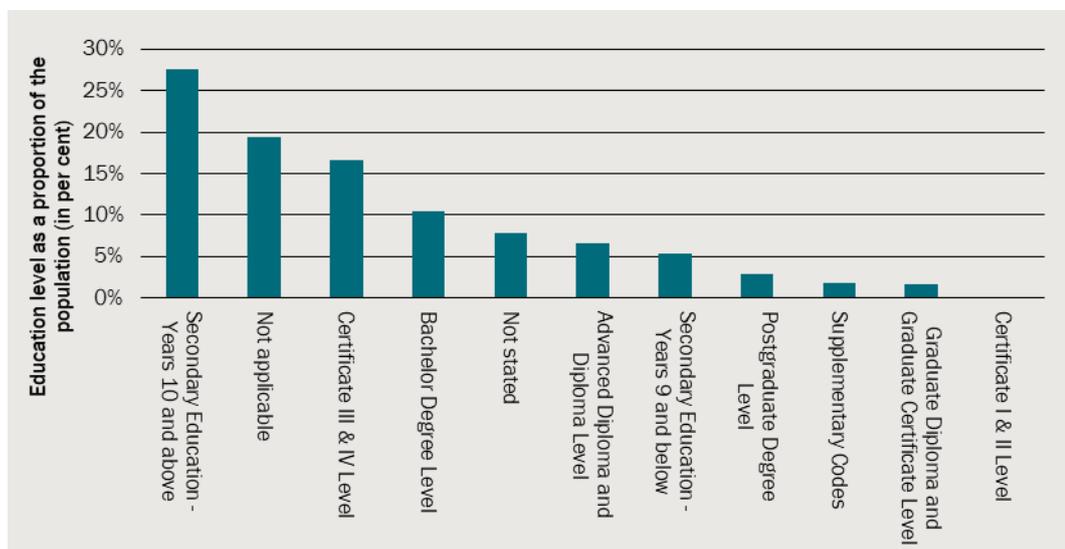
Data source: CIE based on data from ABS Census.

Townsville's economy

Chart 7.24 shows the industry share across Townsville. The Public Administration and Health makes up 28 per cent of the economy. Education and training make up 8 per cent. This reflects that Townsville is a regional hub for the military in North Queensland and for education and healthcare.

7.24 Industry share of Townsville GDP 2021
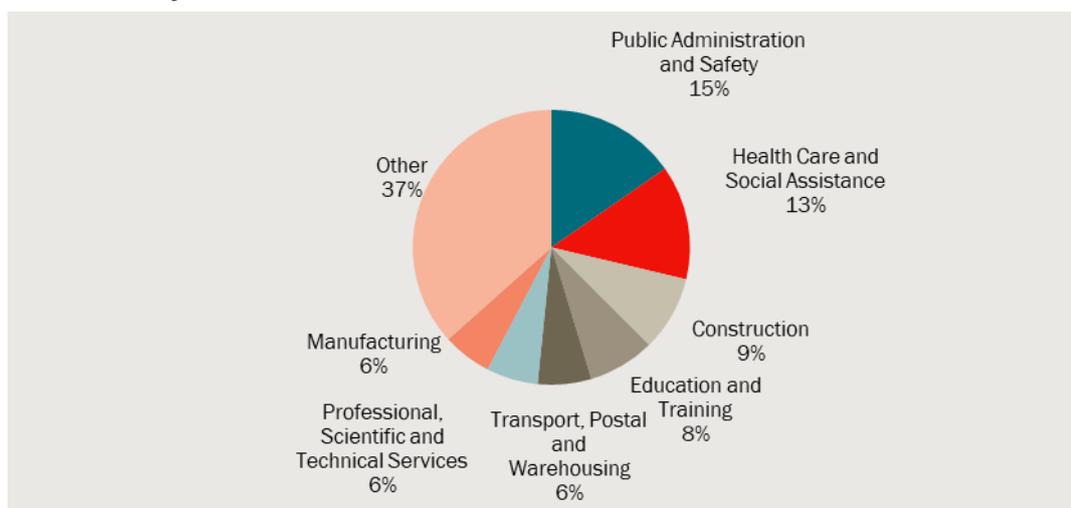
Data source: CIE analysis based on .id consulting industry sector analysis data.

The largest Australian defence base is located in Townsville. Townsville has always been a strategic defence location and therefore includes a strong military presence in the area since World War II. The Lavarack Barracks, located in the city is a key component of the Australian Defence Force's operations in the Northern Australian region. Additionally, there are other defence-related facilities in and around Townsville, including RAAF Base Townsville and the Defence Science and Technology Organisation.

Townsville, according to the 2021 Census, had more currently serving ADF members than any other regional area (shown in 2.2).

7.25 Regional areas (SA3) for people currently serving in the ADF, by service type, 2021

Statistical Areas Level 3 (SA3)	Regular Person count	Percentage of regular persons	Reserve Person count	Percentage of reserves
	No.	Per cent	No.	Per cent
Townsville, QLD	4 962	8.2	565	2.3
North Canberra, ACT	2 244	3.7	534	2.2
Rockingham, WA	1 995	3.3	464	2.0
The Gap - Enoggera, QLD	1 643	2.7	369	1.5
Gungahlin, ACT	1 583	2.6	360	1.5
Ipswich Inner, QLD	1 495	2.4	347	1.4
Sydney Inner City, NSW	1 387	2.3	318	1.3
Wagga Wagga, NSW	1 355	2.2	315	1.3

Statistical Areas Level 3 (SA3)	Regular Person count	Percentage of regular persons	Reserve Person count	Percentage of reserves
	No.	Per cent	No.	Per cent
Shoalhaven, NSW	1 341	2.2	277	1.1
Mornington Peninsula, VIC	1 299	2.2	268	1.1
Queanbeyan, NSW	1 211	2.0	251	1.0
Liverpool, NSW	1 130	1.9	240	1.0
Darwin City, NT	1 117	1.9	239	1.0
Wodonga - Alpine, VIC	1 061	1.8	232	1.0
Newcastle, NSW	981	1.6	230	1.0

Source: CIE based on data from the ABS Census 2021.

Townsville's infrastructure

Townsville has two universities, James Cook University and CQ university, located within its borders. The city also has the Townsville Hospital and Health Service, serving not only the local community but also the wider region of North Queensland.

Townsville also has the headquarters for the Australian Institute of Marine Science and Great Barrier Reef Marine Park Authority, and Commonwealth Scientific Industrial and Research (CSIRO).

Table 7.26 summarises the number of available physical and social infrastructures within Townsville and other towns and cities across North Queensland. It is evident that amongst the towns listed, Townville has the greatest number of educational institutions, public and private hospitals, railway stations.

7.26 Infrastructure across North Queensland

	Education	Rail stops	Public hospital	Private hospital
	No.	No.	No.	No.
Townsville	54	13	2	5
Cairns	34	11	1	3
Gympie	11	2	1	1
Mackay	29	2	1	5
Mount Isa	15	3	1	0
Yeppoon	6	2	1	0

Source: CIE.

Did government intervention make a difference?

The City Deal began in 2016. Most developments under the city deal were initiated after 2016 and some projects are still ongoing. This makes it relatively difficult to measure changes to date, as the drivers of migration tend to be quite slow. To date, the evidence does not suggest that there has been a noticeable impact in Townsville's population and economic outcomes.

It remains to be seen if there will be any impact in the future of the ongoing developments. This includes the Lansdown Eco-Industrial Precinct, North Australia Concert Hall and Arts Precinct and the Defence Hub investments.

The following sections examine whether there are noticeable differences in Townsville's migration performance or economy following the City Deal.

Townsville's population and migration outcomes

The population of Townsville increased from 2011 to 2021 by a low of 4 per cent. Growth was higher from 2016 to 2021 (post City Deal) than from 2011 to 2016.

The majority of growth has been in older age cohorts (60-79). The 20-29 age group population has fallen between 2016 to 2021 (chart 4.6).

7.27   Townsville population by age groups across 2011, 2016 and 2021 census
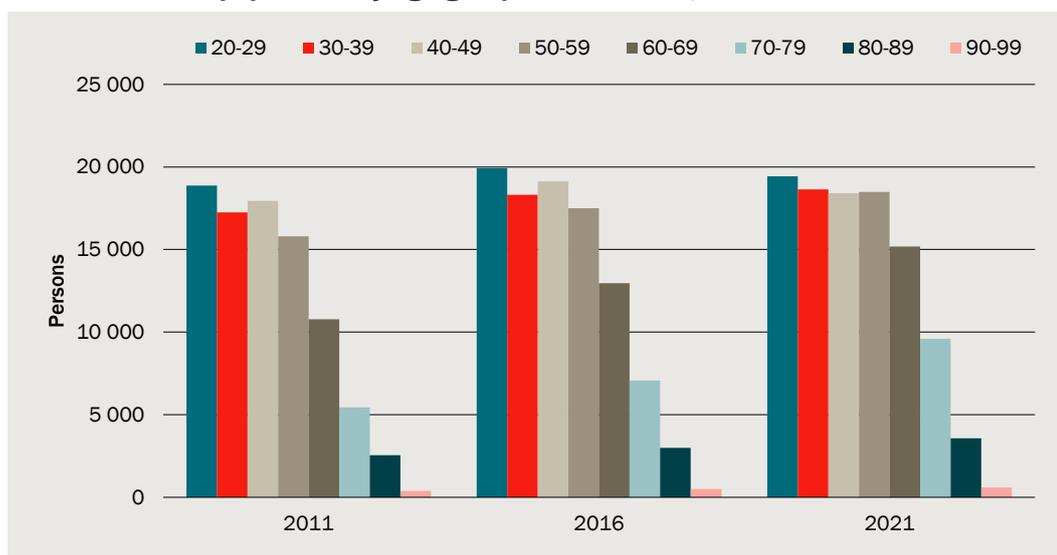
Data source: CIE based on data from ABS Census.

We have compared the migration and population differences with other towns in the same area that did not have a City Deal. These towns include Cairns, Mackay, Gympie, Mount Isa, and Yeppoon. As shown in Chart 7.28, Townsville has the highest number of residents compared to the other cities in North Queensland. It has grown, as have other larger cities in the region from 2016 to 2021.

7.28   Population across within same area (North Queensland)
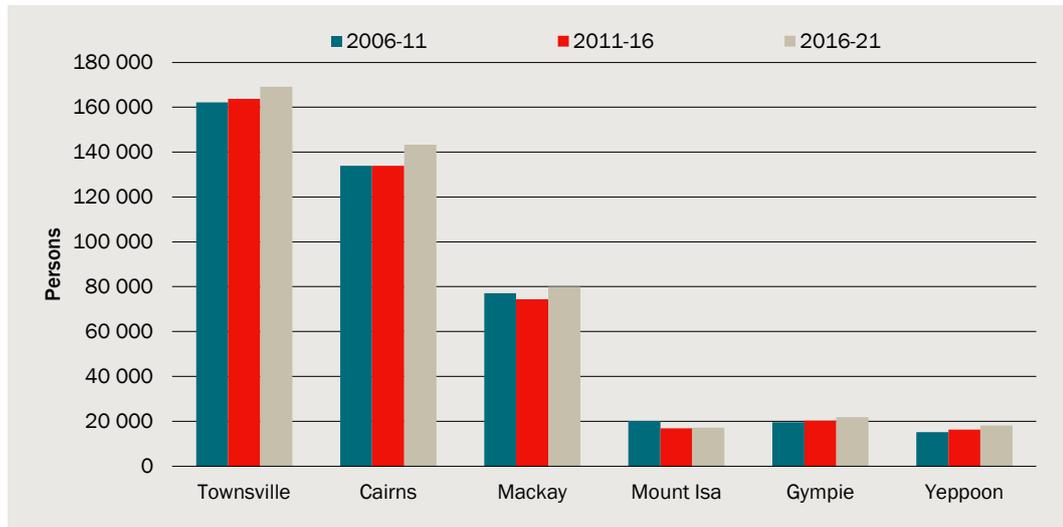
Data source: CIE based on data from ABS Census.

With the exception of Mount Isa, which is an inland town, the other areas are coastal cities/towns just like Townsville. All of these towns/cities are located in North Queensland.

Townsville seems to be the only city that has been experiencing a falling net migration rate since 2011 (chart 7.29). The other North Queensland cities considered for the analysis had a drop in the migration rate between 2011 to 2016 but picked up again in 2016 to 2021. Mount Isa has had continuous negative net migration rates from 2011 to 2021.

7.29   Net migration rates within North Queensland
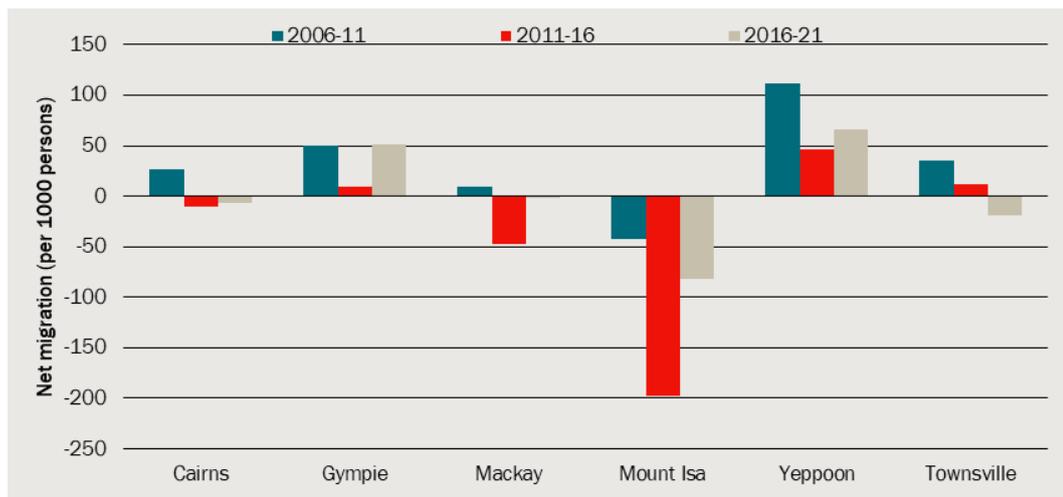
Data source: CIE based on data from ABS Census.

All age groups saw migration rates decline over the years, from 2011 to 2021 except 60- to 69-year-old cohort. Moreover, the 60 years and above age groups were the only ones with net immigration into Townville in 2021.

7.30 Townsville net migration rate by age groups across 2011, 2016, and 2021 census
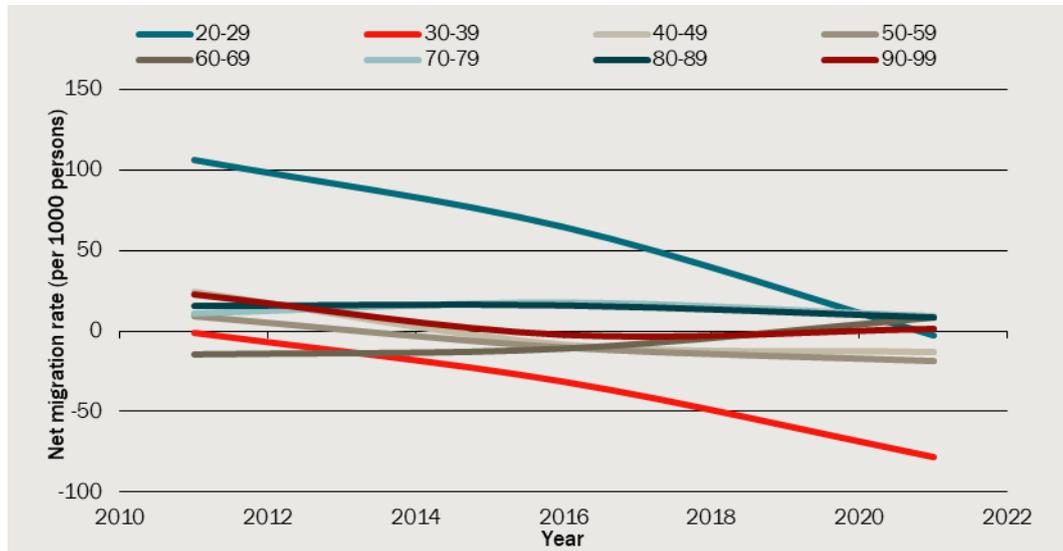
Data source: CIE based on data from ABS Census.

Economic outcomes

Chart 7.31 shows that unemployment rate increased from 2011 to 2016 for all the towns/cities including Townsville. The unemployment rate declined again from 2016 to 2021. Townsville, Mackay and Gympie had the highest unemployment rate in 2016 of approximately 9 per cent. Townsville's unemployment rate fell down to around 5 per cent (approx.)

7.31 Unemployment rate within North Queensland
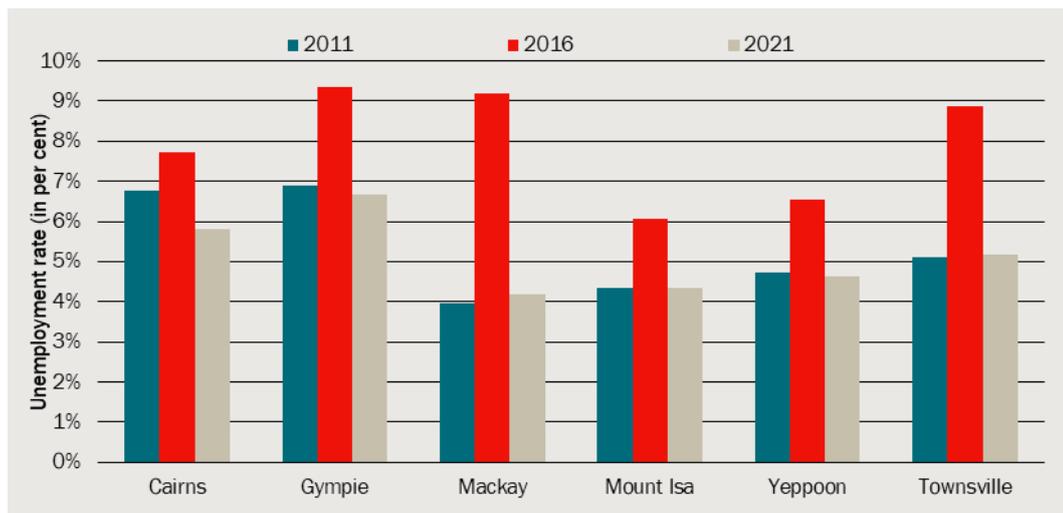
Data source: CIE based on data from ABS Census.

In terms of employment, it was identified in the Townsville Workforce Development Plan 2020-2025 that there is a need for additional 4,640 workers between 2017 and 2022 in the Townsville Statistical Area Level 4 (SA4), according to Jobs Queensland's

Anticipating Future Skills (AFS) project.[92] The labour force did not achieve this level of growth, growing by 1 464 workers between 2016 to 2021.

The median weekly income for Townsville in 2021 is in the middle of the range of other areas in the region. Income grew strongly in Townsville from 2016 to 2021. However, less strongly than in Mackay and Yeppoon and similar to Cairns and Gympie. This suggests broader factors driving income growth rather than specific factors relevant to Townsville.

7.32   Median weekly Income in North Queensland and growth

Town or City	Weekly income 2021	Growth	
		2011 to 2016	2016 to 2021
	$/week	Per cent	Per cent
Mount Isa	2 180	6.3	2.9
Mackay	1 805	-8.3	26.5
Townsville	1 699	4.2	19.1
Yeppoon	1 602	15.5	26.9
Cairns	1 576	14.7	18.2
Gympie	1 083	14.2	17.4

Data source: CIE based on data from ABS Census.

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92 Townsville Workforce Development Plan 2020-2025. See, https://jobsqueensland.qld.gov.au/wp-content/uploads/2020/09/townsville-workforce-development-plan.pdf

8 What do people say are the key drivers of their migration choices?

To complement the empirical data and case studies, we conducted a survey of the Australian population to understand:

- propensity to move and the extent to which people return to previous locations
- the key triggers leading to a migration in the past five, other key factors people take into account and difficulties people found following a migration
- reasons people do not move, and
- moving intentions and the factors that people believe are important for their future moving intentions.

Survey coverage

The survey covered 4313 Australian residents. The survey sample covered two samples. The main sample, which covers 4027 people, were selected so that the survey was representative of:

- demographics — age and sex, and
- location — state and territory.

A small boost sample of 286 was added for people who were recent movers to ensure good coverage of the factors driving recent movers.

The main sample is used for all analysis except for findings about the key triggers and factors for recent movers in deciding to migrate.

The survey covers migration to Australia and migration within Australia. Findings are presented for these separately.

Propensity to move

On average, people surveyed had undertaken 3.5 moves over their lifetime to date and lived in 3.2 different locations (table 8.1). Slightly more than one third of moves are return moves back to a place that a person has previously lived in. Over the past five years, 30 per cent of respondents indicated that they had moved to live in a different city or region. This includes overseas migrants.

8.1   Propensity to move

Item	Unit	Estimate
Average number of moves	Moves per person	3.5
Average number of places lived	Locations per person	3.2
Average number of returning moves	Moves per person	1.3
Share of respondents moving within the last five years	Per cent	30.5

Note: For the main sample only.
Source: CIE based on survey conducted by Pure Profile.

More than one fifth of the sample had never moved to another city or region and a further 18 per cent had only moved once (chart 8.2). About one quarter of the sample had moved five times or more over their lifetime.

8.2   Distribution of respondents by number of moves
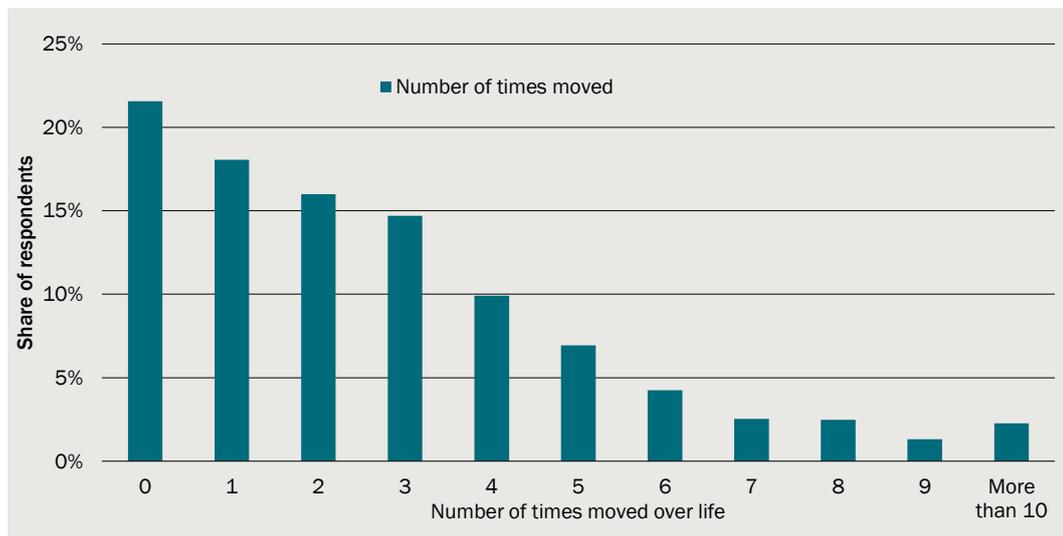
Note: For the main sample only.
Source: CIE based on survey conducted by Pure Profile.

People born overseas or in the Northern Territory had the highest average number of moves (chart 8.3). Overseas migrants by definition have to have made at least one move. People born in capital cities had the least number of moves over their lifetime on average (chart 4.14). Inland areas that are not cities had the higher number of average moves for people born within Australia.

8.3   Average number of moves by type of origin of birth

Note: For the main sample only.

Source: CIE based on survey conducted by Pure Profile.

8.4   Average number of moves by type of place of birth
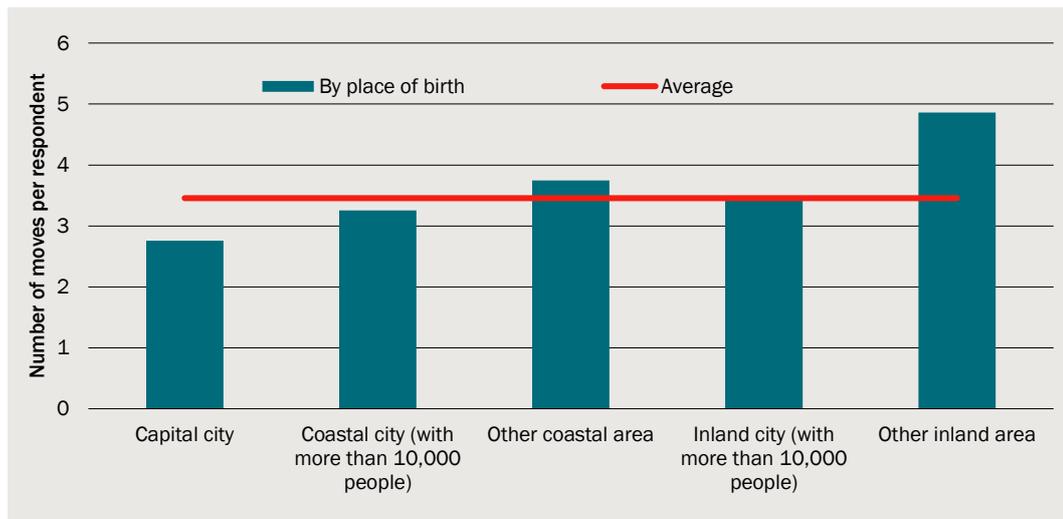
Note: For the main sample only.

Source: CIE based on survey conducted by Pure Profile.

Key drivers for people who have recently migrated

For people who had moved the city or region where they live over the past five years, the survey asked the respondent to identify:

- the key triggers for their move
- the importance of a range of factors in their decision to move
- the importance of a range of difficulties they encountered as part of their move.

The aim of asking these three sets of issues is to understand the extent that government policies or services could influence the decision-making process around moving in different ways.

Triggers for most recent move

The most important trigger for a move for people migrating and from overseas was to take up a job. This was cited by over 35 per cent of respondents (chart 8.5). The second most important factor cited was to be near family or friends.

A number of significant differences are evident in relation to triggers for overseas migrants versus internal migrants:

- internal migrants are much more likely to have been triggered by housing affordability
- overseas migrants are much more likely to have been triggered to move to find high quality school or tertiary education, as well as for cultural reasons.

8.5   Key trigger for most recent move, by origin prior to move
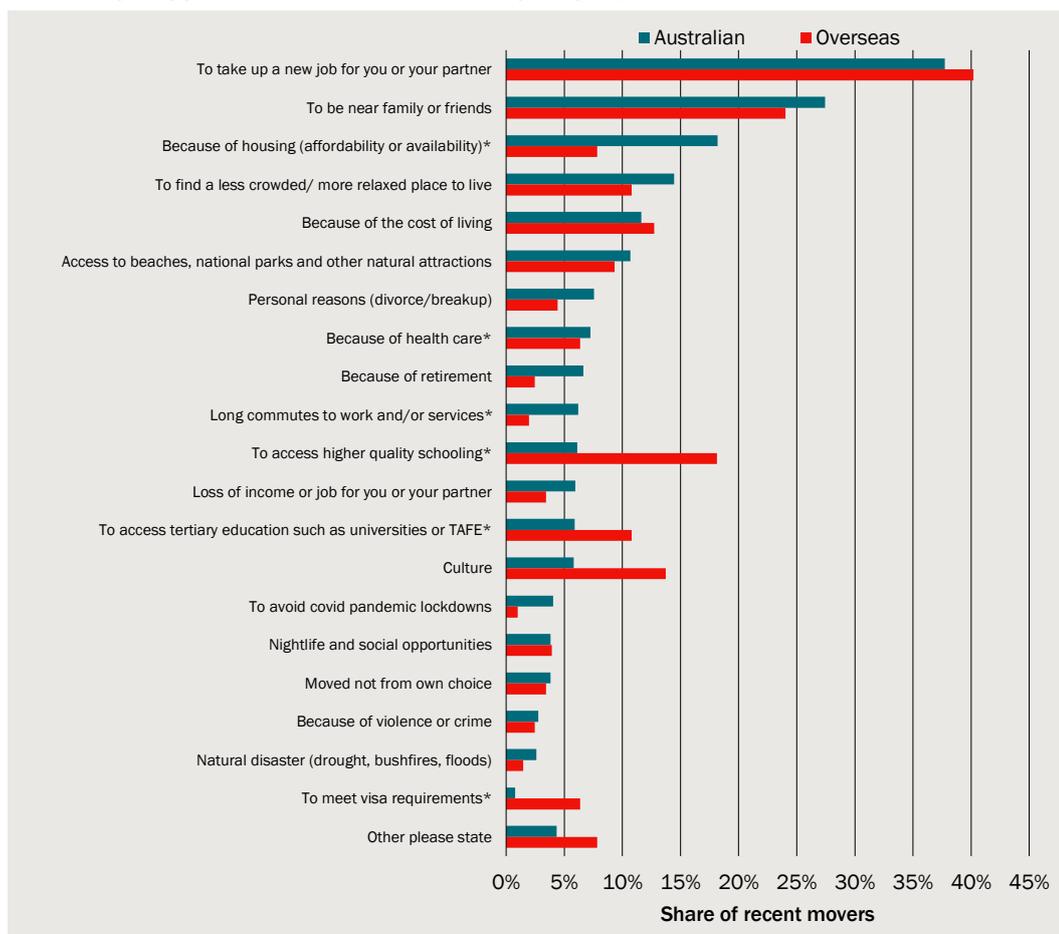
Note: For the full sample.

Source: CIE based on survey conducted by Pure Profile.

There are also clear differences in triggers for different age groups (chart 8.6).

- Jobs become less important as a trigger for older age groups, but are the most cited trigger for all age groups under 60.
- Retirement, healthcare and to be near family and friends are substantially more important for over 60s
- Access to tertiary education is much more important for under 30s.

8.6   Key triggers for most recent move, internal by age
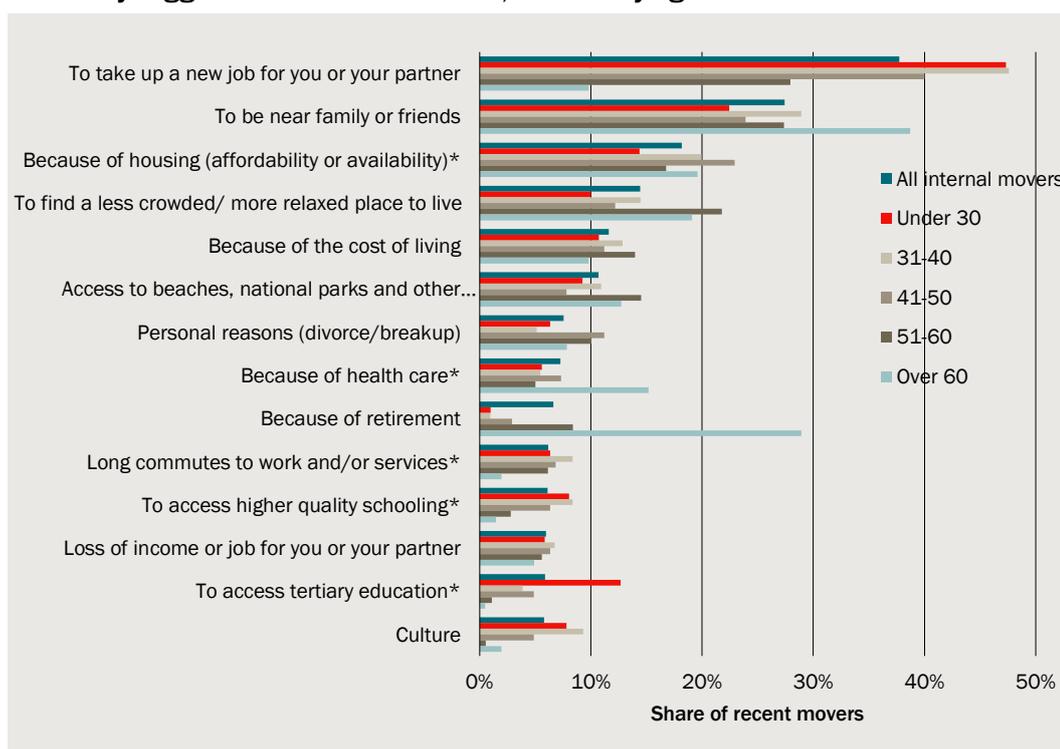
Note: For the full sample.

Source: CIE based on survey conducted by Pure Profile.

Importance of factors for most recent move

Recent movers were also asked to assess the importance of a range of factors from 1 (not important) to 5 (very important), to understand whether there are key factors that government influences that are relevant to migration decisions (chart 8.7).

- Domestic migrants rated cost of housing and living as being important or very important most often.
  - A range of government provided or partly provided services were seen as important by the majority of respondents, such as high quality healthcare and digital connectivity.
  - Other government provided or supported services such as public transport, schools, airports and tertiary education were viewed as important or very important by 25-50 per cent of respondents.
  - There are many factors that the government has limited influence over that are viewed as important, such as family and friends, natural amenity and climate.

■ Overseas migrants rated nearly all factors as being more important to them than did domestic migrants.

8.7   Importance of factors for recent movers
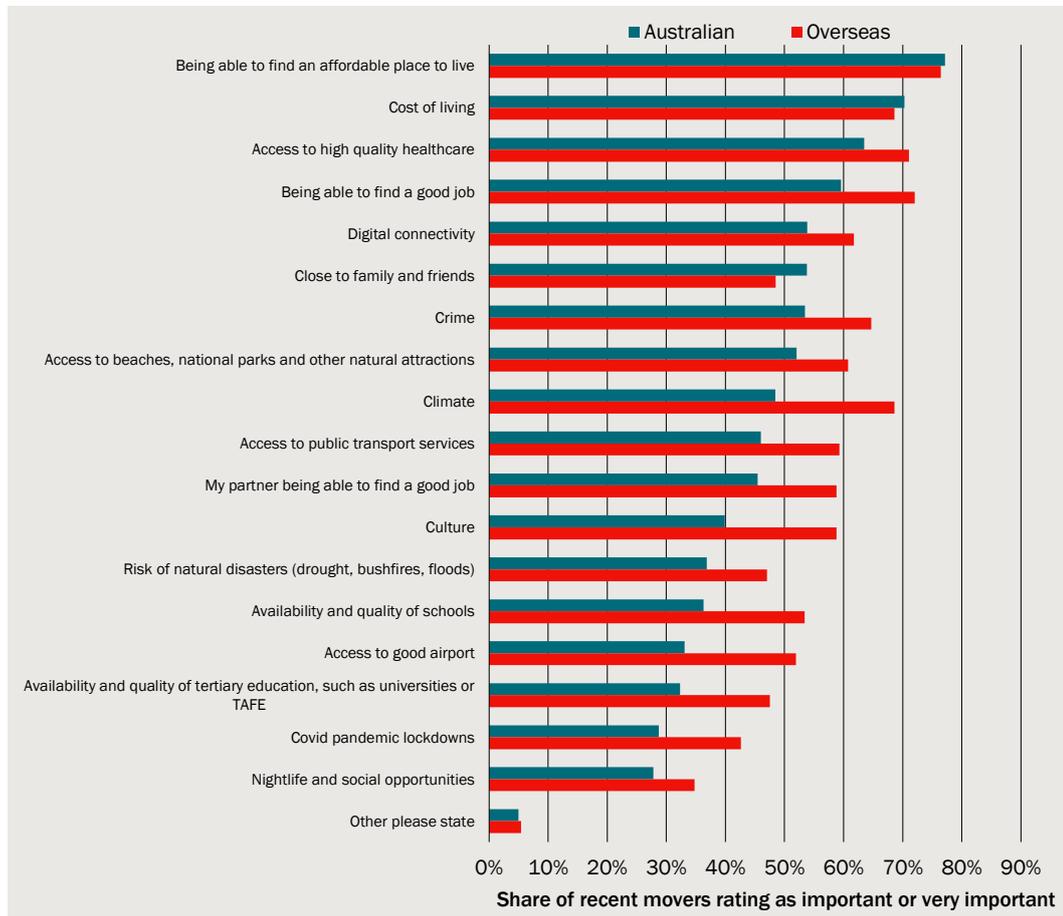
Note: For the full sample.

Source: CIE based on survey conducted by Pure Profile.

Difficulties for most recent move

Recent movers were asked to consider the extent to which a range of issues caused difficulties for their most recent move. Based on where people moved to, housing costs and costs of moving were rated as important or very important difficulties most often for people moving to capital cities (chart 8.8). Interestingly, people moving outside of capital cities did not note difficulties with services such as health and education any more often than those moving to capital cities.

8.8   Difficulties faced by recent movers rated as very important or important by destination
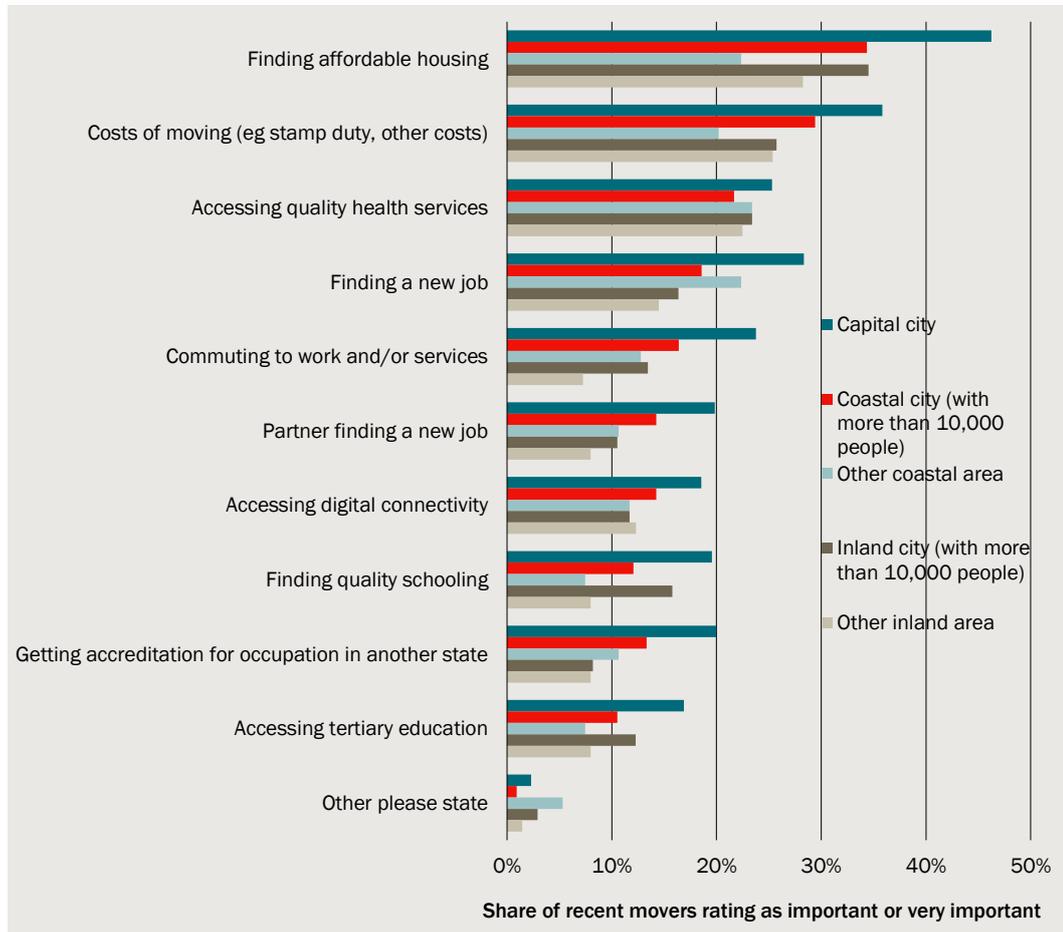
Note: For the full sample.

Source: CIE based on survey conducted by Pure Profile.

The difficulties faced by recent movers show some differences across different age groups (chart 4.8). Affordable housing was a more important difficulty for younger movers. Middle age cohorts tended to show higher difficulties with costs of moving, finding a job, education and digital connectivity. Older movers tended to have less difficulties across all areas.

8.9   Difficulties faced by recent movers rated as very important or important by age
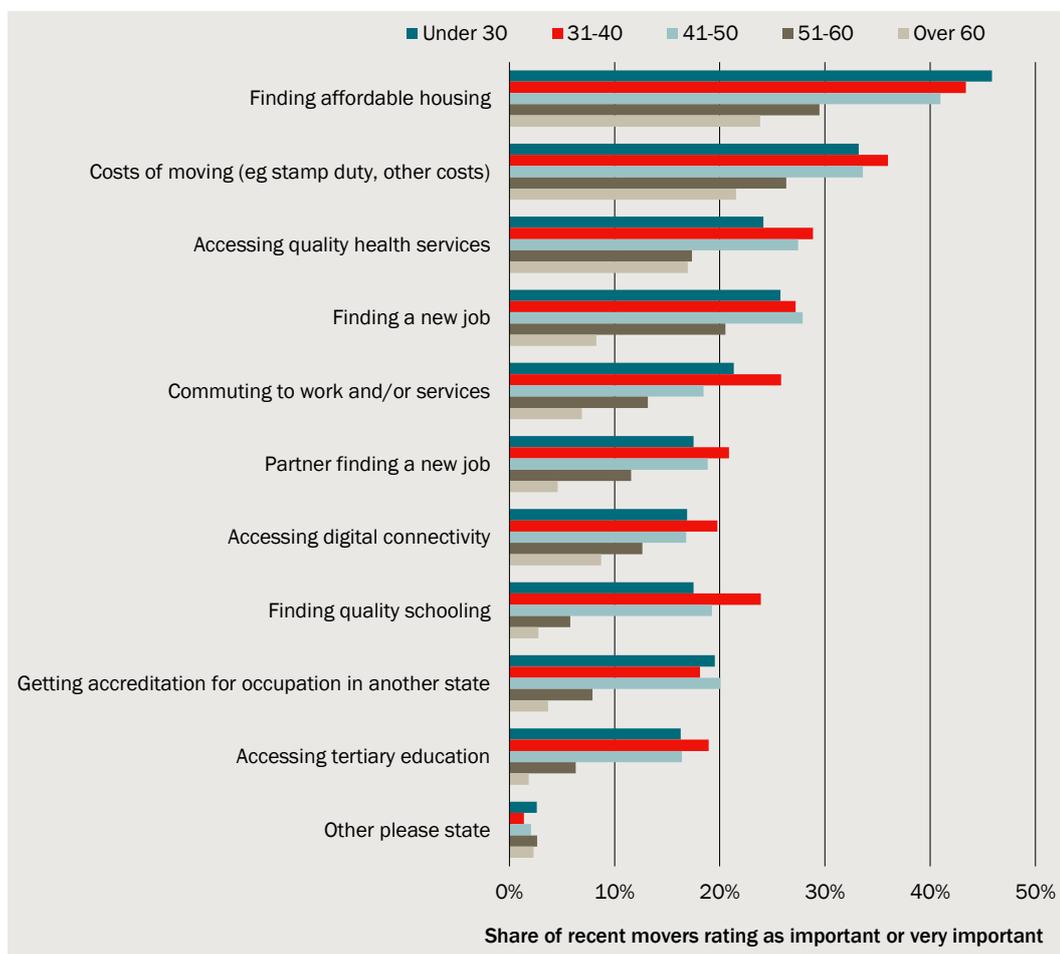
Note: For the full sample.

Source: CIE based on survey conducted by Pure Profile.

Implications for government drivers of migration

Responses from recent movers suggests that while activities directly influenced by government are not likely to be a trigger for their moving, there are many aspects of what government does directly that are important for movers. This includes provision of services, cost barriers to moving, occupational accreditation.

Indirectly, government influences significant issues for movers such as the cost and availability of housing and the strength of the overall labour market. However, government is only an influence on these issues.

Why do people not move?

Of those who did not move, about one third had considered moving and decided not to and two thirds had not considered moving. The factors rated as important and very important varied somewhat across the groups (chart 8.10).

- For both groups, social networks of family and friends were the factor rated as most important in not moving
- Those who had considered moving rated cost of moving as an important factor, with more than 50 per cent of respondents indicating this was important or very important in their decision not to move. This groups also rated job availability as more important than those who did not consider moving.

8.10 Factors rated as important and very important for not moving
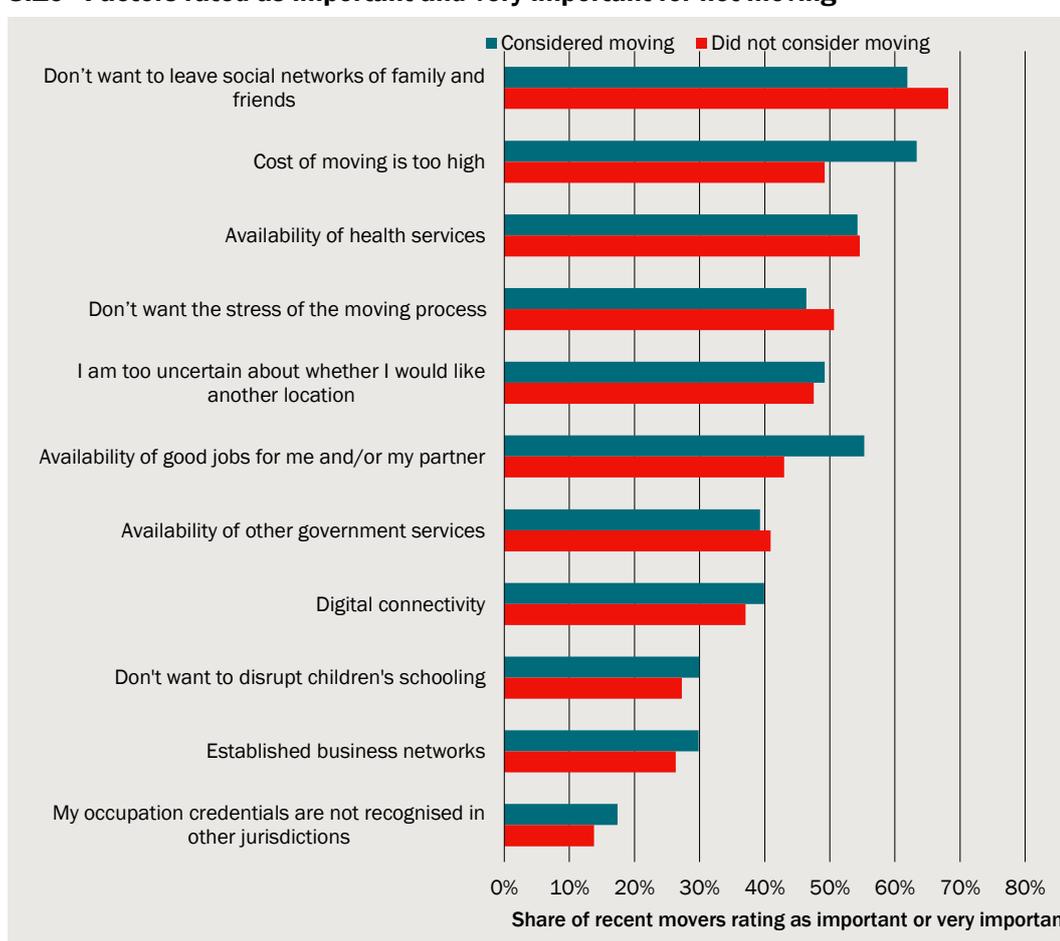
Note: For respondents who have not moved in the past five years.
Source: CIE based on survey conducted by Pure Profile.

The factors that are important for not moving show clear patterns by age (chart 8.11).

- Cost of moving is most important for younger people
- Schooling is most important for middle age brackets and less important for the young and old
- Jobs and business networks are less important for the older cohorts

- Health and other government services are particularly important for older cohorts
- Networks of family and friends are important for all age cohorts

8.11 Factors rated as important and very important for not moving by age
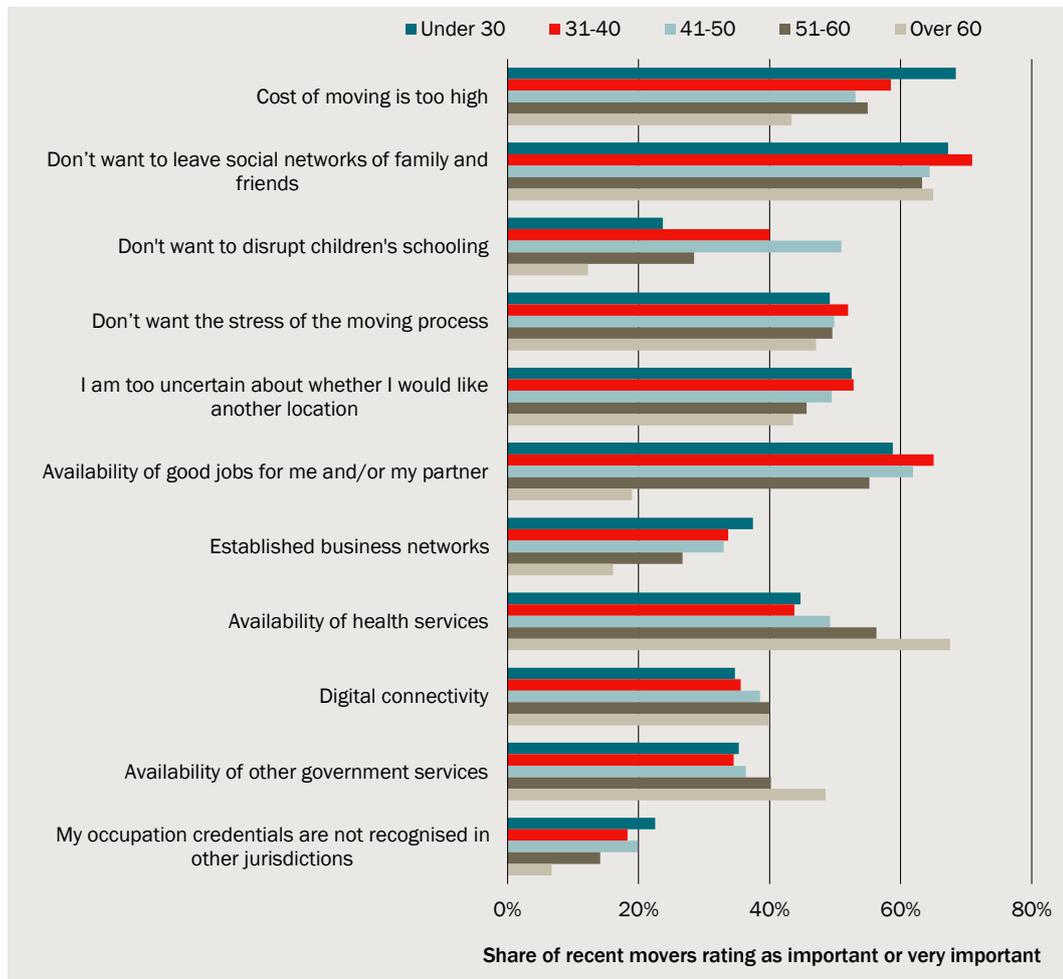
Note: For respondents who have not moved in the past five years.
Source: CIE based on survey conducted by Pure Profile.

The survey also suggests that it is nearly always a combination of factors that are relevant for people not moving. Of the eleven factors for not moving provided, on average people who had not moved considered 4.7 of these to be important or very important reasons for not moving.

Implications for role of government

Similar to movers, the responses of non-movers suggest that there are barriers to moving that governments can address, but government will likely not be the major driver of allowing current non-movers to migrate. There are typically a bundle of factors considered important as to why people did not move and the influence of changing one individual factor is likely to be relatively limited.

Future moving intentions

All survey respondents were asked about their future moving intentions and the factors that would influence this. As a forward looking question, answers to this are likely to be more speculative, and may overstate moving intentions relative to what actually occurs.

Perceived likelihood of moving to particular destinations

The likelihood of moving to certain destinations is relatively low across all destinations, with the majority of people perceiving a potential move as highly unlikely and unlikely. This broadly reflects the share of those who have moved in the past (around 20-30 per cent) (chart 8.12).

8.12 Likelihood of moving to different destinations
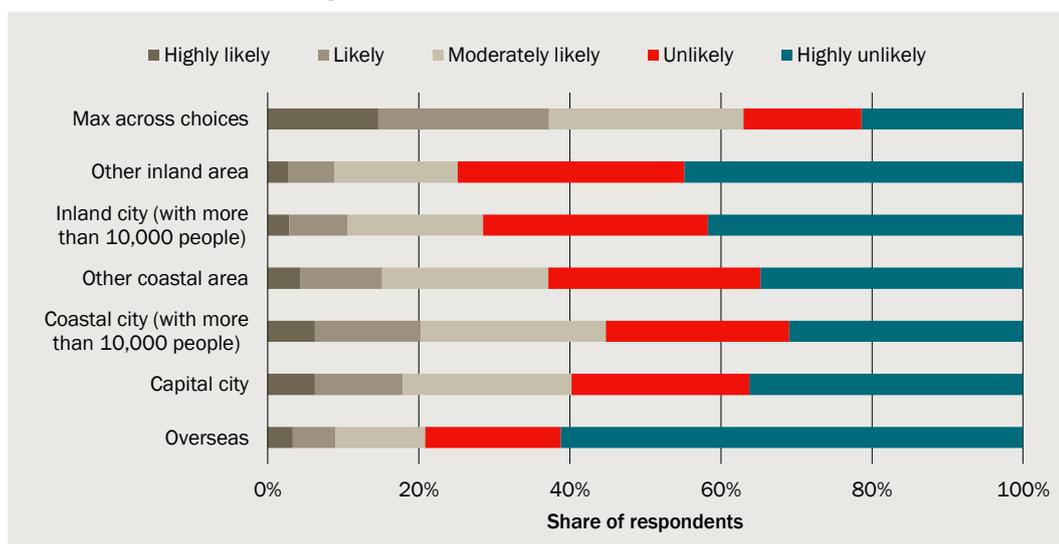
Note: For base sample.
Source: CIE based on survey conducted by Pure Profile.

Patterns of moving intentions align with Census data on actual moving.

- People indicate that they are more likely to move to a place similar to their current place (e.g. capital city to capital city)
- Younger cohorts are more likely to move than older cohorts
- Younger cohorts are more likely to move to capital cities.

More interesting is that people often have quite specific locational preferences. For example, by indicating they are likely to move to one location and highly unlikely to move to all the other location types. Across all respondents, 85 per cent indicated no destination that they were highly likely to move to (chart 8.13). Of the remaining 15 per cent, 10 per cent were only highly likely to move to one of the destination types. If we do the same analysis for people indicating likely or highly likely, 63 per cent did not indicate any location they would move to. Of the remaining 37 per cent, 17 per cent indicated only one location and 11 per cent indicated two locations. These patterns suggest that people's preferred destinations, at least by broad type, are somewhat fixed.

8.13   Number of destination types considered likely or highly likely by prospective movers
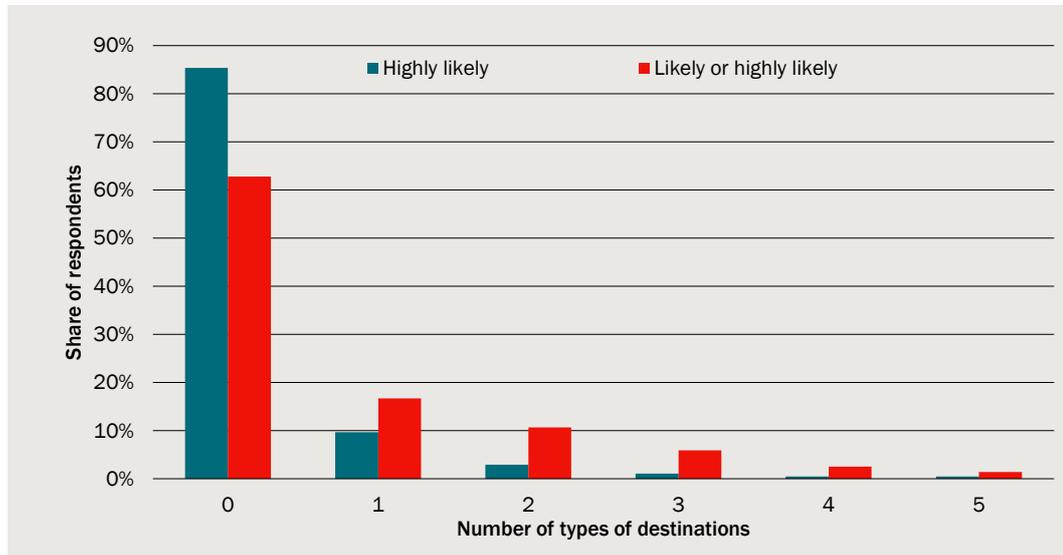
Note: For base sample.

Source: CIE based on survey conducted by Pure Profile.

Key factors for future moving

Respondents identified the level of important of a range of future factors in relation to their moving (chart 8.14). Cost of housing and cost of living were most cited as important or very important. Healthcare and digital connectivity ranked highly for government-provided or partly provided services. Jobs rated much lower than for recent movers — this reflects that the overall sample is weighted more towards older people and their concerns than recent movers, because older people have a lower propensity to move.

8.14 Importance of factors for future moving
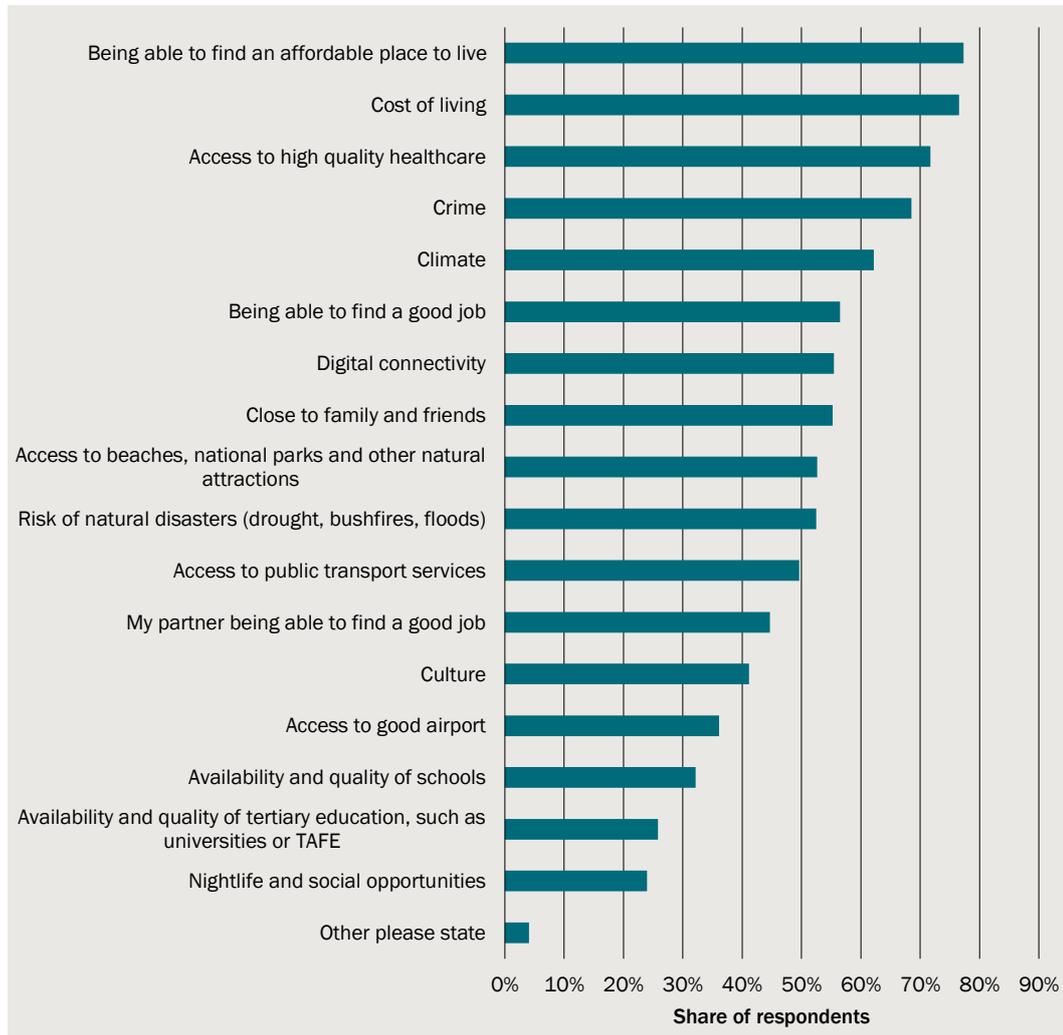
Note: For base sample.

Source: CIE based on survey conducted by Pure Profile.

There are noticeable differences in the importance of different factors across age groups (chart 4.1). Job factors, education and nightlife are rated much more highly by younger cohorts, while healthcare is rated more highly by older cohorts (particularly over 60s). Note that over 60s are less worried than other cohorts about housing cost and other cost of living issues.

Many factors are rated similarly across age cohorts, such as digital connectivity, family and friends and crime.

8.15   Importance of factors for future moving, by age
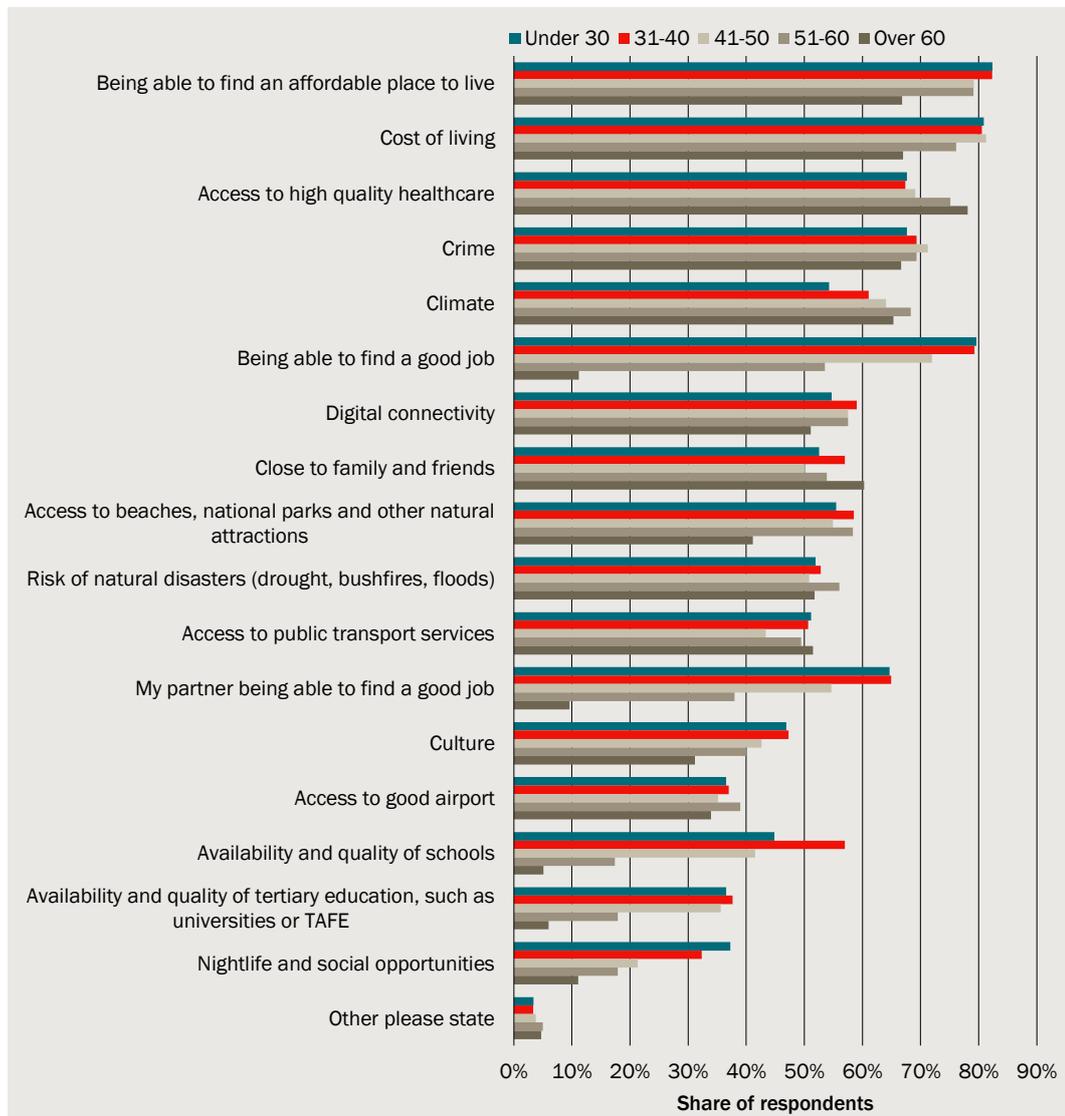
Note: For base sample.
Source: CIE based on survey conducted by Pure Profile.

If we consider how important different factors are for people more likely to move, then there are clear differences to those who are not likely to move (chart 4.32). Likely to move includes any respondent who was likely or highly likely to move to any of the destination types. Not likely to move is all other respondents. People likely to move rate most factors as more important than those not likely to move and particularly over-rate jobs, natural environment, education, culture and nightlife. This reflects that younger people are more likely to move than older cohorts.

8.16   Importance of factors for future moving, by likelihood of moving
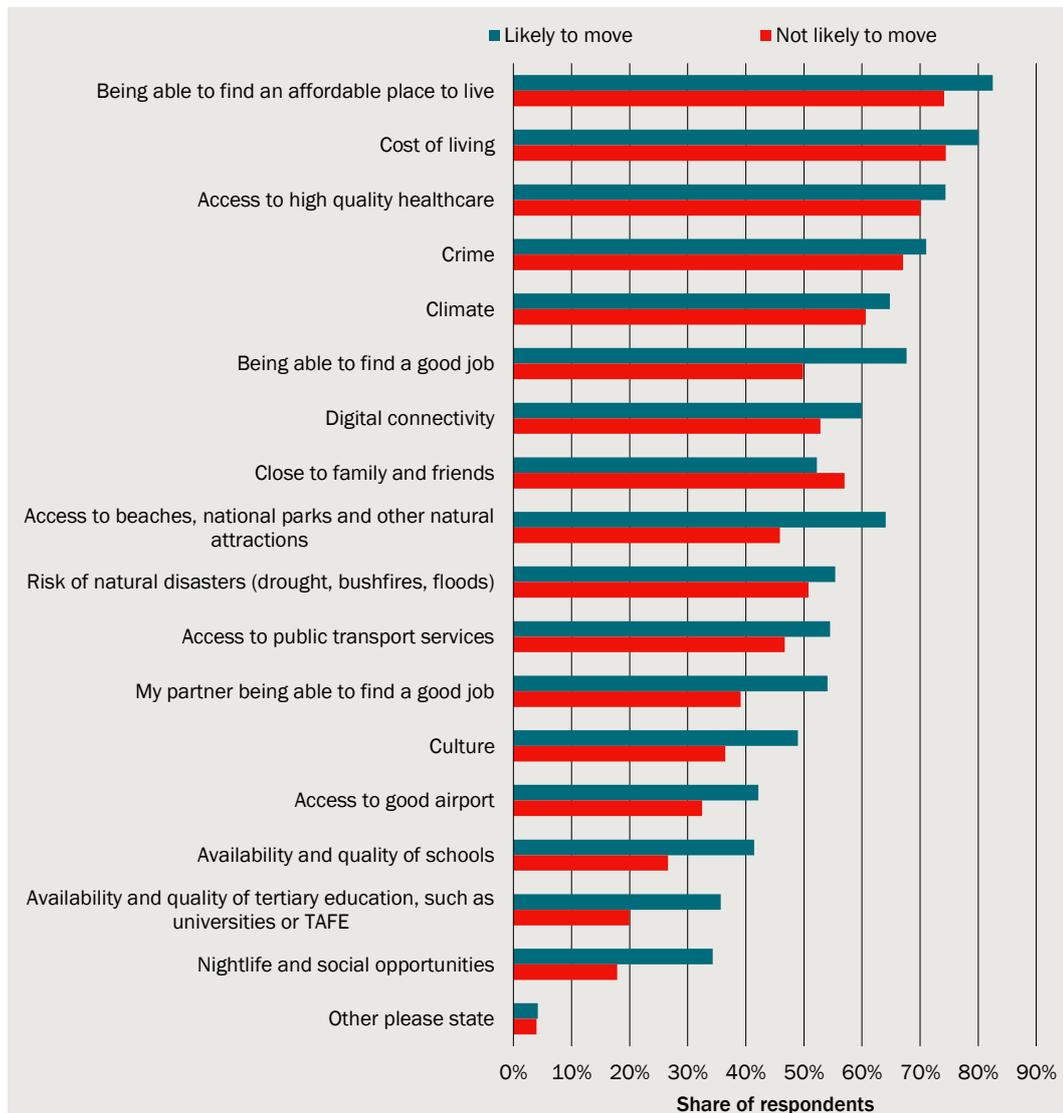
Note: For base sample.

Source: CIE based on survey conducted by Pure Profile.

Implications for role of government

The responses to future likelihood of migrating and how important different factors are for this shows similar patterns as for recent movers, albeit somewhat more weighted to the concerns of older respondents. Government services are rated as important by many respondents, but so are many other factors that are not able to be influenced by government.

People expected likelihood of moving to different locations suggests that most people do not consider themselves likely to move. Of those that are likely or highly likely to move, they tend to have a specific type of destination that is more likely, rather than being open to moving to a range of different types of locations. This suggests that policies that reduce

the barriers to people who would consider moving to a particular type of location are likely to be more influential than trying to change a mover's ultimate destination.

Conclusions

The most significant types of triggers that people have indicated make them move are not generally within government direct influence. The two most important triggers are jobs and friends and family. Government can influence the first if it is seeking to move the jobs that government itself is responsible for (and these jobs are footloose) and potentially through its economic development strategies where these have a spatial lens. Whether the latter are effective is an important question in considering how much government can influence the job trigger. Government is not able to influence family and friends.

However, there are many second-level triggers and barriers that government can play a significant role in, such as housing affordability, provision of health and education services, costs of moving related to government (such as taxes) and recognition of occupations. Government initiatives in these areas are likely to be undertaken for their direct effects — more affordable housing, better services — with changes to how this impacts on where people choose to live a secondary effect. Note that policies may have migration effects that work counter to other objectives, such as increasing regional populations. For example, housing affordability was noted as a more important issue for people moving to capital cities and addressing this would tend to increase migration into capital cities other things equal.

Technical appendices

A   Defining geographic regions

Urban Centres and Localities

Urban Centres and Localities (UCLs), as defined by the ABS *Australian Statistical Geography Standard 2021*, are used to define regions in the empirical model. UCLs represent areas of concentrated urban development within the Census and are designed to facilitate the visualisation and analysis of population. For the purposes of empirical modelling, we set a population threshold of at least 10 000 people in at least one of the census periods to be included in the model, resulting in 126 UCLs being included. This is to reduce volatility that results from small areas and the resulting boundary changes between census waves. The number of UCLs by state are set out in table A.1. The full list of UCLs and their population levels over time are set out in Table A.7 at the end of the chapter.

A.1   Number of UCLs by state and territory

State	Count of UCLs
	No.
NSW	42
VIC	31
QLD	23
WA	11
SA	11
TAS	5
ACT	1
NT	2
Total	**126**

Source: CIE.

Correspondence between geographies

Because the geographical boundaries of UCLs have changed over time, we use the 2021 boundaries to define UCLs in each time period of our sample and use correspondences provided by the ABS to convert relevant data to the same time period classification.

While the majority of the variables of interest are produced by the ABS on a UCL basis, internal migration statistics are published on a Statistical Area basis, with the lowest level of aggregation being Statistical Area Level 2 (SA2). We have utilised spatial mapping techniques to align and create a correspondence between SA2s and UCLs utilising a

boundary and population weighting method to determine in which UCLs migrants have moved to or from.

UCLs and SA2s do not necessarily align to one another, resulting in a range of possible spatial overlays. Some UCLs are larger than SA2s (such as capital cites) while some SA2s are larger than UCLs. The types of combinations between the different boundaries include:

- UCLs falling within an SA2 boundary
- SA2s falling within a UCL boundary
- An overlap between multiple SA2s and UCLs

In this instance, the UCL of Goulburn closely resembles the SA2 boundary, which is slightly larger and includes space which falls outside of the UCL (chart A.2).

A.2   UCL within SA2 boundary

Data source: ABS Maps, available at: https://maps.abs.gov.au/
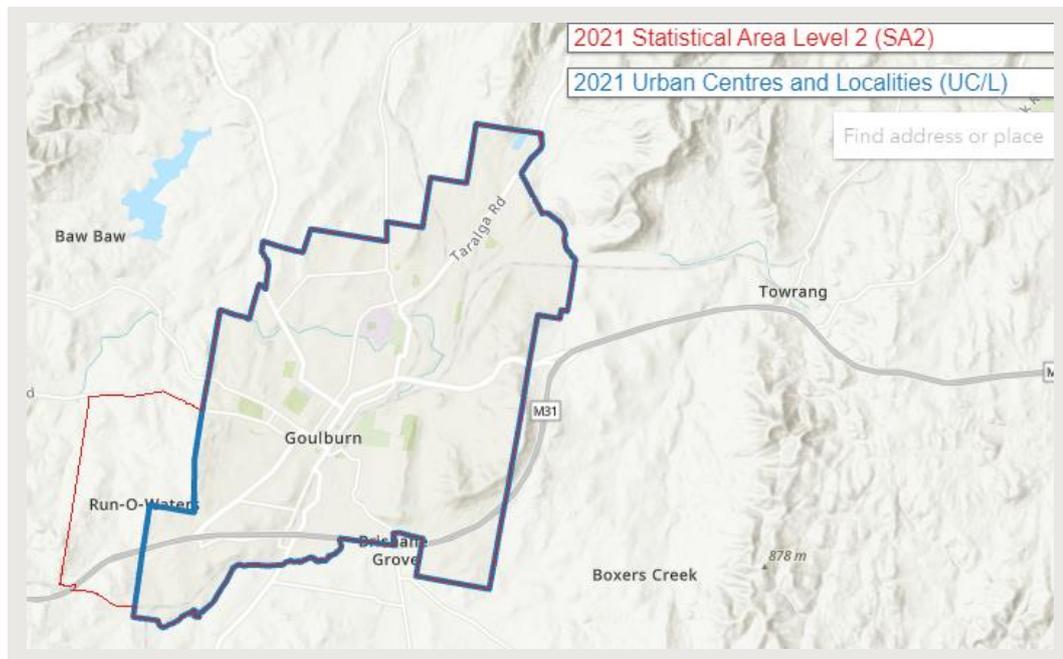
The SA2 for Ulladulla in contrast, contains three separate UCLs, one which defines a smaller area for Ulladulla, as well as Kings Point and Milton (chart A.3).

A.3   Multiple UCLs within an SA2 boundary

Data source: ABS Maps, available at: https://maps.abs.gov.au/
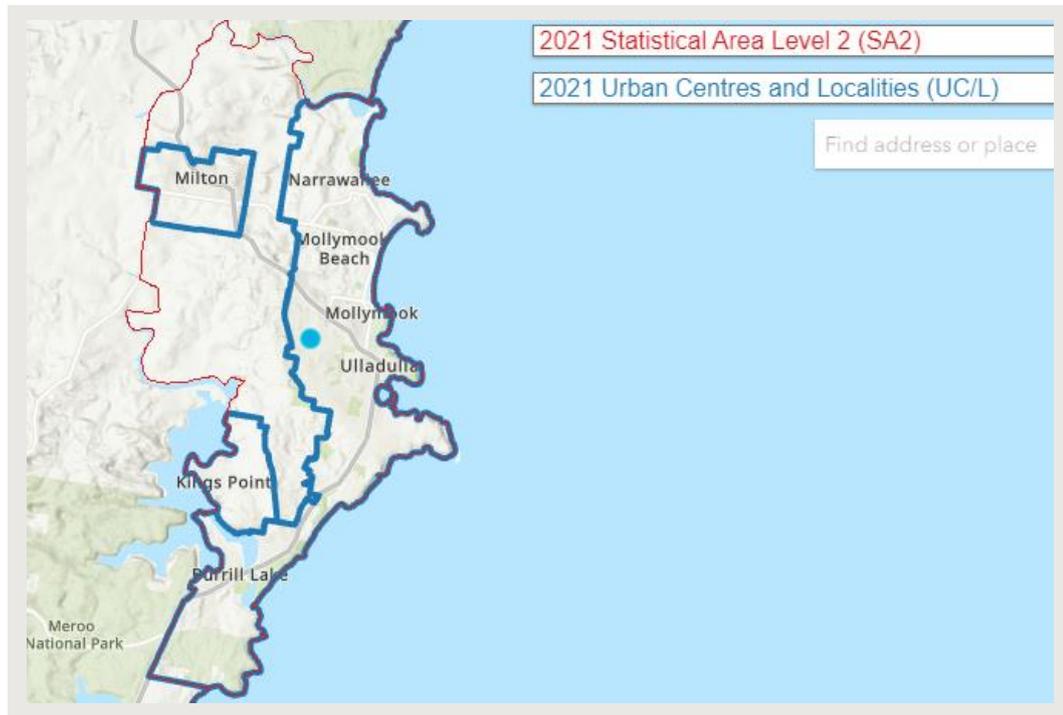
Finally, the UCL for Dubbo contains three separate SA2s, of which several appear to cross over the UCL boundary and also into another UCL chart A.4.

A.4   Multiple SA2s overlaying a UCL boundary

Data source: ABS Maps, available at: https://maps.abs.gov.au/
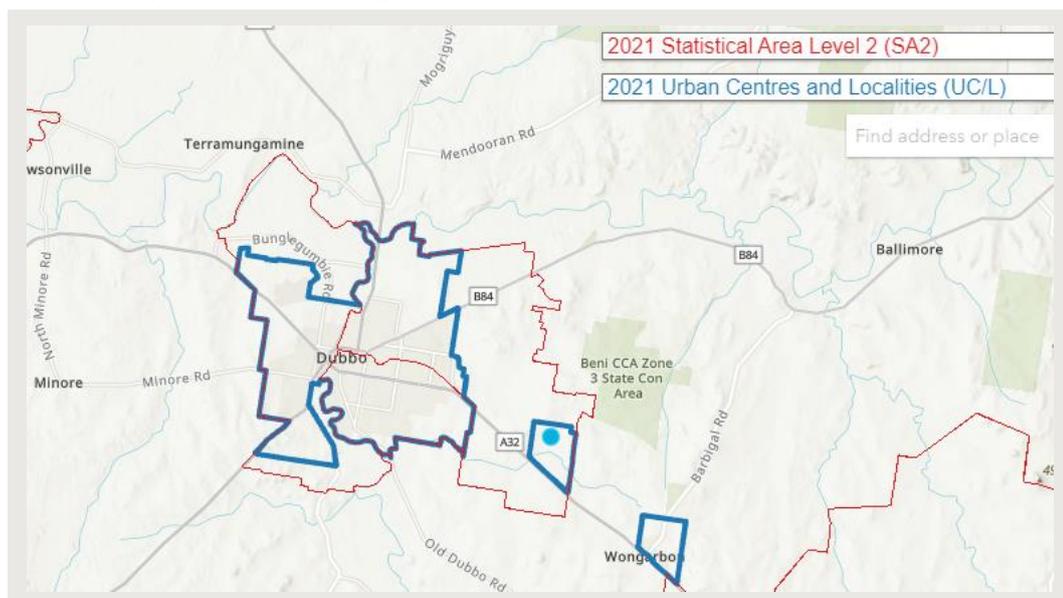
Assigning SA2 net migration statistics to UCLs

The goal of creating a correspondence between SA2s and UCLs is to accurately reflect whether people moving to and from an SA2 region, as defined by the Census, can be reflected in the move to or from the UCL(s) to which it is connected. One method, as employed by AHURI[93], is to use the spatial overlays and create proportions based on the area overlay. For instance, if 80 per cent of the Goulburn SA2 falls within the Goulburn UCL, then it can be assumed that 80 per cent of the inward and outward migrants from the SA2 are occurring at the UCL level.

The limitation of this approach is that it does not consider precisely where within the SA2 boundary people live and are therefore likely to move to or from. Where a UCL occupies a small proportion of an SA2's area, only a small proportion of the net migration data will be attributed to the UCL. This could bias downward the gross movements, since the majority of the population may reside in the UCL (due it being an urban area).

Our approach is to instead create a weighting based on the population of the SA2 that falls within the boundary of the UCL. This is done using SA1 population data from the Census, which are a disaggregation of the SA2 level boundary. Because the sum of population at the SA1 level perfectly aligns to the total population of the larger SA2, we can observe which SA1s fall within the boundary of the UCL and by extension what proportion of the SA2 population that also falls within the boundary. These proportions are then used as weights for the net migration data.

The region of Goulburn provides an example below. The small area SA1s predominantly fall within the Goulburn UCL, while we can also observe the population of the Run-O-Water SA1, that while forms part of the Goulburn SA2 (on which net migration statistics are based) that falls outside of the boundary (chart A.5). The weights are calculated as the proportion of SA1 population to SA2 total population that happen to fall within the UCL boundary.

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93 Understanding what attracts new residents to smaller cities, AHRUI, March 2022

A.5   SA1s within the UCL — Goulburn example

Data source: ABS Maps, available at: https://maps.abs.gov.au/
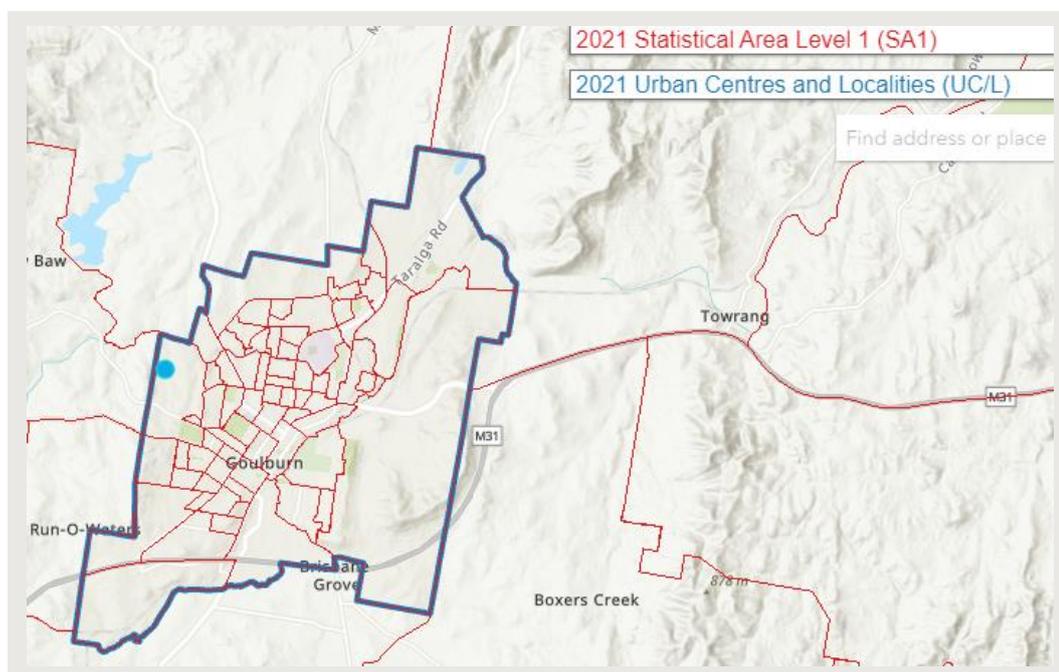
A similar situation applies in the example of Ulladulla, except in this instance there are multiple UCLs within the SA2 on which migration into and out of the region are based. Net migration data is assigned proportionately to the UCLs of interest based on the share of SA1 population compared to total SA2 population that fall within each of the UCLs. Those SA1s which are outside of the UCL boundary inform the proportion of the population that live within the SA2 but outside of a UCL (chart A.6).

A.6   SA1s within the UCL — Ulladulla example

Data source: ABS Maps, available at: https://maps.abs.gov.au/
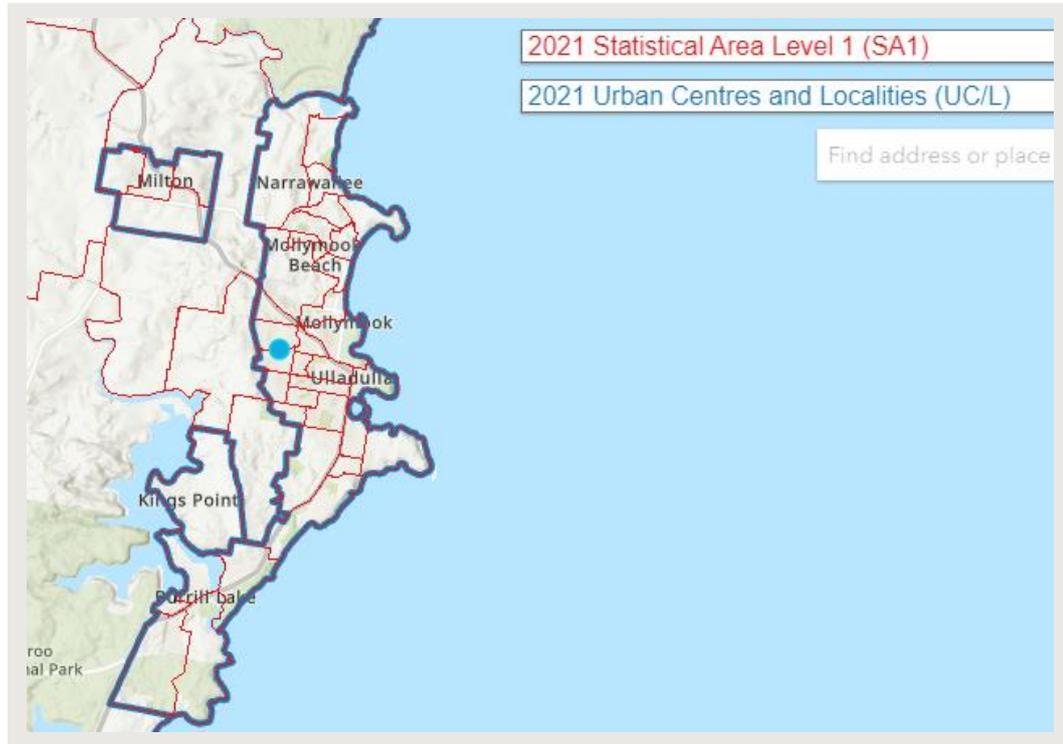
List of UCLs included in empirical model

The total list of UCLs included within the empirical model, based on the criteria of comprising at least 10 000 people in any one of the census periods is presented in table A.7.

A.7   UCLs included in empirical model

UCL name 2021	Population 2011	Population 2016	Population 2021	State
	No.	No.	No.	State
Adelaide	1 122 532	1 106 582	1 183 008	SA
Albany	30 468	31 907	33 766	WA
Albury - Wodonga (Albury Part)	46 558	47 488	52 066	NSW
Albury - Wodonga (Wodonga Part)	35 145	37 547	40 644	VIC
Alice Springs	25 144	21 626	22 762	NT
Armidale	19 980	19 375	19 492	NSW
Bacchus Marsh	15 056	17 536	21 092	VIC
Bairnsdale	11 594	12 491	13 395	VIC
Ballarat	91 716	96 398	107 633	VIC
Ballina	16 083	16 480	17 835	NSW
Bargara - Innes Park	10 523	10 915	12 599	QLD

UCL name 2021	Population 2011	Population 2016	Population 2021	State
	No.	No.	No.	State
Batemans Bay	13 108	12 767	14 133	NSW
Bathurst	32 483	34 032	36 070	NSW
Bendigo	86 088	91 354	99 411	VIC
Blue Mountains	29 602	28 989	29 728	NSW
Bongaree - Woorim	17 047	17 505	20 082	QLD
Bowral - Mittagong	20 255	21 294	23 428	NSW
Brisbane	1 937 871	1 947 711	2 192 034	QLD
Broken Hill	18 380	17 138	16 914	NSW
Broome	12 765	13 054	13 794	WA
Bunbury	65 604	68 589	73 899	WA
Bundaberg	51 825	49 989	52 121	QLD
Burnie - Somerset	20 873	19 772	20 493	TAS
Busselton	21 898	25 471	27 855	WA
Cairns	133 896	133 958	143 283	QLD
Canberra - Queanbeyan (Canberra Part)	355 634	352 806	406 307	ACT
Canberra - Queanbeyan (Queanbeyan Part)	36 046	34 234	35 166	NSW
Castlemaine	9 069	9 520	10 272	VIC
Central Coast	303 778	308 882	326 598	NSW
Cessnock	20 017	21 431	22 798	NSW
Coffs Harbour	51 490	52 055	55 143	NSW
Colac	11 399	11 478	11 802	VIC
Crafers - Bridgewater	15 012	14 699	15 343	SA
Dalby	11 746	11 728	11 791	QLD
Darwin	109 088	106 707	111 755	NT
Devonport	24 829	24 169	25 151	TAS
Drouin	9 871	11 836	14 503	VIC
Drysdale - Clifton Springs	11 283	12 593	15 867	VIC
Dubbo	33 851	34 532	38 642	NSW
Echuca - Moama (Echuca Part)	12 493	12 488	13 315	VIC
Emerald	13 219	12 835	13 395	QLD
Esperance	9 733	10 009	9 919	WA
Forster - Tuncurry	19 159	19 643	20 120	NSW
Gawler (SA)	26 109	28 030	30 345	SA
Geelong	153 117	155 956	177 854	VIC
Geraldton	35 192	35 160	36 791	WA
Gisborne	8 565	9 726	10 787	VIC
Gladstone (Qld)	32 306	31 365	33 315	QLD

UCL name 2021	Population 2011	Population 2016	Population 2021	State
	No.	No.	No.	State
Gold Coast - Tweed Heads (Gold Coast Part)	487 198	502 988	570 368	QLD
Gold Coast - Tweed Heads (Tweed Heads Part)	65 787	68 399	72 871	NSW
Goulburn	20 958	21 678	23 073	NSW
Gracemere	8 263	10 548	11 229	QLD
Grafton	16 358	16 231	16 767	NSW
Griffith	28 038	27 757	28 320	NSW
Gympie	19 515	20 308	21 769	QLD
Hervey Bay	48 682	50 223	55 388	QLD
Highfields	7 908	9 011	10 031	QLD
Hobart	179 259	177 397	191 804	TAS
Horsham	15 243	15 257	15 849	VIC
Kalgoorlie - Boulder	30 838	27 179	27 171	WA
Karratha	16 474	14 524	16 105	WA
Kempsey	10 110	10 211	10 882	NSW
Kiama	12 903	13 107	14 300	NSW
Kurri Kurri	15 714	16 871	19 806	NSW
Lara	11 761	13 339	15 311	VIC
Launceston	75 365	72 646	76 745	TAS
Leopold	9 386	11 609	12 006	VIC
Lismore (NSW)	28 281	27 513	27 735	NSW
Lithgow	11 076	11 304	10 901	NSW
Mackay	77 142	74 363	79 938	QLD
Maitland (NSW)	72 453	80 349	92 888	NSW
Maryborough (Qld)	24 438	24 654	25 003	QLD
Melbourne	3 808 724	3 852 748	4 263 962	VIC
Melton	45 903	54 712	70 564	VIC
Mildura - Buronga (Mildura Part)	37 007	37 623	39 465	VIC
Moe - Newborough	15 197	14 828	15 416	VIC
Morisset - Cooranbong	19 967	21 215	24 825	NSW
Mount Barker (SA)	14 540	16 432	20 826	SA
Mount Gambier	27 754	27 782	28 647	SA
Mount Isa	20 171	16 859	17 113	QLD
Mudgee	9 649	10 454	11 217	NSW
Murray Bridge	15 986	15 805	16 994	SA
Murwillumbah	16 525	16 736	17 835	NSW
Muswellbrook	10 474	10 331	10 531	NSW
Nambour	17 097	18 218	20 494	QLD

UCL name 2021	Population 2011	Population 2016	Population 2021	State
	No.	No.	No.	State
Nelson Bay	13 047	13 565	14 096	NSW
Newcastle	312 318	313 367	339 605	NSW
Nowra - Bomaderry	32 196	33 472	36 152	NSW
Ocean Grove - Barwon Heads	12 960	16 126	20 118	VIC
Orange	36 175	37 049	40 003	NSW
Perth (WA)	1 706 622	1 738 583	1 957 784	WA
Port Augusta	12 922	12 494	12 384	SA
Port Hedland	13 769	12 503	14 280	WA
Port Lincoln	13 446	13 617	14 037	SA
Port Macquarie	41 086	43 432	47 445	NSW
Port Pirie	13 854	13 524	13 398	SA
Portland (Vic.)	9 971	9 820	10 190	VIC
Raymond Terrace	13 259	13 054	13 773	NSW
Rockhampton	64 811	62 437	64 039	QLD
Sale	13 140	12 955	13 551	VIC
Shepparton - Mooroopna	46 364	46 883	50 361	VIC
Singleton	13 489	12 974	13 670	NSW
St Georges Basin - Sanctuary Point	9 090	9 908	10 773	NSW
Sunbury	34 704	35 989	38 734	VIC
Sunshine Coast	241 293	259 125	300 281	QLD
Swan Hill	10 135	10 178	10 139	VIC
Sydney	3 973 033	3 947 003	4 335 903	NSW
Tamworth	36 237	36 808	39 175	NSW
Taree	17 239	17 264	17 700	NSW
Toowoomba	105 346	104 459	111 373	QLD
Torquay - Jan Juc	14 059	16 464	22 296	VIC
Townsville	162 159	163 744	169 167	QLD
Traralgon	34 980	34 928	37 201	VIC
Ulladulla	11 963	12 617	14 134	NSW
Ulverstone	13 866	13 592	14 392	TAS
Victor Harbor	19 990	20 950	23 208	SA
Wagga Wagga	51 626	50 964	52 757	NSW
Wallan	7 837	10 260	14 202	VIC
Wangaratta	17 536	18 186	19 056	VIC
Warragul	13 881	15 175	18 541	VIC
Warrnambool	31 745	32 140	33 759	VIC
Warwick	13 277	13 312	13 738	QLD
Whyalla	21 707	21 032	20 294	SA

UCL name 2021	Population 2011	Population 2016	Population 2021	State
	No.	No.	No.	State
Wollongong	247 519	250 979	270 912	NSW
Yanchep	4 459	8 042	10 523	WA
Yeppoon	15 195	16 215	18 179	QLD

Source: CIE.

B   Survey instrument

Survey of migration and government influences and population pressures

Welcome

Thank you for participating in this survey, which is being run by Pureprofile and the Centre for International Economics on behalf of the Centre for Population within the Australian Government.

This survey is about migration behaviour and the reasons and barriers to moving within Australia. Your input is very important and will assist in government policies related to migration within Australia.

This questionnaire will take around 10 minutes to complete.

We wish to reassure you that this is genuine market research and, as always, your individual survey responses will remain confidential and anonymous at all times.

In the unlikely event of any technical difficulties please click on the technical support e-mail link.

Please Keep In Mind

Do not use your Back or Forward browser buttons while you are taking this survey. Once you answer a question, you will not be able to go back and change your answer.

Before we go through to the main study, we would like to ask you some questions to make sure we are interviewing a good cross section of people.

Q1 Do you or a member of your household work in the market research industry?

- Yes TERMINATE
- No

Q2 What is your age?

a. Less than 18 years TERMINATE

b. 18-19 years

c. 20-29 years

d. 30-39 years

e. 40-49 years

f. 50-59 years

g. 60-69 years

h. 70-79 years

i. 80 years or over

TERMINATE PAGE

Thank you for your patience in answering these questions. Unfortunately, we do not need you to participate in our research this time, but we sincerely appreciate your time and assistance today.


<u>Lifetime moving characteristics</u>

The following questions relate to the number of moves you have made over your lifetime. We define a move to be any change of location to a new city, town or region. For this survey, **a move does not include changing where you live within the same city, region or town.** It would typically involve moving to a location more than 50km away.

An example of a move that is included in this definition and a move that is not are shown below.

Move to a new city or region ✅   **Move within a city of region** ❌
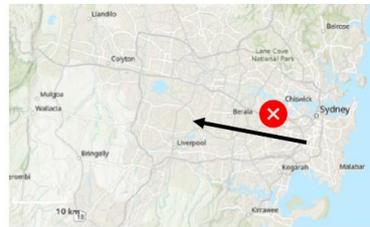
Q3 How many times have you moved between different cities or regions over your lifetime? **A move does not include changing where you live within the same city, region or town.**

Q4 How many different cities or regions have you lived in over your lifetime? (for example, if you moved from Sydney to Melbourne to Sydney, then you have lived in two different cities or regions) **A move does not include changing where you live within the same city, region or town.**

       [Restrictions on answers: Answer has to be at least 1. Answers cannot be more than the number of times in Q3 moved plus 1. E.g. if move 5 times, then can at most have lived in 6 places. If have moved at least once, then answer has to be at least 2]

[If error in above] "This answer is not consistent with the number of times that you have moved."

Q5 In which of the following were you born?
- NSW
- Victoria
- QLD
- Western Australia
- South Australia
- Tasmania
- ACT
- Northern Territory
- overseas

Q6 [If in Australia] How would you best categorise the place where you first lived?
- capital city
- coastal areas (non capital city)
    i. coastal city (with more than 10,000 people)
    ii. other coastal area
- inland areas (non capital city)
    i. inland city (with more than 10,000 people)
    ii. other inland area

Q7 In which of the following do you currently live?
- NSW
- Victoria
- QLD
- Western Australia
- South Australia
- Tasmania
- ACT
- Northern Territory

Q8 How would you best categorise the place where you currently live?
- capital city
- coastal areas (non capital city)
    i. coastal city (with more than 10,000 people)
    ii. other coastal area
- inland areas (non capital city)
    i. inland city (with more than 10,000 people)
    ii. other inland area

<u>Recent moving</u>

The following questions relate to your moving over the past five years. Remember that a move is defined as to another city, town or region. **A move does not include changing where you live within the same city or town.**

Q9 Have you moved city, town or region in the past five years? [Yes/No] **A move does not include changing where you live within the same city or town.**

[For people who have moved in the past five years]

Q10 In which of the following type of area did you move from, for your most recent move?
- NSW
- Victoria
- QLD
- Western Australia
- South Australia
- Tasmania
- ACT
- Northern Territory
- overseas

Q11 How would you best categorise the place where you most recently moved from?
- overseas
- within Australia
  - i. capital city
  - ii. coastal areas (non capital city)
    1. coastal city (with more than 10,000 people)
    2. other coastal area
  - iii. inland areas (non capital city)
    1. inland city (with more than 10,000 people)
    2. other inland area

Q12 What was the main trigger or triggers for your most recent move? [Tick all that apply]

to take up a new job for you or your partner
loss of income or job for you or your partner
to access higher quality schooling
to access tertiary education such as universities or TAFE
because of housing (affordability or availability)
because of health care
long commutes to work and/or services
natural disaster (drought, bushfires, floods)
because of retirement
to be near family or friends
because of the cost of living
to find a less crowded/ more relaxed place to live
personal reasons (divorce/breakup)

| culture |
| nightlife and social opportunities |
| access to beaches, national parks and other natural attractions |
| because of violence or crime |
| moved not from own choice |
| to avoid covid pandemic lockdowns |
| to meet visa requirements |
| |
| other_ please state |

Q13 How important were the following factors for you in your most recent move? [Rate from 1 not important to 5 very important]

| Being able to find a good job |
| My partner being able to find a good job |
| Availability and quality of schools |
| Availability and quality of tertiary education, such as universities or TAFE |
| Being able to find an affordable place to live |
| Access to high quality healthcare |
| Access to public transport services |
| Risk of natural disasters (drought, bushfires, floods) |
| Digital connectivity |
| |
| Close to family and friends |
| Cost of living |
| |
| |
| Culture |
| Nightlife and social opportunities |
| Access to beaches, national parks and other natural attractions |
| Crime |
| Covid pandemic lockdowns |
| Climate |
| Access to good airport |
| Other_ please state |

Q14 To what extent did the following cause difficulties as part of your most recent move? [Rate from 1 no difficulties to 5 major difficulties]

| Finding a new job |
| Partner finding a new job |
| Finding quality schooling |
| Accessing tertiary education |
| Finding affordable housing |
| Accessing quality health services |
| Commuting to work and/or services |

Accessing digital connectivity
Getting accreditation for occupation in another state
Costs of moving (eg stamp duty, other costs)
other_ please state

[For people who have not moved in the past five years]

Q15 Did you consider moving over the past five years?

- No
- Yes, but decided not to

Q16 How important do you consider the following as reasons for you **not moving** over the past five year? [Rate from 1 not important to 5 very important]

Cost of moving is too high
Don't want to leave social networks of family and friends
Don't want to disrupt children's schooling
Don't want the stress of the moving process
I am too uncertain about whether I would like another location
Availability of good jobs for me and/or my partner
Established business networks
Availability of health services
Digital connectivity
Availability of other government services
My occupation credentials are not recognised in other jurisdictions
Other (Please specify)

Prospective moving

The following questions are about your view on whether you will move in the future and what would make this happen or be a barrier to this happening. Remember that a move is defined as to another city, town or region. **A move does not include changing where you live within the same city or town.**

      Q17 How likely do you think it is that you would move to the following types of areas in the next five years? [Rating for each from Highly unlikely, unlikely, moderately likely, likely, highly likely]
- overseas
- within Australia
    i. capital city
    ii. coastal areas (non capital city)
        1. coastal city (with more than 10,000 people)
        2. other coastal area
    iii. inland areas (non capital city)
        1. inland city (with more than 10,000 people)
        2. other inland area

      Q18 How important do you think the following are in any decision you might make to **move in the next five years**: [Rate from 1 not important to 5 very important]

Being able to find a good job
My partner being able to find a good job
Availability and quality of schools
Availability and quality of tertiary education, such as universities or TAFE
Being able to find an affordable place to live
Access to high quality healthcare
Access to public transport services
Risk of natural disasters (drought, bushfires, floods)
Digital connectivity
Close to family and friends
Cost of living
Culture
Nightlife and social opportunities
Access to beaches, national parks and other natural attractions
Crime
Climate
Access to good airport
Other_ please state