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Place-based drivers and effective management of population growth and change in regional Australia

From the AHURI Inquiry: Inquiry into projecting Australia's urban and regional futures: population dynamics, regional mobility and planning responses

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Contents

List of tables

List of figures

List of boxes

Acronyms and abbreviations used in this report

ABS	Australian Bureau of Statistics
AHURI	Australian Housing and Urban Research Institute Limited
BITRE	Bureau of Infrastructure and Transport Research Economics
COVID-19	Coronavirus disease 2019
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAMA	Designated Area of Migration Agreement
DIDO	Drive-in drive-out
DRNSW	Department of Regional NSW
FIFO	Fly-in fly-out
ICT	Information and communication technology
LGA	Local government area
NAPLAN	National Assessment Program – Literacy and Numeracy
NSW	New South Wales
NZ	New Zealand
OLS	Ordinary least squares
RDA	Regional Development Australia
REDS	Regional Economic Development Plans
RFDS	Royal Flying Doctor Service
STRA	short-term rental accommodation
SUA	Significant Urban Area
TAFE	Technical and Further Education
UDRH	University Department of Rural Health
UK	United Kingdom
US	United States
Vic	Victoria
VIF	variance inflation factor
WA	Western Australia

Executive summary

Key points

- Place-based push and pull factors influence different patterns of population growth and decline across non-metropolitan Australia. The aim of this study is to reveal contemporary push–pull factors influencing population change and identify key policy solutions for managing the impacts of this change.
- Modelling of population change reveals that larger tourism sectors and more graduates in the workforce, as well as increased airport services, are associated with higher population growth in non-metropolitan Australia, while higher dwelling prices have a negative effect on growth. Favourable geographic factors for growth are proximity to the coast and metropolitan cities, and a warmer and wetter climate.
- Respondents to community surveys noted different reasons for moving to selected case study areas, with 'lifestyle reasons' selected most by those who had moved to Port Macquarie Hastings, 'personal reasons' for movers to Ballarat and 'employment reasons' for Broken Hill. Cheaper housing and lifestyle were increasingly important reasons for moving from capital cities to all case study areas within the last five years.
- The likelihood of population churn was high across all case study areas, with the highest number of survey respondents stating they were likely to move away in the next five years coming from Broken Hill (44% of respondents).

- **Poor or inadequate secondary education and tertiary training, health and disability services, crime rates, climate and rising housing costs or lack of availability were stated in interviews as place-based factors for moving from the case study areas.**

- **Policies to support liveability, such as improvements to housing affordability and availability, local health and education services, and local transport infrastructure, as well as funding for regional airports, universities and TAFE campuses could aid population growth and retention.**

- **Coordination across tiers and departments of local, state and federal government and industry is essential to deliver successful place-based solutions to encourage and manage population growth in regional cities.**

Key findings

This study reveals some important trends in population change across non-metropolitan Australia based on key place attributes that determine where people decide to move and when.

Modelling the factors that influenced population change in non-metropolitan Australia from 2011 to 2021 revealed that non-metropolitan cities with more graduates in the workforce and higher tourism and entertainment activity grew faster. Accessibility emerged as a key element: proximity to the coast and to major metropolitan areas emerged as significant positive attributes for growth, while the number of air services was also a positive factor. Meanwhile, higher dwelling prices were found to have a negative impact on population growth. Warmer and wetter climates encouraged population growth.

Reasons for moving to the selected high population change case study areas stated in community surveys largely followed expected trends in Australian and international migration literature, with personal, lifestyle and employment reasons stated most often as key factors in survey respondents' decisions to move. However, the main reasons for moving were differentiated based on the case study location. Lifestyle was the factor selected most by survey respondents who moved to Port Macquarie Hastings (selected by 61% of movers), while personal reasons were selected most by survey respondents in Ballarat (selected by 45% of movers), and employment reasons most by survey respondents in Broken Hill (selected by 58% of movers).

Beyond these main reasons for moving were specific place-based attributes that influenced decisions to move to the case study areas. Access to major cities through strong transport links was a desirable pull factor for Ballarat for those from capital cities, and facilities and services were a pull factor for movers from smaller regional areas. Ballarat also had the highest number of people moving to access better or more affordable housing; however, 'cheaper housing' was also a pull factor to all three local government areas (LGAs) in the study, particularly for those that had moved within the last five years from capital cities. Growing familiarity and acceptance of telecommuting during the coronavirus (COVID-19) pandemic also contributed towards decisions to move from capital cities to Ballarat and Port Macquarie Hastings.

The recent population changes experienced in each of the case study areas posed certain challenges. The key challenges noted in interviews with local government, industry and economic development experts related to insufficient road and water infrastructure, health, and childcare and educational services; insufficient housing supply or growing unaffordability; and, in the case of Broken Hill, the need for key worker attraction to match the growing service demands or prevent further decline.

Despite strong pull factors to the case study LGAs, the likelihood of churn was high across all three areas, which, in some ways, relates to the challenges each face in managing their changing populations. Among the survey respondents in Broken Hill, 44 per cent stated that they were more likely than not to move within five years, while 35 per cent of Ballarat respondents and 30 per cent of Port Macquarie Hastings respondents said they were more likely to move. The possible place-based reasons for moving from each of the case study areas were varied. Gaps in health and education service provision were potential push factors from Broken Hill. Crime rates and the cold climate were regularly cited reasons for considering moving from Ballarat. A lack of affordable housing or rental availability was one of the main reasons stated for possibly moving away from Port Macquarie Hastings, which was the LGA with the highest median dwelling and rental prices. These findings show that place-based attributes are important for determining growth, decline and churn among non-metropolitan cities.

Another key finding was that survey respondents stated that they would most likely move to other regional cities (46% of all respondents) rather than capital cities (30% of all respondents) if they were to move away from the case study areas, which is counter to the overall urbanisation trend in Australia and warrants further investigation into the popularity of mid-sized, regional cities (Crommelin, Denham et al. 2022).

Policy development options

Policies that encourage economic growth and the creation of local jobs remain a key instrument to grow and maintain regional populations, as employment is a key migration driver to non-metropolitan Australia. Supporting local business development, particularly in growth sectors such as tourism, hospitality, tertiary education and renewable energy, could help attract new residents, retain local youth and diversify local economies in non-metropolitan areas. Enhancing internet connectivity and physical transport infrastructure in remote and outer regional areas could also shift commuting zones further outwards and allow people to live in regional areas more confidently, while maintaining employment, study and social ties to major centres.

Housing and lifestyle factors have become more influential on decisions to move to non-metropolitan areas within the last few years, particularly for those moving from capital cities heavily impacted by the COVID-19 pandemic. There is an opportunity to leverage this 'regional revival' through marketing the unique lifestyle attributes of non-metropolitan areas to capital city residents (e.g. building on campaigns such as Move to More and Evocities). However, efforts to maintain housing and rental affordability and liveability need to be implemented urgently in non-metropolitan Australia to maintain 'cheaper housing' and 'different lifestyle' as pull factors, and limit the impact of population growth on communities and local housing markets. Limiting short-term rental accommodation (STRA), providing state and federal government support to build appropriate social and affordable housing, and increasing or attracting trade workers/building inspectors to aid housing construction are potential policy solutions, as well as upgrading and developing air, road and rail services, and health and education infrastructure and services.

In addition, key worker attraction and retention is essential to support growing regional populations (Haslam McKenzie 2011). Government and industry incentives such as grants can be effective for filling vacancies; however, they may only be temporarily effective. Non-cash incentives, such as ensuring childcare, combined with broader approaches to maintain liveability and housing affordability could continue to attract and retain key workers, as with the broader population more generally.

A main takeaway from this study is the importance of timing policy responses with population change and adapting attraction and retention agendas accordingly. Being able to effectively anticipate population growth is critical for timing appropriate interventions to ensure population retention. Local planners in non-metropolitan areas should have access to accurate growth forecasting and research resources to be able to plan as effectively as possible, and should also be able to put in place temporary measures to meet unexpected demand resulting from rapid growth (e.g. through Temporary Local Planning Instruments).

However, another major challenge to being able to keep pace with population change is that governance of the different needs of new residents (e.g. health, housing, transport and education) is delivered by multiple public and private sector bodies beyond the scope of local government. Therefore, state and federal government and industry cooperation is essential. Opportunities for cooperation through strategic planning between different tiers of government and industry in communication with local communities should be sought for areas of high population change. Government bodies like the Department of Primary Industries and Regional Development in NSW[1] could facilitate the interactions between different tiers of government, community and stakeholders to identify appropriate policy responses to the population challenges faced in non-metropolitan cities.

The study

Building directly on previous AHURI research on regional population growth, connectivity and planning (Gurran, Forsyth et al. 2021), the findings of this project quantify place-based push–pull factors influencing contemporary population shifts in non-metropolitan Australia. The study also explores the impacts of these trends for affected communities, examining the role of local, state and federal governments in responding to population growth and change trajectories.

This study is part of a wider AHURI *Inquiry into projecting Australia's urban and regional futures* that aims to investigate the population dynamics and regional mobility trends impacting regional and urban Australia and planning and policy responses. This study specifically aims to identify contemporary, place-based push and pull factors that influence population change in non-metropolitan urban centres and investigate how LGAs adapt and manage growing and changing populations.

Stage 1 of the research identified key factors influencing population change in Significant Urban Areas (SUAs) of non-metropolitan Australia by modelling variables associated with population change identified through a literature review. The models used 2011, 2016 and 2021 Census population and employment data, as well as property, climatic, geographical and air service data from various sources.

Stage 2 of the research involved selecting three LGAs experiencing high population change identified in Stage 1 and examining them in greater depth. Port Macquarie Hastings (NSW), Ballarat (Vic) and Broken Hill (NSW) LGAs were chosen as examples of a coastal lifestyle city, inland manufacturing regional centre and mining resource town, respectively, as they are each experiencing different population challenges. A community survey was conducted in these case study areas to identify contemporary push–pull factors relevant to these different locations. Respondents were asked about their reasons for moving to each case study LGA (where applicable), their experiences and the different place attributes of their area, and, finally, the potential likelihood and reasons for leaving the case study LGAs.

Finally, 19 local government, industry and economic development knowledge holders from the three LGAs were interviewed to identify the challenges they faced, as well as policy development options for managing population change.

1 Prior to 1 July 2024, during the period that this report was prepared, the Department of Primary Industries and Regional Development was called the Department of Regional NSW (DRNSW). The updated departmental name is used throughout the report except where it relates to pre-1 July 2024 interviewee organisational affiliations and relevant direct quotations.

1. Introduction

- Historically, population change has been uneven in non-metropolitan Australia, often based on place-specific push and pull factors.
- Population growth is desirable for some regions struggling to maintain services and a sustainable local economy, and challenging for others, as it puts pressure on infrastructure and services.
- Impacts from the COVID-19 pandemic are hypothesised to have changed populations in non-metropolitan Australia, possibly causing a 'regional revival'. This offers an opportunity for migrant attraction but also exacerbates population challenges.
- This study investigates place-based push and pull factors that explain contemporary population shifts in regional urban centres, and how local governments can manage this change through key policy development solutions.
- A mixed-method approach was utilised for this study, combining analysis of population change and place characteristics through statistical modelling; analysis of push and pull factors via a community survey conducted in the case study areas of Port Macquarie Hastings, Ballarat and Broken Hill; and, finally, interviews with local council and economic development representatives to provide effective policy solutions for managing population change.

This project was designed to investigate place-based push and pull factors that explain contemporary population shifts in regional urban centres, and how local governments can best foster and manage population growth and retention across different economic and environmental contexts in non-metropolitan Australia.

Growth and decline in Australia's non-metropolitan cities are of interest to policy makers as governments incentivise migration to regional areas both to take the 'pressure' off major cities (Crommelin, Denham et al. 2022; Vij, Ardeshiri et al. 2022) and to encourage sustainable growth in regional areas, especially those experiencing labour shortages (Hugo 2008).

However, migration into and out of regional and remote Australia is not uniform. Previous research suggests that a number of different place-based push and pull factors, such as economic conditions, climate or lifestyle opportunities, can be used to explain migration to regional and remote locations (Argent, Tonts et al. 2014; Connell and McManus 2016).

More recently, reports of a net exodus from major Australian cities during the COVID-19 pandemic is of key interest to policy makers as a possible opportunity for growth and retention of population in non-metropolitan areas previously experiencing population concerns. However, the nature of these population changes and emerging trends, including how likely the movers are to stay, remains unknown.

Building directly on AHURI research on regional population growth, connectivity and planning, lived experiences of regional cities and attracting residents to smaller cities (Crommelin, Denham et al. 2022; Gurran, Forsyth et al. 2021; Vij, Ardeshiri et al. 2022), this study aims to quantify and qualify place-based push–pull factors influencing contemporary population to determine possible policy levers to manage population across non-metropolitan regions. This study first examines existing variables causing the greatest change in the populations of regional urban centres, and then investigates new and emerging migration trends through community surveys in the three case study areas.

The management of population change in non-metropolitan Australia is also a key policy concern, as rapidly declining populations can influence service retraction and declining communities. Conversely, accelerated population growth or churning populations can result in severe infrastructure and service shortfalls and change the sense of community in non-metropolitan towns and cities (Hugo and Harris 2013). This study also investigates some of the key challenges and solutions for managing population growth and change through stakeholder interviews, and offers policy solutions for supporting local areas in planning for their future resident populations.

1.1 Population change in non-metropolitan Australia

Changes in population are caused by natural increase or decline due to fertility and mortality, and net internal and international migration (Hugo, Feist et al. 2015). While both fertility rates and mortality rates can have place-specific impacts on the natural increase and decrease of population in non-metropolitan regions, overall, the impact of natural rates of growth are small in Australia compared to the change in population as a result of migration. As it is a major driver of historical and recent population change, this report focuses primarily on migration to, from and within non-metropolitan areas rather than natural population increase and decrease. Migration also tends to be the area of greatest policy focus as it is relatively adaptable to local, state and federal policy changes.

1.1.1 Migration and non-metropolitan areas

International migration contributes significantly to Australian population growth overall (Hugo 2008). However, despite policies to encourage migration to regional areas implemented at all levels of government (Crommelin, Denham et al. 2022; Hugo 2008), the majority of international migrants settle in major cities. For non-metropolitan Australia, internal migration is the biggest contributor to population change rather than international migration (Rees, Bell et al. 2017), and, hence, dominates discussions of population dynamics outside major cities.

General patterns of, and reasons for, internal migration shift over time. While internal migration overall has declined in recent decades (Kalemba, Bernard et al. 2021), various patterns of population change have been documented in Australia.

Australia exhibits metropolitan primacy, with most of the population situated in major cities (Burnley and Murphy 2004). Australia's largest cities – Sydney, Melbourne and Brisbane – continue to attract significant growth from interstate and internationally (Hugo, Feist et al. 2015; Raymer and Baffour 2018).

Metropolitan primacy makes efforts to shift population away from the major cities and retain population in non-metropolitan areas challenging and resource intensive. Rural and outer regional populations of Australia continue to decline long term, particularly in remote inland regions and Australia's wheat–sheep belt (Smailes, Griffin et al. 2019). Young adults in particular tend to leave non-metropolitan regions, resulting in rapidly ageing towns that create population sustainability concerns (Smailes, Griffin et al. 2019). Rural and regional Australian areas can experience stigma due to this perceived and real locational disadvantage (McManus and Pritchard 2000). However, select non-metropolitan areas can experience rapid population growth relative to their resident populations based on place-based factors as discussed below.

1.1.2 Non-metropolitan urban centres of high population change

Many regional areas are exhibiting high population change due to migration, particularly those in commutable distance to major cities. Based on a historical and contemporary Australian migration literature review, a broad typology of non-metropolitan urban areas based on their migration profile was developed for the purposes of this study. These urban areas are 'satellite' cities, high environmental amenity coastal cities, large inland manufacturing and agricultural cities, and resource-dependent cities experiencing overall population decline. Each of these are explained briefly below.

- *Satellite cities:* Satellite cities are cities situated close to capital cities with strong economic and social links to the capital cities. Satellite cities in Australia tend to be experiencing high rates of population growth and change (e.g. Geelong to Melbourne, and Newcastle and Wollongong to Sydney). These cities are less of a focus for this study, as it can be difficult to differentiate migration drivers to these areas from the growth of their nearby major centres, and, therefore, population gains could be attributed to continued metropolitan primacy.
- *Sea change cities and lifestyle/amenity migration destinations:* High environmental amenity locations, particularly those situated along the coast, have been growing in population for decades. The identification of a 'population turnaround' in Australia in the 1970s (Burnley and Murphy 2002; Hugo 1994; Hugo and Smailes 1985; Smailes and Hugo 1985) attributed much of the growth of regional Australia to migration to the high amenity coastal locations, termed 'sea change' migration (Burnley and Murphy, 2004). Amenity destinations remain some of the most rapidly growing areas in Australia, particularly those close to capital cities (Argent, Tonts et al. 2014; Borsellino, Charles-Edwards et al. 2021).
- *Inland agricultural and manufacturing centres:* Large, inland urban centres provide services for surrounding districts and can be large economic and employment hubs in their own right beyond the urban dominance of capital cities. Many regional cities have grown from primarily manufacturing and resource-industry focused centres into health, construction and service-industry sectors (Li et al. 2022). These larger inland towns and cities tend to grow faster due to a combination of more highly developed infrastructure and industry specialisation (Beer and Clower 2009), clusters and networks of universities (Harrison and Turok 2017), and businesses in 'innovation districts' (Baily and Montalbano 2018). Population growth of these centres has been theorised as resulting from migration from surrounding rural and low populated areas, leading to the term 'sponge' cities. However, the 'sponge city' effect has been disputed, as growth experienced in regional centres can also be due to substantial migration from capital cities (e.g. Dubbo and Tamworth as investigated in Argent, Rolley et al. 2008).

- *Resource-dependent towns and their transition:* Resource extraction industries have historically grown local populations in mineral-rich regional areas, drawn by employment (Perry and Rowe 2015). However, many resource-dependent cities are experiencing population decline after historically high growth due to job losses in the sector and are in various stages of transition to new economic activities (Martinez-Fernandez, Wu et al. 2012). Some resource-dependent towns experience boom and bust population cycles, particularly with the increase of non-resident workers. Recent trends such as fly-in fly-out (FIFO) or drive-in drive-out (DIDO) working practices have reduced the necessity to permanently settle in resource extraction sites, and generally do not lead to local development or longer-term population growth (Martinez-Fernandez, Wu et al. 2012; Perry and Rowe 2015).

1.1.3 Place-based drivers of migration in and out of non-metropolitan areas

Accounts of what drives people to move to and from non-metropolitan regions in Australia tend to be dominated by narratives of either employment-led or lifestyle-led migration. Over the last two centuries, Australian's mobility has fluctuated in response to mineral exploration, such as gold rushes, droughts and recessions (Bell, Wilson et al. 2017), and in response to lifestyle trends, including increased urbanisation and a shift towards the coast (Burnley and Murphy 2004). Employment-led migration trends are often discussed as growing population in certain manufacturing and resource extraction zones, while lifestyle-led migration results in the growth of high environmental amenity coastal regions, as discussed above (Argent, Tonts et al. 2014).

However, determinants of non-metropolitan migration and settlement patterns are expansive, with numerous place-based push and pull factors intersecting in complex ways depending on the attributes of an area to create differential growth and decline (Bourne, Houghton et al. 2020; Gosnell and Abrams 2011; Partridge 2010; Rupasingha, Liu et al. 2015). Different locations will have varied migration profiles based on their unique combination of the factors outlined below.

Employment, tertiary education and innovation opportunities

Employment remains a key driver of migration. Therefore, policy makers actively seek to improve local economies to grow populations in non-metropolitan Australia (Cresswell, Dorow et al. 2016). Job opportunities (Rupasingha, Liu et al. 2015) or the creation of innovation clusters (Beer and Clower 2009; Baily and Montalbano 2018) draw migrants to specific areas.

Amenity and lifestyle

Amenity and lifestyle are drivers of migration to many high environmental amenity zones, particularly coastal zones, in non-metropolitan Australia. Why Australians seek beachside lifestyles, in particular, is often attributed to a deep collective valuation of the beach within the national identity (Booth 2001; Osbaldiston 2012; Osbaldiston and Picken 2014). Select coastal 'sea change' and high environmental amenity 'tree change' regions continue to attract high numbers of migrants, with some areas being the fastest growing regions in Australia (e.g. Sunshine Coast, Gold Coast).

Services and infrastructure

The growth of cities is positively related to connectivity by major railways, roads and airports (Duranton and Turner 2012). Proximity to major railways and highways has traditionally been a major urban growth factor for manufacturing (Greenhut 1956).

Technological advancements and favourable economic conditions may have facilitated the ability of former city dwellers to telecommute from smaller regional locations (Guaralda, Hearn et al. 2020; Waters-Lynch, Glover et al. 2022). Therefore, internet connection speeds and transport infrastructure may be a factor in migration to certain non-metropolitan areas.

Access to hospitals and available health infrastructure can be significant considerations for potential in-migrants, especially for households with specific health care requirements. The quality of schools has been found to influence residential choices within American cities (Bayer, Ferreira et al. 2007; Teske, Yettick et al. 2015); however, its effect on Australian migration is less certain.

Gravity effects

Towns closer to larger cities and employment centres tend to grow faster (Frost 2004; Rupasingha, Liu et al. 2015) in what is often termed the 'gravity effect' (Poot, Alimi et al. 2016). This is associated with greater access to business services and supplies in large cities and to specialised city facilities and consumer services for residents. Larger cities and those close to capital cities are also less likely to face the stigma of rural disadvantage (McManus and Pritchard 2000).

Dwelling prices

Lower dwelling prices may also attract people to non-metropolitan regions (Vij, Ardeshiri et al. 2022; Vij, Connor et al. 2021). House prices have long been considered a driver of migration for those seeking cheaper housing or home ownership, particularly those moving out of higher-priced capital cities (Crommelin, Denham et al. 2022; Vij, Ardeshiri et al. 2022).

1.1.4 Impacts of COVID-19 and other recent events

Much of the literature on migration drivers and trends in non-metropolitan Australia was published prior to the COVID-19 pandemic and other recent major events impacting regional Australia, such as the bushfires in 2019–20 and floods in 2022.

Anecdotal and emerging evidence suggests that COVID-19 had some impact on population change in the regions. Lockdowns and restrictions were implemented in major cities to prevent the spread of COVID-19, especially in Melbourne and Sydney. These lockdowns and border closures made urban life difficult, and narratives in the public domain turned towards anti-urban sentiments, with claims of capital city residents moving temporarily or permanently to lower density areas, seeking refuge, and initiating a 'regional revival' (Regional Australia Institute 2022; Salt 2021).

Increased familiarity with telecommuting and working from home as a result of the COVID-19 pandemic has been discussed as a possible driver for migration from major centres to regional areas. At the same time, being less tied to a physical workplace enhanced the opportunity for moves for lifestyle and personal reasons (Beck and Hensher 2022; Denham 2021; Nygaard and Parkinson 2021).

However, some of the impacts of COVID-19 on migration trends may be overstated or misunderstood, and non-metropolitan population growth may be, instead, more due to population retention in regional areas rather than an exodus from capital cities (Borsellino, Charles-Edwards et al. 2022; McManus 2022).

A possible deterrent to relocating to some non-metropolitan regions may be the recent and widespread natural disasters that affected many locations across Australia. In the summer of 2019–20, widespread bushfires impacted 19 million hectares across Australia, affecting the tourism season in many high environmental amenity locations, destroying 3,000 houses and killing 33 people (Filkov, Ngo et al. 2020). Shortly afterwards, in 2021, a mouse plague ravaged inland Australia destroying many crops (Nogrady 2021). Large rain events and an unusually wet season in 2022 resulted in widespread flooding, impacting northern NSW regions and south-east Queensland and destroying 5,000 homes (Ludlow 2022). These events may have also influenced out-migration from select regional locations and increased concerns about disaster risk in vulnerable locations.

This report addresses our gap in knowledge related to the impact of recent events on the place-based migration drivers of different non-metropolitan locations, and the impacts and challenges of subsequent population change.

1.2 Policy approaches to encourage population growth in regional Australia

Government spending on infrastructure and services is often tied closely to population. Governments at all levels can undertake many initiatives to try to bring population into non-metropolitan towns and cities. The following outlines a few key approaches to influencing population change in non-metropolitan regions and attempts to direct population to areas that require population boosts.

- *Place marketing:* Locations experiencing long-term population decline or the need to attract migrants for economic growth can aim to influence migration decisions through place-marketing campaigns (e.g. Evocities by the NSW Government or Move to More by the Australian Government).
- *Relocation grants and incentives:* Government at all levels, as well as industry bodies, can offer grants and incentives to relocate or remain in regional locations. These incentives and grants are often aimed at specific skilled or key workers to fill job vacancies (e.g. the NSW Government's Regional Skills Relocation Grant or the WA Government's Attraction and Retention Initiative for teachers).
- *Migration visa requirements and incentives:* To fill worker shortages, many international migration visas stipulate requirements for international migrants to live or work in regional areas for a given amount of time or offer incentives for choosing to work or live in a designated regional area (e.g. Skilled Work Regional visa 491, Working Holiday visa 462).
- *Decentralisation of jobs and industry:* Historically, government bodies in Australia have decentralised to strategic non-metropolitan locations, such as larger regional cities with existing infrastructure and services (e.g. Albury–Wodonga [Lange 1975]), or peri-urban growth zones (e.g. Parramatta in Sydney or Tooronga in Melbourne [Bell 1991]). After an extended focus on managing growth in Australia's major cities, regional and rural areas are receiving more attention from policy makers for decentralisation (Crommelin and Osbaldiston 2022).
- *Growth planning and infrastructure/service grants:* Planning for growth zones and infrastructure or service grants can influence migration trends indirectly. Upgraded transport infrastructure, tertiary education services and campuses, airport upgrades and supported economic growth as a result of these projects can impact the desirability of, and, therefore, migration to, regional areas (e.g. the Australian Government's Building Better Regions Fund). Strategic economic growth planning (and, by extension, population growth) can also aid development of select regional areas through coordination between tiers of government and industry (e.g. Regional Deals and Special Activation Precincts).

1.3 Challenges of managing changing populations

While many regional urban centres require population growth for their local economy and, therefore, encourage greater migration, there are many challenges associated with population change that often fall to local governments to manage. This section presents common challenges with managing high population change areas.

Infrastructure and service burdens

Both population increase and decrease cause infrastructure and service challenges. Population decrease can justify a retraction of services and/or mean that services cost more per person, especially for services with fixed costs such as water supply (Hummel and Lux 2007). Population increase can create infrastructure and service shortfalls, particularly in sea change or high tourism zones, which may need to service high seasonal temporary populations as well as resident populations (Gurran and Blakely 2007).

Housing market impacts

Rapid population increases can create housing and rental market booms, especially in tourist destinations where the loss of long-term rental housing to holiday letting creates tight rental markets (Gurran and Phibbs 2017; Wachsmuth and Weisler 2018). Population decrease can also lead to housing problems, including abandonment, asset depreciation and a decrease in the quality of housing stock and services in general (Jeon and Kim 2020; Beer and Keane 2000).

Impacts on environment

Coastal regional areas are often magnets for counter-urban migrants; however, risks such as sea level rise, storm surge and, increasingly, bushfires represent critical development constraints (Gurran, Norman et al. 2013; Norman, Newman et al. 2021). All these factors will present challenges for local government, which is tasked with planning for, and accommodating the infrastructure, housing and service needs of, changing populations in locations vulnerable to natural disasters (Gurran, Blakely et al. 2007).

Skills shortages and social impacts

Population growth and decline can have impacts on the social fabric of regional communities. Growth can change the demographic make-up of a community, and population loss, particularly due to out-migration of young people, can lead to social and economic decline (McGuirk and Argent 2011). Many areas in Australia are experiencing skills shortages, and this is most pronounced in remote and very remote areas (Haslam McKenzie 2011). The continued out-migration of young adult populations who might otherwise undertake entry level and essential work (Argent and Walmsley 2008; Drozdzewski 2008) is contributing to a skills shortage in non-metropolitan Australia. Further, ageing populations in regional Australia put pressure on health services in areas that have long struggled to attract health care workers in sufficient numbers.

The nature of population change can also impact communities, as both seasonality and high population churn can create social issues. Seasonal change in tourist zones and second home ownership can impact local character (Hugo and Harris 2013). FIFO or DIDO practices can erode social capital in regions such as mining towns (Nicholas and Welters 2017), and an erosion of social capital can further disincentivise skilled and professional staff retention in remote areas (Haslam McKenzie 2011).

1.4 Research questions

This study is one of four projects conducted as part of the AHURI Inquiry on population growth and change across Australian cities and regions. The Inquiry sub-research question this project addresses is:

What are the place-based determinants of population growth and change, and how best can local governments foster population growth and retention across the different economic and environmental contexts characterising non-metropolitan Australia?

Within this context, this research aims to (1) analyse the factors influencing population change in regional urban centres; (2) shed new light on contemporary, place-based push and pull factors that encourage population growth and change in regional Australia; and (3) investigate how LGAs adapt and manage growing and changing populations. Three research questions structure the project around these aims:

RQ1: What locational, economic, housing and infrastructural characteristics are associated with differences in population growth and decline across non-metropolitan Australia?

RQ2: What place-based push–pull factors help explain decisions to migrate to, and remain in, regional localities?

RQ3: What are the impacts of different growth scenarios for local governments, and how can they best respond?

1.5 Research methods

This research analyses place-based variables that determine growth and change across Australia's regional cities, and studies the individual motivations of those who migrate to, or decide to remain in, regional cities. It also investigates responses by local governments and other organisations to manage population change and its effects on local infrastructure. The research combines quantitative and qualitative approaches (Table 1). The study was conducted in three stages with each stage corresponding to a research question.

Table 1: Research questions, data sources and methodology

Research question	Data sources	Methodology (including data sources)
RQ1	• ABS SUA population 2011, 2016, 2021 • ABS ERP (2020–2021, during the COVID-19 period) • ABS Industry of employment (3 digit level), at LGA/SA2 levels • ABS Occupation of employment (2 digit level), at LGA/SA2 levels • SQM Research asking property prices (postcode level) • BITRE air passengers p.a. top 10 airports and top 50 regional airports • Bureau of Meteorology annual records for weather stations	Growing and declining SUA (regional towns) under 250,000 population at start of period across Australia were identified. SUAs within Greater Capital City Statistical Areas were excluded except for Hobart and Darwin. An OLS regression model was used to identify variables contributing significantly to explaining population change in 2011–16 (model 1) and 2016–21 (model 2).
RQ2	• Community survey data (n = 421–485 responses, over three case study areas) • Case study data including descriptive statistics, planning/policy documents	Three LGAs with SUAs that have recorded high levels of population growth/change were selected as case study areas. Surveys were conducted in case study areas with a descriptive analysis of relationships between respondent attributes (e.g. age, household type, income, employment status, industry, housing tenure) and particular place-based push–pull drivers of each case study area (e.g. employment opportunities, educational facilities, health services, housing costs/ preferences, climate etc.) and likelihood of staying in area.
RQ3	• Interview transcripts	Nineteen semi-structured interviews were conducted with local government planners, policy makers and politicians, and economic development and community service personnel in the three case study areas, addressing: • impacts of recent population growth/change trajectories for local and regional communities • perceived place-based drivers of population growth/retention/decline • existing and potential policy and planning interventions.

Note: ABS = Australian Bureau of Statistics; BITRE = Bureau of Infrastructure and Transport Research Economics; ERP = Estimated Resident Population; LGAs = local government areas; OLS = ordinary least squares; SQM Research = a property market research company; SUA = Significant Urban Area.

Source: Authors' research.

Stage 1: Drivers of population change across Australia

Stage 1 answered RQ1 using statistical modelling of the relationship between population change and locational, economic, housing and infrastructural characteristics of SUAs in non-metropolitan Australia. These characteristics were broken down into hypothesised causal variables for migration and population change.

A literature review was conducted of international and domestic literature to identify contemporary and historical drivers of migration to, and population change in, non-metropolitan regions in Australia and other comparable geographies in the United Kingdom (UK), United States (US), New Zealand (NZ) and Canada. From these identified drivers of migration and population change, a list of potential causal variables was created for later input into the regression analysis (for more detail on these variables and analysis, see Chapter 2).

A model was constructed using these variables to examine population change in non-metropolitan SUAs (regional towns) of less than 250,000 people in relation to hypothesised causal variables. Population change for all non-metropolitan SUAs in Australia was analysed from 2011 to 2021. SUAs with the greatest population change were identified and shortlisted to select three case study regions for Stages 2 and 3.

Stage 2: Reported push–pull factors in three case study areas

Stage 2 answered RQ2 using a community survey identifying push–pull factors to move to and remain in three case study areas. Case study LGAs were selected in part due to analysis of population change in the relevant SUAs identified in Stage 1, as well as four additional factors to provide a diverse set of case study areas (see Appendix 1 for more detail). The case study LGAs were Port Macquarie Hastings (NSW), Broken Hill (NSW) and Ballarat (Vic).

Online surveys were distributed in the case study areas. Residents of the case study areas were asked about their reasons for moving/remaining in the area and about other place attributes to determine push–pull factors (see Appendix 3). The surveys were advertised through local newspapers and radio interviews, and through posters and flyers left around shopping centres and university and TAFE campuses and placed on noticeboards in the main shopping strips in the LGAs. Social media advertisements targeted via location and Qualtrics (survey company) recruitment were also used. The multiple ways survey respondents were recruited in each case study area aimed to reduce the potential of a biased sample by age or gender; however, some gender bias remained (see Chapter 3 for demographics of respondents). A minimum of 375 respondents for each location were sought to ensure strong results, and this number was exceeded in each case study (n = 458 for Port Macquarie, n = 485 for Ballarat, n = 421 for Broken Hill).

Stage 3: Understanding local government and state responses to population change

Stage 3 of the research answered RQ3 using semi-structured interviews with local government, industry and economic development experts who work in the case study LGAs. Participants were approached by email to participate in the study and were selected based on their knowledge of key population and economic drivers and the policy context impacting the case study LGAs. Participants were given the opportunity to explain different impacts of population change in their area as currently experienced and under different growth scenarios expected for their LGA, the challenges they face under different population pressures and possible solutions to respond to these pressures. A total of 19 interviews were conducted. For the breakdown of participants, see Table 2.

Table 2: List of interview participants, position title and/or organisational affiliation

Case study area	Name/pseudonym and organisation
All of NSW	Director, Welcome Experience Program, DRNSW
Port Macquarie	Mayor Pinson, Port Macquarie Hastings Council
Port Macquarie	Hon Leslie Williams MP, member for Port Macquarie
Ballarat and NSW	Economic development manager, DRNSW
Broken Hill	Business Development, DRNSW
Broken Hill	Hon Mark Coulton MP, member for Parkes
Broken Hill	Mayor Kennedy, Broken Hill Council
Broken Hill	Health researcher, Broken Hill
Broken Hill	Roy Butler MP, member for Barwon
Broken Hill	CEO, Robinson College, Broken Hill
Broken Hill	Mining industry representative
Broken Hill	CEO, Foundation Broken Hill
Ballarat	Ballarat City Council representative
Ballarat	Ballarat City Council representative
Ballarat	Social researcher, Federation University
Ballarat	CEO, Committee for Ballarat
Ballarat	Ballarat City Council representative
Ballarat	Ballarat City Council representative
Ballarat	Ballarat City Council representative

Source: Authors' research.

2. Modelling factors associated with population change in non-metropolitan areas

- **Modelling of factors hypothesised to influence population change in urban areas with populations of between 10,000 and 250,000 explained 79 per cent of variance in population change between 2011 and 2016 and 82 per cent between 2016 and 2021.**
- **Centres with higher human capital through larger workforces of university graduates experienced faster growth.**
- **Centres with a larger hospitality sector also had faster growth.**
- **Proximity to the coast or metropolitan city generated an increased population.**
- **A higher level of air services was positive for growth.**
- **Higher house prices negatively impacted population change.**
- **Centres that were warmer and wetter grew more rapidly.**

This chapter presents the results of an ordinary least squares (OLS) regression model used to identify variables contributing significantly to explaining population change in small and medium Significant Urban Areas (SUAs) in 2011–16 and 2016–21. Australian Bureau of Statistics (ABS) SUA data are available for urban areas with populations of 10,000 or more. The analysis below includes all SUAs with populations under 250,000 at the start of each period, except for those SUAs within Capital City Statistical Areas for capital cities with over 250,000 people (Sydney, Melbourne, Brisbane, Perth, Adelaide and Canberra), which were excluded because they were functionally part of those statistical areas. The upper limit of 250,000 was chosen as reflecting an upper limit of regional development policy focus, beyond which population growth becomes more assured. OLS regression is used because it enables the identification of the quantitative influence of each hypothesised population change variable on population change in the selected SUAs. It is subject to statistical assumptions about the properties of each variable, which the analysis tests.

The first section outlines variables that have historically impacted population change as identified in an international literature review on internal migration and incorporated into the OLS regression model. This section is followed by an analysis of the results of the OLS regression model. The final section presents implications for policy development based on the modelling results.

2.1 Identified variables impacting population change from an international literature review

Below is a table of identified, regional small city population change and associated migration change drivers from Australian and international literature, and variables that help to explain migration to non-metropolitan locations. The justification for including variables from the literature, and the data sources used to quantify the variables for inclusion in the model, are set out in Appendix 2. During the data identification period, some variables were substituted for others based on the availability of data in Australia (see Appendix 3 for details). The variables are a translation of population change and migration drivers into a form of data that are collectable for statistical modelling. Data were collected for these variables and input into the regression analysis for Stage 1. Table 3 shows variables used in the regression analysis.

Table 3: Explanatory variables identified in the Australian and international literature used in modelling

Migration drivers	Variables
Amenity	• Hospitality workers as a percentage of total employment, 2011 or 2016 • Distance to coast • Annual precipitation • Average minimum July temperature • Average maximum January temperature • Arts and media professionals as a percentage of total employment, 2011 or 2016
Employment structure	• Level of employment specialisation, 2011 or 2016
Innovation opportunities	• Number of ICT professionals (2-digit ABS occupation level), 2011 or 2016
Health services	• Number of surgeons (2-digit ABS occupation level), 2011 or 2016 • Number of health diagnostic and promotion professionals (2-digit ABS occupation level), 2011 or 2016
Education and research/ human capital	• Number of university lecturers and tutors, 2011 or 2016 • Percentage of the workforce with a university degree
Transport services	• Number of air passenger movements per annum, 2012–13 (earliest available data) or 2016
Gravity effects of population and distance	• SUA population size, 2011 or 2016 • Road distance to nearest capital city (incl. Canberra for local region SUAs; air distance to Melbourne for Tasmanian SUAs; distance to capital city containing SUA in its economic hinterland for NSW and Victorian SUAs)
Dwelling price	• Median dwelling price, 2011 or 2016

Note: ABS = Australian Bureau of Statistics; ICT = information and communication technology; SUA = Significant Urban Area.

Source: Authors' research.

2.2 Analysis of variables

This section describes the results of the multiple regression model that uses the variables described in Table 3 as independent variables, and SUA population change in 2011–16 or 2016–21 as the dependent variable.

2.2.1 Variable transformations

The relationship between the dependent variable of SUA population change and one or more independent variable was not necessarily linear, as assumed by the OLS method used here for the multiple regression. Transforming the variables helped linearise these relationships, making them more suitable for linear regression analysis. In addition, the values of many of the variables were closely related to SUA population size. Because there were more SUAs at the lower end of the SUA population range, this resulted in skewed distributions of population-related variables. Transforming these variables helped to normalise their distribution, as assumed by OLS regression analysis. Further, because of the potential for high multi-collinearity (where independent variables are highly correlated with each other), especially due to joint correlation related to population size, transformations helped reduce the collinearity and improve the stability of the regression model estimates. Logarithm transformation, using natural logarithms (base e), was used to avoid skewness of the data, improve linearity and reduce multi-collinearity.

2.2.2 Multi-collinearity

In this research, a very large potential set of explanatory variables could be chosen to explain population changes in the SUAs. However, it is evident that many of these are strongly correlated with each other, which would adversely affect the coefficients in the regression.

In order to identify an optimal set of explanatory variables, the research employs the use of variance inflation factors (VIF), which are a measure of multi-collinearity in regression analysis. VIF for each explanatory variable is calculated by first regressing the explanatory variable as a target variable against all the other explanatory variables, determining the R^2 value, and then calculating: VIF_i = 1 / 1 – R^2. If the variable is highly correlated with the others, the R^2 would be high, therefore the denominator would be low in the ratio above, which in turn implies that the VIF would be high. Thus, all variables that have very high VIFs can be safely excluded from the analysis. VIFs between 1 and 6 indicate moderate multi-collinearity, while VIF values above 6 indicate high multi-collinearity. Accordingly, variables with VIF values of 7 or more have been omitted from the model as explanatory variables.

The VIF calculations for the 2011–16 model generated VIF values above 7 for four variables: log ICT professionals (8.6), log number of surgeons (8.0), log number of health etc. professionals (16.1) and log population size (30.6). These variables were omitted from the 2011–16 model.

VIF calculations for the 2016–21 model generated VIF values above 7 for five variables: log ICT professionals (17.5), log number of surgeons (8.0), log number of health etc. professionals (27.6), log number of university lecturers and tutors (7.4) and log population size (45.2). These variables were omitted from the 2016–21 model. The VIF values for each variable in each period are shown in Appendix 4.

2.2.3 Multiple regression model

The project used an OLS regression model to understand the locational, economic, housing and infrastructural characteristics associated with differences in regional urban area population growth and decline across Australia. The OLS regression model estimates the coefficients of independent variables that best fit the data. The estimated coefficients' standard errors, t-statistics and p-values assess the statistical significance of the relationship between each independent variable and the dependent variable and are set out along with the estimated coefficients for the two model periods in Tables 4 and 5.

2011–16 regression model

Table 4: OLS regression results, 2011–16 model

Dep. variable:	Log (population change 2011–16)	R-squared:	0.785
Model:	OLS	Adj. R-squared:	0.734
Method:	Least squares	F-statistic:	2.690
Date:	Tue, 13 Feb 2024	Prob (F-statistic):	0.00513
Time:	18:25:31	Log-likelihood:	–180.61
Total observations:	80	AIC:	287.2
Covariance type:	Non-robust	BIC:	218.2

	coefficient	std err	t	P>|t|	[0.025	0.975]
constant	–3.1702	0.086	–0.727	0.040	–3.790	8.130
Hospitality workers as percentage of total employment	1.8312	0.091	1.083	0.013	1.545	5.207
Log (distance to coast)	–2.0334	0.096	–0.348	0.019	–0.158	0.225
Arts and media professionals as percentage total employment	–0.5539	0.982	–0.564	0.005	–1.406	2.514
Industry specialisation index	5.1621	0.000	0.283	0.002	0.001	0.001
Log (number of university lecturers and tutors)	1.6053	0.299	2.021	0.007	0.008	1.203
Percentage of the workforce with a university degree	1.0680	0.096	0.706	0.033	0.124	0.260
Log (annual air passenger movements)	2.0599	0.089	0.671	0.005	0.238	0.118
Log (road distance to nearest capital city)	–2.1516	0.088	–0.807	0.022	–0.526	0.223
Annual precipitation	2.1602	0.001	0.210	0.004	0.002	0.002
Average July minimum temperature	4.1185	0.085	1.393	0.018	0.051	0.288
Average January maximum temperature	3.0375	0.034	1.103	0.024	0.105	0.030
Median dwelling price	–3.2506	0.006	–1.147	0.025	-3.207	3.406

Omnibus:	17.820	Durbin-Watson:	2.206
Prob (omnibus):	0.000	Jarque-Bera (JB):	21.321
Skew:	–0.215	Prob (JB):	2.35e-05
Kurtosis:	0.700	Cond. no.	7.87e-06

Source: Authors' research.

Analysis of population change model results for 2011–16

The model delivers a high level of explanation of population change between 2011 and 2016 in SUAs with fewer than 250,000 people in 2011. The adjusted R-squared of 0.785 indicates that nearly 80 per cent of population change is explained by the model. All the independent variables in the model are significant at the 0.05 level of probability. The coefficients for the significant variables have signs in the hypothesised direction except for arts and media professionals. The negative association between arts and media professionals and population change perhaps points to an attraction for such professionals to older towns with heritage attributes. Often, such towns (like smaller SUAs in Victoria) have historically had very low growth rates, allowing heritage qualities to be retained.

Proximity to the coast and to major cities is shown to be a significant positive population change factor. This can be seen in the strong growth rates for major provincial cities that are fairly close to Melbourne and in the high growth in resort and retirement urban areas, such as Port Macquarie, Hervey Bay and Yeppoon. Climate factors also emerge as having a significant impact on population growth. Warmer temperatures are a positive for population growth, as is higher rainfall. The positive effect of rainfall on growth is seen in coastal areas of NSW and Queensland, where the highest rainfall across all SUAs is found and which have been a magnet for sea change inter-regional migration.

Several of the variables suggest that towns with a higher tertiary education profile grow faster – that is, those with more university lecturers (as a proxy for the size of the university sector) and those with more workers with a university degree. The university sector has grown at a greater rate than the overall economy; therefore, towns with a greater university presence stand to gain faster growth. Towns with more university graduates may have grown more because of in-migration of professionals able to work remotely, or because highly skilled jobs are growing faster in all sectors across Australian non-metropolitan urban areas than less skilled jobs (Sobyra, Sigler et al. 2022).

The positive relationship between the proportion of hospitality workers in total employment and population change suggests that towns with higher tourism and entertainment activity grow faster. This may be due to the expansion of tourism/entertainment industries themselves, and/or to the lifestyle suggested by the presence of such industries, which, in turn, encourages more in-migration of locationally mobile sections of the population, including retirees.

Air transport availability emerges as a significant positive attribute for growth, offsetting the 'borrowed size' effect of being near major cities. Among the many advantages of air transport availability in more remote towns, it is important for businesspeople who need to get to major cities quickly and for specialised health workers to fly from major cities for surgery.

Industry specialisation was a positive factor for SUA growth in the 2011–16 period. This suggests that regional SUAs can retain and attract population growth by specialising in industries for which they have a natural locational advantage, such as mineral resources or scenic attractions, rather than a diversified economic base servicing a static regional catchment.

Finally, higher dwelling prices have a negative impact on population growth, all else being equal, which is exactly as expected.

2016–21 regression model

Table 5: OLS regression results, 2016–21 model

Dep. variable:	Log (population change 2016–21)	R-squared:	0.818
Model:	OLS	Adj. R-squared:	0.730
Method:	Least squares	F-statistic:	3.591
Date:	Tue, 13 Feb 2024	Prob (F-statistic):	0.000363
Time:	18:30:52	Log-likelihood:	–168.05
Total observations:	81	AIC:	262.1
Covariance type:	Non-Robust	BIC:	293.2

	coefficients	std err	t	P>|t|	[0.025	0.975]
constant	–2.6538	0.075	–1.031	0.006	–2.484	7.792
Hospitality workers as percentage of total employment	1.4978	0.064	1.098	0.027	1.224	4.220
Log (distance to coast)	–2.1074	0.082	–1.311	0.014	–0.271	0.056
Arts and media professionals as percentage total employment	–0.0188	0.015	–1.424	0.019	–2.446	0.409
Industry specialisation index	4.8202	0.000	0.736	0.004	0.000	0.001
Percentage of the workforce with a university degree	1.1315	0.073	1.795	0.007	0.015	0.278
Log (annual air passenger movements)	2.0362	0.069	0.524	0.002	0.174	0.102
Log (road distance to nearest capital city)	–2.3655	0.007	–1.852	0.018	–0.759	0.028
Annual precipitation	1.8306	0.001	0.823	0.013	0.001	0.002
Average July minimum temperature	4.1120	0.073	0.164	0.000	0.158	0.134
Average January maximum temperature	3.2272	0.031	0.235	0.015	0.068	0.054
Median dwelling price	–4.4206	0.006	–1.179	0.043	–9.807	3.806

Omnibus:	29.803	Durbin-Watson:	2.316
Prob (omnibus):	0.000	Jarque-Bera (JB):	48.044
Skew:	–0.523	Prob (JB):	3.69e-11
Kurtosis:	0.228	Cond. no.	5.19e-06

Source: Authors' research.

Analysis of population change model results for 2016–21

The model produces a level of explanation that is very strong, explaining 82 per cent of population change between 2016 and 2021 in SUAs with fewer than 250,000 people in 2016. All the independent variables are significant at the 0.05 level of probability. All the coefficients of significant variables are in the hypothesised direction, except for arts and media professionals as a percentage of total employment, which is negatively associated with population change. The same reasons as for 2011–16 can be offered to explain this result. An additional possible explanation for the much weaker arts and media professionals result for 2016–21 (as indicated by the much lower coefficient than for 2011–16) is that, during the COVID-19 pandemic, these workers relocated to towns with high heritage values and related amenities and more spacious housing that gave more protection from COVID-19 infection and boosted their population, offsetting other negative population change factors in those SUAs. The negative coefficient sign for 2016–21, as in 2011–16, also suggests that a higher population of arts and media professionals did not create cultural hot spots that attracted other groups.

Otherwise, the remaining significant variables show similar effects on population change as the 2011–16 model and, it might be assumed, for the same reasons. A bigger proportion of graduates in the workforce is a positive for population increase. A bigger proportion of hospitality workers has a similarly positive impact on population change, as does higher industry specialisation. Warmer and wetter climates are again shown to positively impact population change, as does proximity to the coast and to major cities. Finally, higher median house prices depress population growth, as in 2011–16.

Overall, it is significant that the 2016–21 model has emerged with very similar significant explanatory variables, despite the 2021 Census being held during the COVID-19 pandemic period. It suggests that the underlying factors producing population change in urban centres in the 10,000–250,000 population range are quite deep-seated and relatively stable despite major disruptive factors (i.e. COVID-19 pandemic), at least over a contemporary timescale of a decade or so.

2.3 Implications for policy development

The findings of the model of population change for 2011–16 and 2016–21 have significant implications for policy development.

- A principal policy implication of the findings concerns the significance of factors in explaining population change over which policies have some leverage. The findings suggest that higher growth is associated with a more highly qualified, tertiary-educated workforce. The policy challenges here are several. It is not clear what factors attract graduates, in particular, beyond a supply of suitable jobs and (probably) good local amenities. In turn, the extent to which jobs follow graduate human capital or to which the converse applies is uncertain. One policy direction might be to improve university education opportunities in regional cities, which could increase the local supply of graduates if they are able to become self-employed, for example, in start-up ventures or in long distance contract work from major city providers. Improvement of regional university education could involve special federal government allocations for extra regional student places and increased capital funding of regional student accommodation. However, as Chapter 4 indicates, there are frequent shortages of skilled labour in general in regional centres, and this can include graduate skills. Chapter 4 outlines several policy approaches to address this.
- The findings show that air services are a positive factor for growth. Where good air services are lacking or expensive, availability could be increased via state government subsidies as in WA. There may also be potential for local governments to develop airports where none now exist or upgrade existing airports. However, the number of air passengers can also be a function of SUA population size. To the extent that this relationship is addressed by the market, policy intervention will be less necessary.

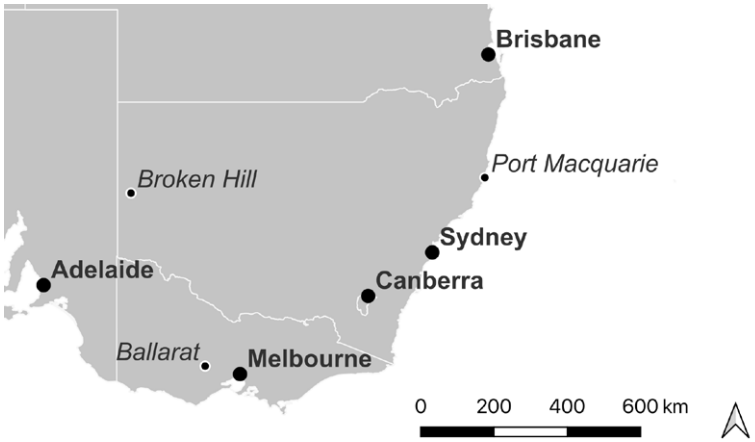
- The findings confirm the attraction of tourist centres (via the significance of hospitality workers for growth) for new residential populations. This requires local and state governments to anticipate growth in such centres. Local governments need to ensure that adequate stocks of new residential land to meet future growth are zoned and serviced. State governments need to recognise tourist centres as focal points in the development of state infrastructure policies and plan and fund infrastructure such as schools and hospitals to cope with increased populations (see also discussion below in Section 5.1.4). On the other hand, rents in tourist centres are exacerbated by short-term residential rentals. The finding that higher house prices reduce population growth implies that higher rents do the same. This may make it difficult for tourism centres to provide affordable accommodation for service workers in hospitality industries and more generally in these centres. Thus, policies to place limits on short-term renting of houses and apartments, as in Byron Shire LGA (Byron Shire Council 2023), could reduce housing price and rental pressures and increase the supply of affordable accommodation for service workers.

3. Place-based factors of population change: a community survey approach

- **The COVID pandemic and natural disasters contributed to migration from both metropolitan and disaster-affected regional areas.**
- **Recent movers were more likely than those who moved more than five years ago to state that cheaper housing and lifestyle were their main reason for moving; natural disasters and telecommuting also factored into their decision.**
- **The main reasons for moving to each case study area were place-based and dependent on life stage, with employment attracting people to Broken Hill, lifestyle to Port Macquarie Hastings and a combination of reasons drawing people to Ballarat.**
- **Among the case study areas, Port Macquarie respondents were least likely to say they would move within five years and Broken Hill respondents were most likely to, but each case study LGA had a high likelihood of churn.**

This section presents the results of community surveys conducted in three case study areas, Port Macquarie Hastings, Ballarat and Broken Hill. Relative distance of the three case study LGAs to capital cities is presented in Figure 1 below. The chapter introduces the case study areas and the characteristics of survey respondents for each community survey, before providing a detailed analysis of the reasons respondents gave for moving to the case study areas. The final sections present stated likelihood and reasons for moving from each case study area, and policy implications of the findings of this chapter.

Figure 1: Map of case study LGAs (italics) relative to nearest Australian capital cities (bold)



3.1 Case study area profiles

An introduction to each case study area is followed by an investigation of individual motivations and how they relate to place-based factors of population change.

3.1.1 Port Macquarie Hastings

Port Macquarie Hastings LGA has a high rate of population change for a smaller urban centre and fits the description of a coastal location with likely migration drivers of lifestyle and coastal amenity.

Port Macquarie is a coastal city approximately 390 kilometres from Sydney and 550 kilometres from Brisbane (Table 6). Port Macquarie Hastings has a population of 86,762 people (ABS 2021), making it a larger urban centre. The rate of internal migration was 1.9 per cent over 2021, with a 10-year average growth rate of 1.5 per cent (Centre for Population 2022). Despite not being located close to a specific source of capital city residents, it is still experiencing considerable population growth from these areas. Increased transport connectivity afforded by road and airport upgrades has supported economic and population growth opportunities (NSW Government 2018). The Ocean Drive Duplication, jointly funded by Port Macquarie Hastings Council and the NSW Government, and the council's construction of a new parallel taxiway at Port Macquarie Airport, jointly funded by the federal government, have been implemented as part of the regional transport strategy. Port Macquarie also hosts a Charles Sturt University campus.

At 49 years, the median age of residents is 11 years higher than the median age of the Australian population. Port Macquarie Hastings Council estimates that the population will grow by 18,900 people to 2041, and that this will include an increase of 66 per cent in residents aged over 65 years. The Port Macquarie Hastings Local Housing Strategy finds that 11,950 new homes will be required by 2041 with provision of a diverse housing supply a priority (Veenhuyzen & Wetzel, 2021).

Table 6: Selected characteristics, Port Macquarie Hastings LGA

Key characteristics	2011	2016	2021
Population	72,696	78,539	86,762
Population growth rate since previous census	-	8.0%	10.5%
Median age	47	48	49
Median total personal income ($/weekly)	447	540	647
Total persons employed	27,626	29,648	35,597
Unemployment rate (of total labour force)	6.8%	6.8%	4.7%
Median weekly asking property price at census (SQM Research, 2023)	$409,144	$509,532	$573,512
Median rent ($/weekly)	250	310	375
New dwelling approvals year ended 30 June 2022	-	-	696
Nearest metropolitan centre	Sydney		
Driving distance from metropolitan centre (km) (Google Maps 2023)	Approx 390 km		

Note: All statistics as at 2021 Census unless otherwise indicated.

Source: (ABS, 2011c, 2016c, 2021c) data by region.

3.1.2 Ballarat

Ballarat LGA is an inland manufacturing centre. It has experienced population growth due to migration from both capital cities and a 'sponge city' pattern of migration from surrounding areas. Ballarat is situated close to Melbourne, which, at around 120 kilometres distance, is a potential source of urban migrants (Table 7). Ballarat's population was 113,763 in 2021, which included population growth of 19 per cent from 2010 to 2019. The LGA sits within the Victorian Government's Regional Economic Development Strategy that prioritises collaboration across the agri-food supply chain, visitor and creative economies, renewable energy and waste management, and health and education sectors as part of an 'innovation ecosystem' (Victorian Government 2022).

Among regional urban centres, Ballarat had the ninth strongest employment growth between 2011 and 2016 (Li, Denham et al. 2022: 52). The highest profile industries in Ballarat are healthcare and social assistance; professional, scientific and technical services; education and training; construction; and manufacturing. The LGA's gross regional product was $7.129 billion in 2021 (City of Ballarat, 2021). Ballarat has a strong tertiary education sector, hosting one of Federation University's campuses, and is expected to grow a further 27 per cent to 2036 (City of Ballarat 2021). Indeed, Ballarat has maintained a consistently high growth rate over time.

Table 7: Selected characteristics, Ballarat LGA

Key characteristics	2011	2016	2021
Population	93,501	101,686	113,763
Population growth rate since previous census	9.7%	8.8%	11.9%
Median age	37	38	39
Median total personal income ($/weekly)	512	590	743
Total persons employed	42,289	44,716	53,104
Unemployment rate (of total labour force)	5.8%	7.1%	4.7%
Median weekly asking property price at census (SQM Research, 2023)	$315,802	$345,375	$516,670
Median rent ($/weekly)	200	250	297
New dwelling approvals – year ended 30 June	-	-	68,467
Nearest metropolitan centre	Melbourne		
Driving distance from metropolitan centre (km) (Google Maps 2023)	Approx 120 km		

Note: All statistics as at 2021 Census unless otherwise indicated.

Source: (ABS, 2011a, 2016a, 2021a), data by region.

3.1.3 Broken Hill

Stretching over 170.4 kilometres squared, Broken Hill LGA is a resource area experiencing a declining population. It is located 1,000 kilometres west of Sydney and 520 kilometres east of Adelaide and has strong links to both capitals (Table 8). Broken Hill has a population of 17,588, and this figure has declined on average by 1.1 per cent annually over the last decade (ABS 2021b). Freight rail and air transport are areas of focus due to the city's remoteness, and the strategic value of Broken Hill Airport is acknowledged by both state and federal governments. Mining continues to be an important employer, with new mines for high value minerals for the renewable energy sector such as cobalt planned in the area. Other important sectors include health and education, tourism and the film industry. Broken Hill was recognised in 2015 as Australia's first National Heritage listed city.

Though the population of Broken Hill has declined slightly over the last few decades, Broken Hill City Council projects an increase over the next few years due to new mines opening, potentially reaching 25,000 people by 2027 (Broken Hill City Council, 2022).

Table 8: Selected characteristics, Broken Hill LGA

Key characteristics	2011	2016	2021
Population	18,517	17,708	17,588
Population growth rate since previous census	−4.4%	−4.4%	−0.7%
Median age	43	45	44
Median total personal income ($/weekly)	414	527	647
Total persons employed	7,006	6,904	7,172
Unemployment rate (of total labour force)	8.3%	8.8%	5.5%
Median weekly asking property price at census (SQM Research, 2023)	$154,227	$148,022	$179,336
Median rent ($/weekly)	150	190	220
New dwelling approvals year ended 30 June 2022	-	-	11
Nearest metropolitan centre	Adelaide		
Driving distance from metropolitan centre (km) (Google Maps 2023)	520 km		

Note: All statistics as at Census 2021 unless otherwise indicated.

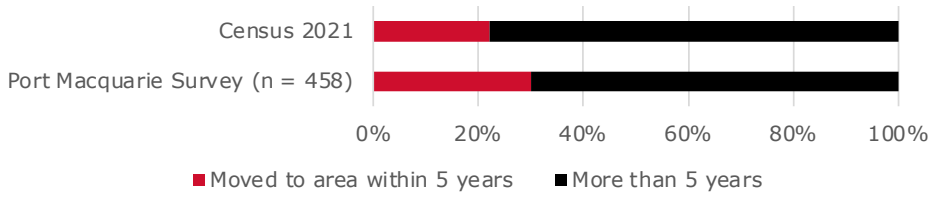
Source: (ABS, 2011b, 2016b, 2021b) data by region.

3.2 Characteristics of movers to case study areas

3.2.1 Port Macquarie Hastings

The Port Macquarie survey returned 458 responses (maximum margin of error ±4.58% at 95% confidence interval), varying from people who had always lived in Port Macquarie Hastings LGA to those that had moved within a year prior to the survey. There was a slight over-representation of newer movers to Port Macquarie Hastings in the survey, compared to Census 2021 data for Port Macquarie Hastings LGA (Figure 2).

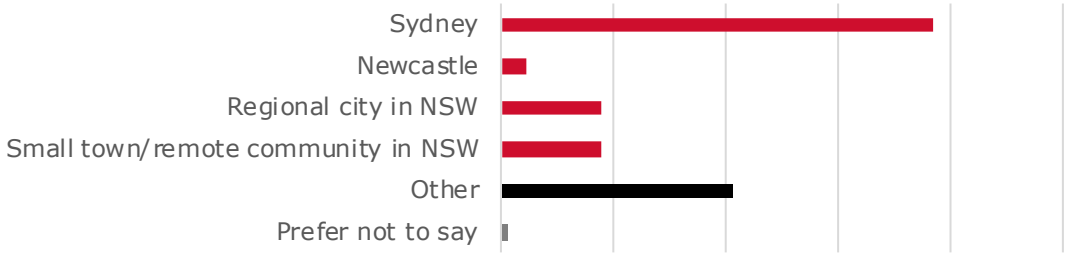
Figure 2: Comparison of length of residence in Port Macquarie Hastings LGA of survey sample versus Census 2021



Source: Authors' research and ABS Census (2021d).

Most respondents in the Port Macquarie survey that moved to Port Macquarie Hastings LGA from other areas stated their origin location as Sydney, with small numbers (under 50 respondents) moving from other parts of regional NSW, regional Australia and other capital cities (Figure 3). When compared to Census 2021 data, there is an over-representation of people who moved from Sydney over other 'origin' locations in the survey data (48% moved from Sydney in the survey versus 31% in Census 2021).

Figure 3: Count of location prior to moving to Port Macquarie Hastings LGA (movers only) (n = 399)



Source: Authors' research.

Survey respondents who migrated to Port Macquarie Hastings varied in age, and there was a slight over-representation of the 50–59 year age group relative to movers in Census 2021 (24% versus 14%, respectively). The gender distribution of movers was more skewed towards females in the survey than Census 2021 (approximately 77% versus 54%, respectively).

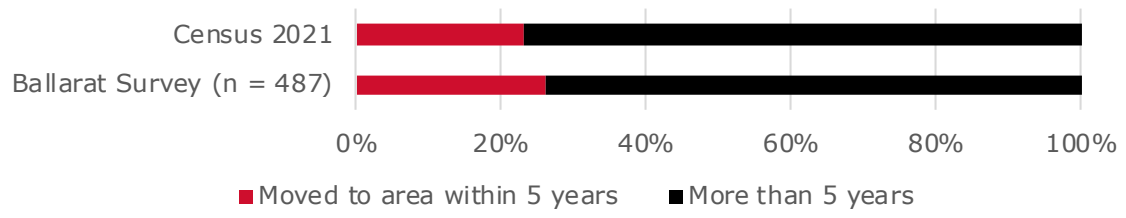
Most movers to Port Macquarie Hastings LGA were within households that consisted of a couple with no children at home (39% of movers), followed by couples with children (29% of movers). This may reflect the skew in responses by older age groups living in households in which children may have left home. Most respondents were mortgage holders or owned their property outright (73% of movers), with 20 per cent renting and 7 per cent in other tenures. There was an over-representation of higher income levels in the respondents who moved to Port Macquarie Hastings LGA earning $65,000 or over annually (67% of movers) than in Census 2021 (50% earning $65,000 or over annually).

Most of the movers to Port Macquarie Hastings were in full-time paid work (37%), not in the workforce (28%) or in part-time employment and not looking for more work (25%), and were highly educated, with a bachelor's degree or higher as their highest level of qualification (50% of movers). Health (21%) and education/research (17%) were the industries noted most by movers as their industry of employment.

3.2.2 Ballarat

The Ballarat survey returned 485 responses (maximum margin of error ±4.45% at 95% confidence interval), varying from people that had always lived in Ballarat LGA to those that had moved within a year prior to the survey. As with the Port Macquarie survey, there was a slight over-representation of newer movers to Ballarat LGA in the survey, compared to Census 2021 data (Figure 4).

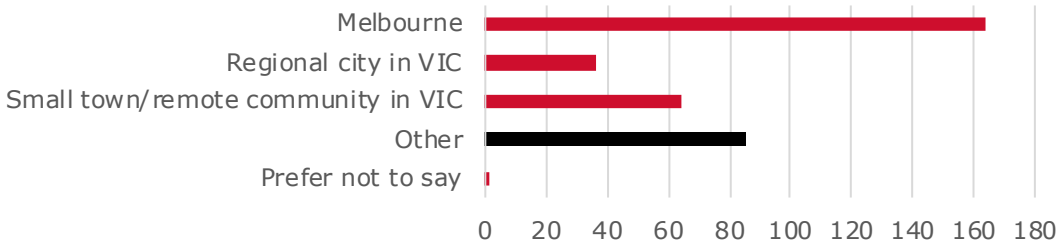
Figure 4: Comparison of length of residence in Ballarat LGA of survey sample versus residents in Census 2021



Source: Authors' research and ABS Census (2021d).

Most respondents in the Ballarat survey who moved to Ballarat LGA from other areas stated their origin location as Melbourne, with smaller numbers moving from other parts of regional Victoria, other locations in regional Australia and other capital cities (Figure 5). When compared to Census 2021 data, a slight over-representation of people moving from Melbourne is evident (47% of respondents from Melbourne in survey versus 39% in Census 2021).

Figure 5: Count of location prior to moving to Ballarat LGA (movers only) (n = 350)



Source: Authors' research.

Survey respondents that migrated to Ballarat LGA varied in age, and there was a slight over-representation of older age groups relative to movers at around the same time in the 2021 Census (almost 50% of movers in the survey were 50 years or over, versus approximately 30% of movers to Ballarat LGA in the 2021 Census). The gender distribution of movers was more skewed towards females in the survey than in the 2021 Census, as in the Port Macquarie survey (with approximately 70% of movers in the Ballarat survey being female, versus just over 50% of movers to Ballarat LGA in the 2021 Census).

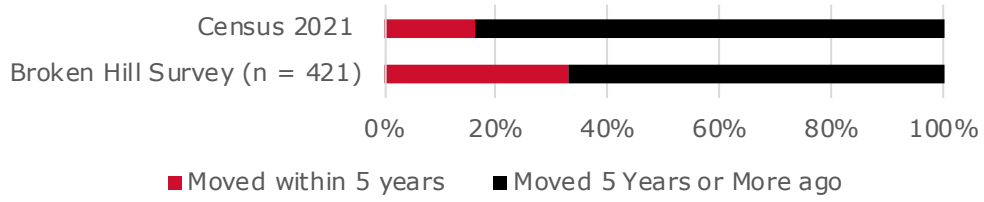
Most movers to Ballarat were within households that consisted of a couple with no children at home (34%), followed by couples with children (31%) and lone person households (16%). This may reflect the skew in responses by older age groups living in households in which children may have left home. Most movers to Ballarat were mortgage holders or owned their property outright (68%), followed by privately renting (28%). Like Port Macquarie, there was a slight over-representation of higher income levels in the respondents who moved to Ballarat LGA earning $65,000 or over annually (69% of movers) than the residents of Ballarat in 2021 Census (56% earning $65,000 or over annually).

Most of the movers were in full-time paid work (44%), not in the workforce (24%) or in part-time employment and not looking for more work (21%), and most were highly educated, with a bachelor's degree or higher as their highest level of qualification (66% of movers). Education/research (21% of movers) and health (17%) were the industries noted most by movers as their industry of employment.

3.2.3 Broken Hill

The Broken Hill survey returned 422 responses (maximum margin of error ±4.77% at 95% confidence interval), varying from people who had always lived in Broken Hill Council LGA to those who had moved within a year prior to the survey. There was an over-representation of newer movers to Broken Hill in the survey compared to Census 2021 data (Figure 6).

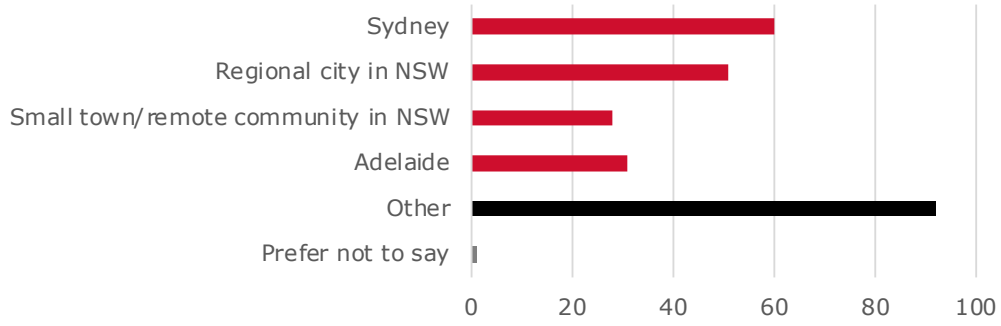
Figure 6: Comparison of length of residence in Broken Hill of survey sample versus residents in Census 2021



Source: Authors' research and ABS Census (2021d).

The origin location selected most in the Broken Hill survey was Sydney; however, the respondents also moved from many other locations, with smaller numbers moving from other parts of regional NSW, regional Australia and other capital cities (Figure 7). When compared to Census 2021 data, there was a slight over-representation of people who had moved from Sydney (23% in survey versus 12% in Census 2021), and under-representation of movers from overseas (3% in survey versus 13% in Census 2021).

Figure 7: Count of location prior to moving to Broken Hill LGA (movers only) (n = 263)



Source: Authors' research.

Survey respondents that migrated to Broken Hill LGA were varied in age, and there was a slight over-representation of older age groups relative to movers in the 2021 Census, (almost 60% of movers in the survey were 40 years or over versus approximately 43% of movers to Broken Hill in the 2021 Census). Like the other two surveys, the gender distribution of movers was skewed towards female in the Broken Hill survey versus Census 2021 (approximately 70% of movers in the Broken Hill survey were female versus approximately 55% of movers in Census 2021).

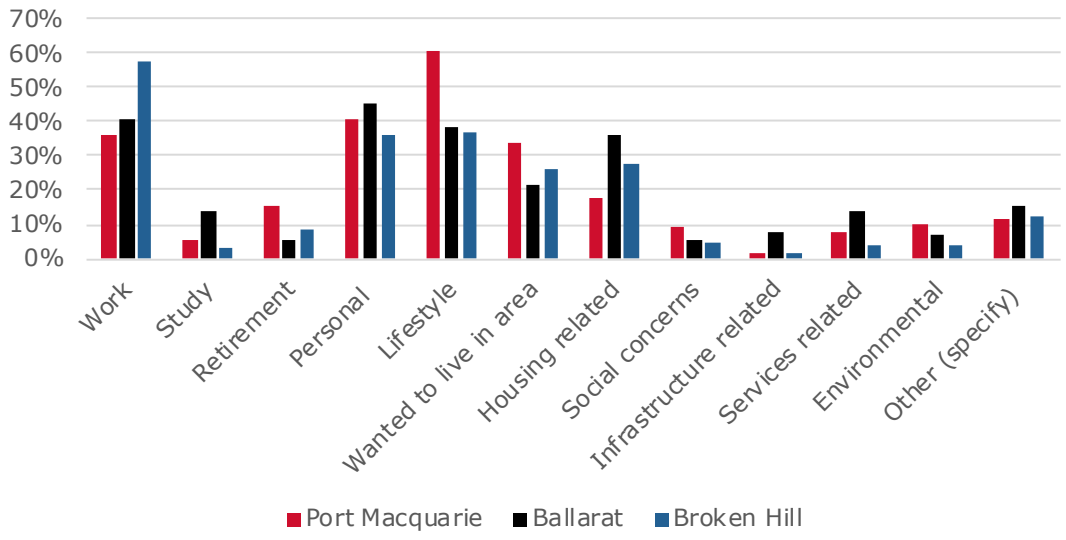
Most movers to Broken Hill were within households that consisted of a couple with no children at home (33%), followed by lone person households (25%) and couples with one or more dependent children at home (25%). This may reflect the skew in responses by older age groups (60–69 years and 70 and over) living in households in which children may have left home. Most respondents who had moved to the area were mortgage holders or owned their property outright (71%), followed by privately renting (25%). As with the other surveys, there was an over-representation of higher income levels in the respondents who moved to Broken Hill LGA earning $65,000 or over annually (69% of movers) than in Census 2021 (48% earning $65,000 or over annually).

Most of the movers were in full-time paid work (58%), not in the workforce (18%) or in part-time employment and not looking for more work (17%), and most were highly educated, with 62 per cent holding a bachelor's degree or higher as their highest level of qualification. Health (26%) and education/research (17%), followed by mining (12%), were the industries noted most by movers as their industry of employment.

3.3 Reasons for moving to case study areas

The main reasons selected for moving to the case study areas were work, personal reasons, lifestyle, wanting to live in the specific case study area and housing-related reasons (Figure 8). The reasons for moving to each area were similarly proportioned across case study areas despite the vastly different characteristics of each location, reinforcing the most common drivers for migration in academic literature (see Section 1.1.3). However, there were key differences in the most commonly selected reason for moving across the three case study areas, and this is where place-based drivers seem to emerge. The reason selected most often by people moving to Port Macquarie Hastings was 'lifestyle', with this option selected by 61 per cent of migrants to the area; the next highest ranked option was 'personal' at 41 per cent. The reasons for moving to Ballarat were less clear, with 'personal', 'work', 'housing' and 'lifestyle' selected at similar frequencies. The main reason selected for moving to Broken Hill was 'work', with 58 per cent of migrants selecting this option; the next highest ranked reason for moving was 'lifestyle' at 37 per cent.

Figure 8: Percentage of total movers to each case study area by stated reason for moving



Note: Respondents were able to select up to three responses.

Source: Authors' research.

The respondents were also asked about why they moved to the case study areas, specifically, whether certain statements were true or false (e.g. distance to cities, crime rate, environment). These were often aligned with the respondents' overall reasons for moving, but provided additional insight into why they chose to move to the different case study areas.

Port Macquarie Hastings

When asked about their reasons for moving to Port Macquarie Hastings LGA, respondents were more likely to select 'true' than 'false' to lifestyle attributes such as 'different lifestyle', 'pleasant climate', 'attractive landscapes' and 'better work/life balance' (Figure 9). The degree to which the statements were 'true' or 'false' was recorded, revealing the definitiveness of the responses. The 'definitely true' option was selected most for moving for a 'different lifestyle', 'pleasant climate' and 'better work/life balance', suggesting that these are the key pull factors for Port Macquarie Hastings.

'Public transport options', 'study opportunities' and 'ability to telecommute' were most often selected as 'false' reasons for moving to Port Macquarie Hastings (Figure 9). The 'definitely false' option was selected most for 'study opportunities' and 'ability to telecommute', suggesting that these were potential push factors and/or that respondents were not intending to study or telecommute and so this was not a factor in their migration decision-making. Surprisingly, moving 'to retire' was not selected as a 'definitely true' reason for many respondents, despite many movers in the sample population being at or close to retirement age (see Section 3.2.1 above).

When asked to rate different place attributes out of 100 (where 0 = 'very bad' and 100 = 'very good'), respondents ranked 'attractiveness of the landscape' and 'pleasantness of the climate' the highest on average, while 'rental options', 'rental prices' and 'public transport options' were ranked the lowest.

Ballarat

Movers to Ballarat noted similar lifestyle reasons for moving as to Port Macquarie Hastings, with more respondents selecting 'true' than 'false' for moving for a 'different lifestyle' and 'better work/life balance' (Figure 10). Ballarat respondents also selected 'proximity to major cities' as a true statement for their reason for moving to Ballarat, likely due to the city's proximity to Melbourne. 'Definitively true' answers from Ballarat respondents were also revealing, as the most selected options were housing related or personal ('to be closer to family or friends', 'for cheaper housing' and 'to own a property') (Figure 10). This suggests these are strong pull factors to the area.

Most respondents selected 'false' when asked if they moved to Ballarat 'to retire', 'for its lower crime rate' or 'to live with people of similar backgrounds'. The attributes chosen the most as 'definitely false' were 'I moved to Ballarat to retire', and 'for study opportunities', suggesting either that respondents were not at retirement stage or studying, or that they did not consider Ballarat as an ideal place to retire/study or were not moving for those reasons. Other 'definitely false' reasons for moving were 'to lessen my/our commute' and 'telecommute', which suggests that telecommuting did not factor into many people's migration decision-making and/or that Ballarat was not an ideal telecommuting location. However, since 84 per cent of movers stated that telecommuting/commuting in Ballarat is satisfactory or very satisfactory, the former is more likely.

When asked to rate other place attributes out of 100 (where 0 = very bad and 100 = very good), respondents ranked 'place to raise children', 'schools' and 'accessibility to major cities' the highest on average, while 'rental options', 'ability to get a high-paying job' and 'rental prices' were ranked the lowest.

Broken Hill

Movers to Broken Hill were more likely to select work-related statements as reasons for moving to Broken Hill (Figure 11). Moving 'for better work/life balance', 'for a different lifestyle' and 'work opportunities' were the reasons most selected as true (Figure 11). In the open text section of the survey, respondents discussed some of the career opportunities and the different lifestyles offered in Broken Hill:

> *I moved to Broken Hill to undertake Midstart through NSW Health to train as a midwife. The Midwifery service here have a great reputation for training and supporting RNs moving into midwifery. (Female, 40–49 years old)*
>
> *To experience a unique lifestyle in remote NSW. (Male, 50–59 years old)*
>
> *Transferred here as a teacher and I wanted adventure. (Male, 70 years old and over)*

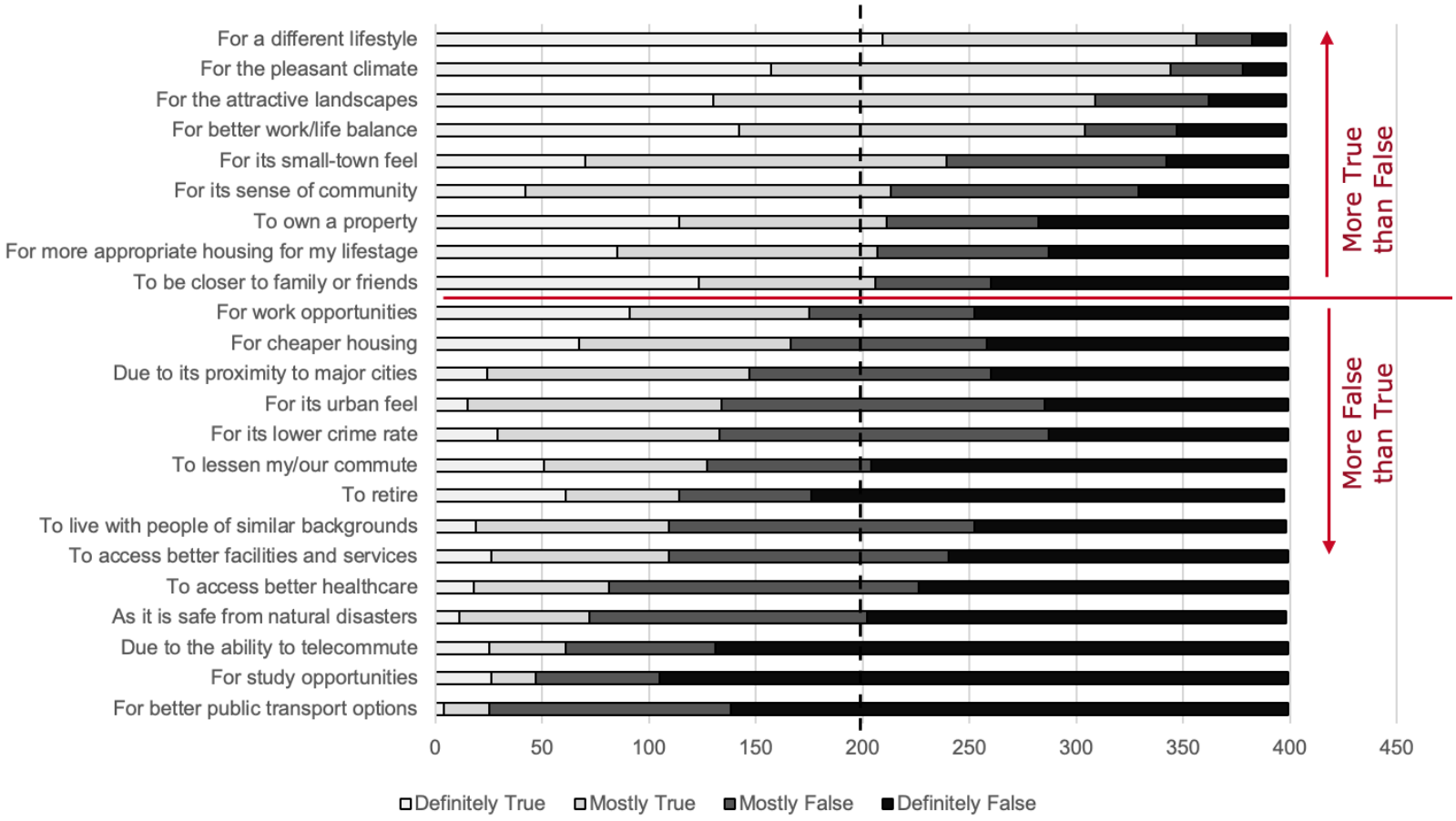
Community reasons such as 'small-town feel' and 'sense of community' also rated highly.

Definitively 'true' statements from movers to Broken Hill revealed housing as a key pull factor beyond the work-related drivers. The most selected options as 'definitely true' reasons for moving were 'work opportunities' and 'different lifestyle', but this was followed by housing-related statements of moving 'for cheaper housing' and 'to own a property') (Figure 11).

Most respondents selected 'false' when asked if they moved 'for better public transport options', 'access to better healthcare' and 'study opportunities'. These options were also the most definitive false responses. This might suggest that public transport options, study opportunities and healthcare services are not perceived as adequate in Broken Hill, or that these factors are not considered in migration decision-making more broadly.

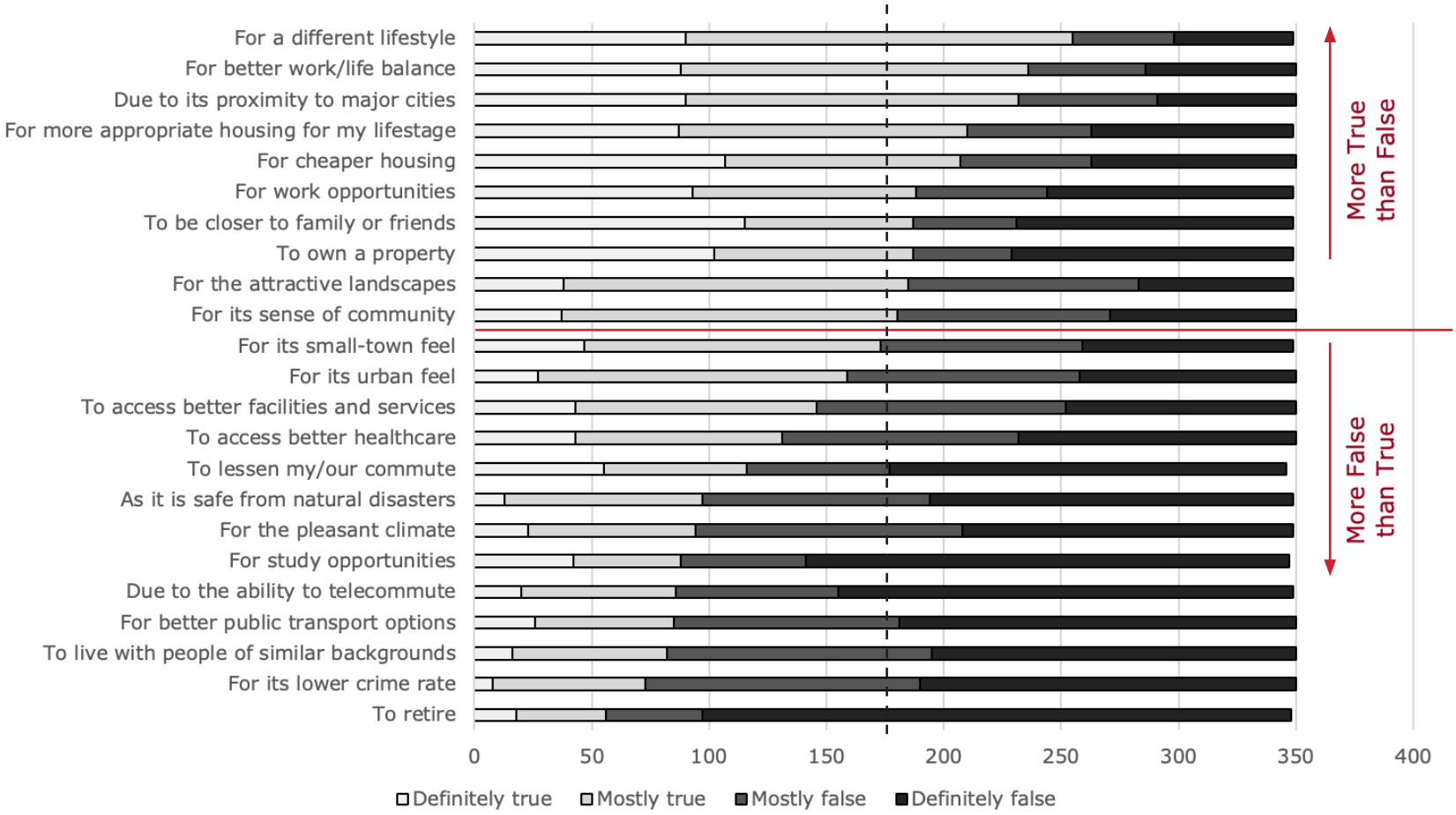
When asked to rate different place attributes out of 100 (where 0 = very bad and 100 = very good), respondents ranked 'traffic congestion', 'ability to commute to work' and 'safety from natural disasters' the highest on average, while 'rental options', 'shopping options' and 'retirement accommodation' were ranked the lowest.

Figure 9: Count of responses from movers only to 'I/we moved to Port Macquarie ...' (n = 397–399)



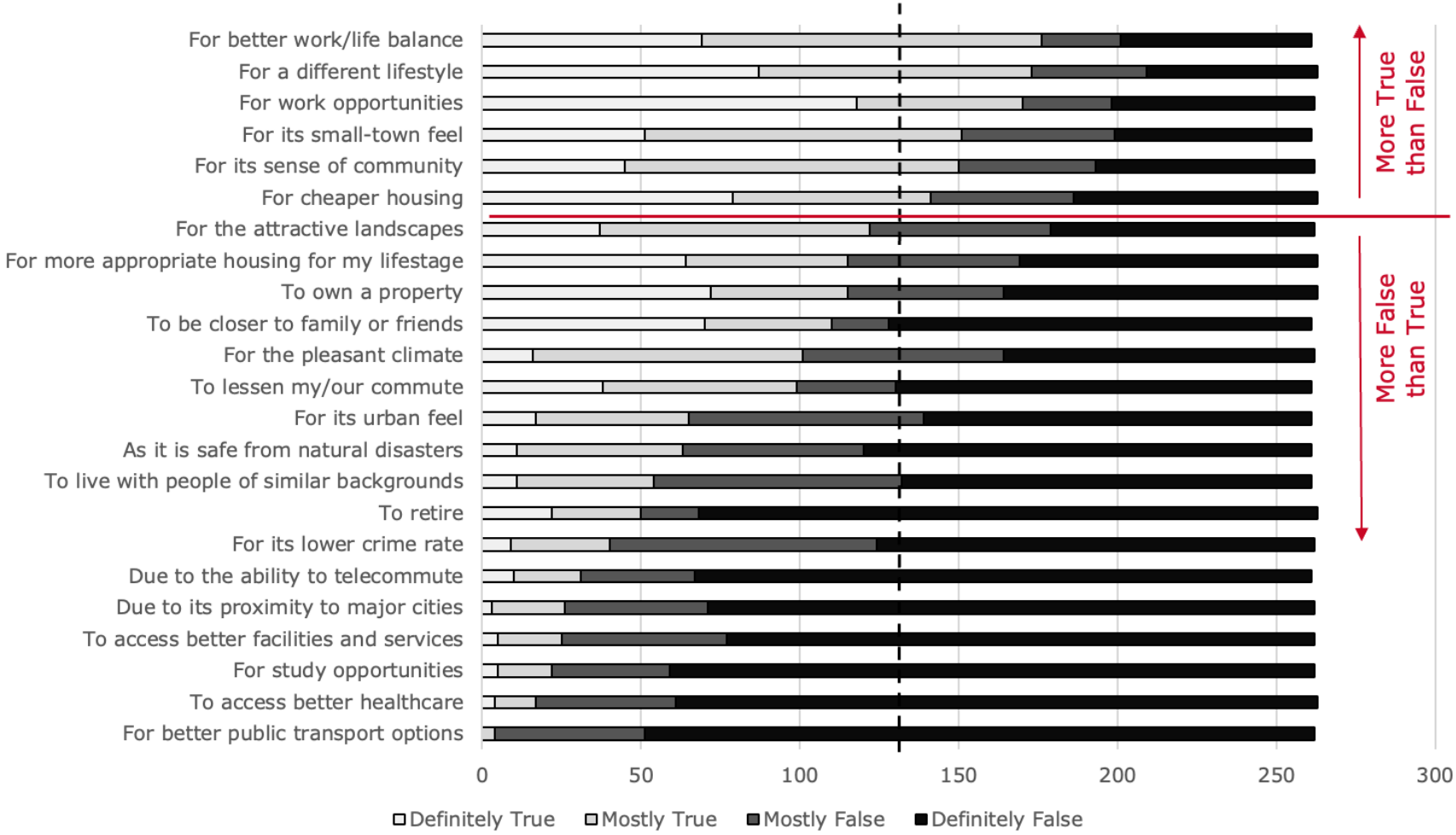
Source: Authors' research.

Figure 10: Count of responses from movers only to 'I/we moved to Ballarat ...' (n = 346–350)



Source: Authors' research.

Figure 11: Count of responses from movers only to 'I/we moved to Broken Hill ...' (n = 261–263)



Source: Authors' research.

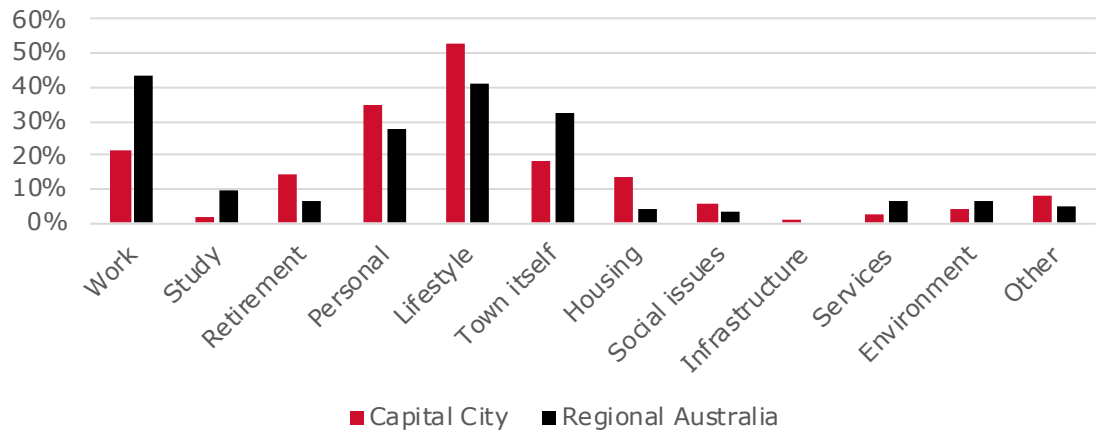
3.3.1 Reasons for moving by movers' characteristics

The following section provides further information on the reasons for moving to each case study area based on the key characteristics of the movers, such as origin location, age and time since move.

Port Macquarie Hastings

Respondents who had moved to Port Macquarie Hastings LGA from capital cities were more likely to state 'lifestyle', 'retirement' and 'housing' as motivators to move to the area than movers from regional Australia (Figure 12). Respondents who had moved from regional areas were more likely to state 'work' and the 'town itself' as motivators for moving (Figure 12).

Figure 12: Percentage of movers to Port Macquarie Hastings LGA from capital cities versus regional areas by stated reasons for moving (n = 399)



Note: Respondents were able to choose up to three reasons for moving.

Source: Authors' research.

Respondents who moved from capital cities expanded on the greater influence of housing and lifestyle-related reasons for moving in the open text response section (e.g. 'housing affordability compared to cities' [Female, 50–59 years old] and 'Wanted a country life with convenience nearby' [Female, 50–59 years old]). Other movers from Sydney noted 'personal' reasons for moving, such as return migration and to raise their children in the area:

> *Removing my child from the fast pace of life in Sydney. (Female, 50–59 years old)*

> *This is the place I grew up, and I wanted to come back home and bring my own kids up here too. (Female, 40–49 years old)*

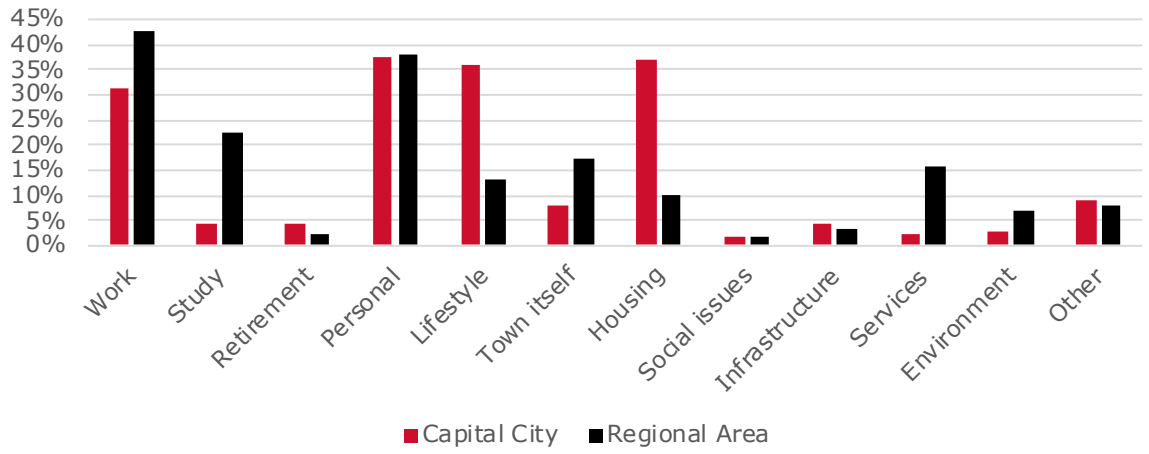
Ballarat

Respondents who had moved to Ballarat from capital cities were much more likely to state housing and lifestyle as motivators for moving than those from regional areas (Figure 13). Responses to the statements 'I/we moved for a different lifestyle' and 'I/we moved for work/life balance' rated highly by movers from capital cities (78% and 71% 'definitely true'/'mostly true', respectively). The open text responses revealed the lifestyle attributes of Ballarat that drew movers from the nearby capital city of Melbourne:

> *Wanted to live in a smaller town with beautiful architecture and friendly people. (Female, 30–39 years old)*

> *Less traffic congestion, less community aggression. (Female, 60–69 years old)*

Figure 13: Percentage of movers to Ballarat LGA from capital city versus regional areas by stated reasons for moving (n = 350)



Note: Respondents were able to choose up to three reasons for moving.

Source: Authors' research.

Movers from capital cities were more motivated to move to Ballarat based on different housing indicators than were regional movers. 'For cheaper housing' was the main housing-related reason for choosing Ballarat for capital city residents (76% 'definitely true'/'mostly true'), rather than 'for appropriate housing for lifestage' (71%) or 'to own a property' (64%). Open text responses revealed intersecting housing and personal motivations for moving:

> *We didn't want a million-dollar mortgage for a dump in Melbourne. In Ballarat we could afford a beautiful home to raise our family. (Female, 40–49 years old, moved from Melbourne)*

Respondents who had moved from other regional and rural areas were more likely to state work, study, 'town itself', services and environment as motivators for moving to Ballarat (Figure 13). Not surprisingly, movers from regional Australia were far more motivated to move to Ballarat for facilities and services than those from capital cities. Movers from regional areas were more likely to select 'for work opportunities' (66%) and 'to access better facilities and services' (67%) as 'definitely true' or 'mostly true' of their reasons for moving to Ballarat; by contrast, most movers from capital cities indicated that these statements were false.

Proximity to major cities was an important factor for choosing Ballarat for both movers from capital cities and regional areas (63% and 69%, respectively, selected this attribute as true), suggesting these are key pull factors for Ballarat.

Recent movers were more likely to move for personal (51% versus 42%), housing (48% versus 30%) or lifestyle reasons (47% versus 33%) than those that had moved to Ballarat more than five years ago. Open text responses revealed some respondents who had moved to Ballarat within the last few years were motivated to move due to acute and severe housing stress:

> *Was homeless due to unaffordable rents in Melbourne. (Other, 40–49 years old)*

> *Forced to vacate due to landlord wanting to sell the property in Daylesford. No other affordable property available in the area. (Female, 40—49 years old)*

Broken Hill

Respondents who had moved to Broken Hill from capital cities had similar motivations for moving as those who had moved from regional Australia. However, movers from capital cities were slightly more likely than those from regional areas to state lifestyle (34% versus 19% for movers from regional areas) and housing (22% versus 18% for movers from regional areas) as a motivator for moving to Broken Hill. Lifestyle, personal and housing reasons for moving were discussed in the open text responses by respondents who had moved from capital cities:

> *[Moved] to be closer to family and the family station but also to get out of the rat race city life, I can afford a house on my own here. (Female, 30–39 years old, moved from Adelaide)*

> *Would have been homeless otherwise. (Female, 40–49 years old, moved from capital city elsewhere in Australia)*

> *At 65 as a woman alone, with limited income I could own a little house … The town has many cultural attributes contributing to its richness and vibrancy. (Female, 70 years and over)*

For those who had moved to Broken Hill more than five years ago, personal reasons (45%) and work (52%) were the main motivations for moving. More recent movers also stated work (63%) as their main reason for moving; however, similar to the other case study areas, more recent movers were also more likely to state housing (31% versus 24%) and lifestyle (42% versus 31%) as other reasons for moving.

3.3.2 Government and industry incentives to move to case study areas

Across all the case study areas, 145 respondents (14%) received a government or industry incentive to relocate to the case study areas. The case study area where respondents received the highest number of incentives was Broken Hill, with 27 per cent of movers to Broken Hill noting that they had received a government or industry incentive to relocate. Most incentives listed were payments or other assistance from governments or public or private sector employers expressly for the purpose of encouraging migration to the case study areas (Table 9).

Table 9: Grants and incentives for moving to each LGA noted by survey respondents

Grant or incentive	Port Macquarie	%*	Ballarat	%	Broken Hill	%
Subsidised housing/temporary housing	3	1%	4	1%	34	13%
Stamp duty waived	4	1%	3	1%	3	1%
Relocation costs	37	9%	22	6%	37	14%
Cash/allowances ($1,500–$20,000)	2	<1%	2	1%	18	7%
Visa incentives	2	<1%	2	1%	0	0%
Additional employment benefits (including pay rise)	5	1%	1	0%	24	9%
Study incentives	3	1%	2	1%	0	0%
Total respondents who received an incentive	43	11%	30	9%	72	27%

Source: Authors' research.

**Percentage of grant or incentive as a proportion of migrants in each LGA.*

^Totals may not add up as some respondents noted multiple grants and incentives influenced their move.

Many respondents moved from other cities and received multiple incentives to move, rather than just one:

> *generous relocation costs paid; assistance with short term accommodation. (Female, 50–59 years old, moved to Port Macquarie Hastings from a regional city)*

> *70 per cent rental subsidy, $20,000 incentive bonus, removalist subsidy through partners employer. (Female, 18–29 years old, moved to Broken Hill from a regional city)*

> *application costs covered, initial accommodation costs covered, travel here for myself and family covered and private healthcare for first 3 years covered. (Female, 40–49 years old, moved to Ballarat from overseas)*

3.3.3 Impact of recent events on reasons to move to case study areas

The following section outlines some of the emerging trends in reasons for moving to and within regional Australia, brought about by events in the last five years, such as the COVID-19 pandemic, bushfires and floods. Table 10 and the open text responses below outline the impacts of these trends by presenting a summary of responses from movers within the last five years to the question: 'Were you directly or indirectly influenced in your decision to move because of the COVID-19 pandemic, bushfires or floods?' Overall, 23 per cent of survey respondents that were recent movers (i.e. had moved in the last five years) reported that they were influenced by COVID-19 to make a move, and 3 per cent were influenced to move due to natural disasters. Thirty-three per cent of recent movers to Ballarat stated that their move was influenced by COVID-19, possibly due to the severity and length of the lockdowns in the nearby capital city of Melbourne.

Table 10: Number of survey respondents who were influenced by recent events to move to the case study areas

Impacts of recent events on decision to move	COVID-19	% recent movers*	Natural disasters	% recent movers
Port Macquarie Hastings	30	22%	4	3%
Ballarat	42	33%	3	2%
Broken Hill	22	16%	4	3%
Total	94	23%	11	3%

Source: Authors' research.

**Percentage of those impacted as a proportion of migrants who had moved within five years to each LGA.*

COVID-19 pandemic

The impact of the COVID-19 pandemic on migration decisions was discussed in the open text responses of recent movers. Some respondents stated that the experience of living through the lockdowns and fear of virus spread in capital cities directly influenced their move away from major cities:

> *Get away from big city with viruses spreading. (Female, 30–39 years old, moved to Port Macquarie Hastings from Sydney)*

> *After living in an apartment in Melbourne CBD during lockdown I wanted to get as far away from the city as I could. (Female, 18–29 years old, moved to Ballarat from Melbourne)*

Some respondents discussed the impact of the pandemic on their employment:

> *Lived in far north Queensland working in the tourism industry. Lost work there immediately. Had work opportunity in Port Macquarie commercial fishing [and] that's why we came here. (Female, 30–39 years old, moved to Port Macquarie Hastings from a small town/remote community)*

> *Lost work during Covid meant I couldn't afford a Sydney mortgage anymore. (Female, 40–49 years old, moved to Port Macquarie from Sydney)*

> *The pandemic put a hold on job opportunities that made us consider other places like Broken Hill. (Female, 30–39 years old, moved to Broken Hill from a capital city elsewhere in Australia)*

The impact of the pandemic on housing and rental markets in capital cities and across regional Australia also influenced some people to move, particularly to Ballarat:

> *Cost of housing in Melbourne became unaffordable. (Female, 50–59 years old, moved to Ballarat from Melbourne)*

> *The pandemic created a massive influx of people from the city to Daylesford, which meant when we needed to move rents had gone up and availability was non-existent. (Female, 40–49 years old, moved to Ballarat from small town/remote community in Vic)*

Many respondents also spoke of having re-evaluated their lifestyle, location or circumstances due to the pandemic:

> *Being apart from family … the pandemic brought into focus what really matters in life. (Male, 60–69 years old, moved to Port Macquarie Hastings from outside of Australia)*

> *Realised the need of work life balance. (Female, 40–49 years old, moved to Port Macquarie Hastings from outside of Australia)*

> *Covid isolated me and showed me how burnt out I was from my business, and I needed to retire. (Female, 60–69 years old, moved to Port Macquarie Hastings from a small town/remote community elsewhere in Australia)*

Overall, the pandemic seemed to have a diverse and widespread impact on moving decisions to each case study LGA.

Ability to telecommute

Ten respondents who had moved to Ballarat recently (8% of movers with the last five years) and 10 respondents who had moved to Port Macquarie Hastings recently (7% of movers within the last five years) noted that increased familiarity with telecommuting and working from home as a result of the COVID-19 pandemic had impacted their decision to move. In Broken Hill, only one recent mover mentioned remote work. This was not part of their moving decision, but came up in the context of their ability to find employment post-move. As the other case study LGAs were closer to capital cities, the Ballarat and Port Macquarie Hastings respondents were more likely to telecommute and maintain work or study in capital cities:

> *Work from home trend allowed me to bring my Sydney job to [Port Macquarie]. (Male, 50–59 years old, moved to Port Macquarie from Sydney)*

> *The pandemic made remote working possible which made us reconsider the cost and value of staying in Melbourne. (Female, 18–29 years old, moved to Ballarat from Melbourne)*

> *I initially planned to move to a rental in Melbourne but postponed this due to pandemic. Ballarat came on to my radar later due to proximity, affordability, and study being more flexible (online). (Male, 18–29 years old, moved to Ballarat from a small town/remote community in Victoria)*

Natural disasters and climate change

Overall, 11 respondents stated that natural disaster or climate events influenced their decision to move to the case study LGAs (Table 10). The natural disasters discussed were bushfires, floods, drought, increasing temperatures and heavy rain events causing mould.

For some, the threat of natural disasters and wanting to live somewhere perceived as safer from these threats influenced the decision to move, while others were forced to move due to being directly affected:

> *We lived in the Blue Mountains and fires got to within 300 metres of our house for the third time in 12 years so we got out as we couldn't stand it again. (Male, 60–69 years old, moved to Port Macquarie Hastings from a regional city)*

> *We were tired of the constant flooding [in previous location]. (Male, 18–29 years old, moved to Ballarat from a capital city elsewhere in Australia)*

Living in the Mallee was too hot and getting hotter, climate change is our #1 reason for moving to Ballarat. (Male, 30–39 years old, moved to Ballarat from a small town/remote community in Victoria)

Lost my Lismore community in floods. (Female, 50–59 years old, moved to Broken Hill from a regional city in NSW)

The flood took my house and me and my family had been in emergency accommodation for the whole of 2022. (Female, 40–49 years old, moved to Broken Hill from regional city in NSW)

3.4 Likelihood and potential reasons for moving from case study areas

The following section presents the respondents' stated reasons for, and likelihood of, moving from the case study areas in response to the question: 'On a scale of 0 to 100 (0 = very unlikely and 100 = very likely), how likely are you to move from the area?'

3.4.1 Likelihood of moving from case study areas

In each case study area, the likelihood of moving within 12 months or five years was highest in Broken Hill. Twenty-seven per cent of Broken Hill respondents stated that they were more likely than not to move away from the area in the next year (selecting >50 on the scale of 0–100), and almost 44 per cent of respondents stated that they were more likely than not to move away within the next five years. For Ballarat, around 35 per cent of respondents, and for Port Macquarie, 30 per cent of respondents, stated that they were more likely to move than stay. This suggests a high level of churn in these case study areas.

3.4.2 Characteristics of people most likely to move

In all surveys, younger respondents stated that they were more likely to leave in the next one to five years than any other age group. This is to be expected, as this age group tends to be most mobile and the most likely to move from non-metropolitan regions (Bernard, Bell et al. 2016; Clark 2013). In the 18–29 age group, 68 per cent of Ballarat respondents, 65 per cent of Broken Hill respondents and 60 per cent of Port Macquarie respondents stated that they were more likely to move than stay in the next five years. This suggests a very high level of churn from this age group, and presents future challenges for the case study cities in retaining young adult populations.

Movers from regional locations were more likely to state that they would move away from all case study areas than those from capital cities.[2] This is interesting, as it would be expected that movers from capital cities might be less familiar with living regionally and therefore more likely to move again (Connell and Dufty-Jones 2014). However, it may be that the high cost of living and housing in capital cities compared to the case study areas might mean that, after leaving the capital cities, it is more challenging to return.

The stated likelihood of moving away from the case study areas differed according to when the respondent had moved into the area and/or if they had lived there all their lives. For each case study area, those who had moved more recently (within five years) were more likely to state that they would move away from the case study area than not (i.e. in comparison to those who had moved to the area five or more years ago, or were lifelong residents). The case study LGA with the largest gap over intention to move between recent movers and those who had moved five or more years ago or were lifelong residents was Broken Hill, with almost 60 per cent of recent movers stating they were more likely to move in five years than stay, versus around 35 per cent of those who had moved more than five years ago or were lifelong residents stating they were more likely to move than stay.

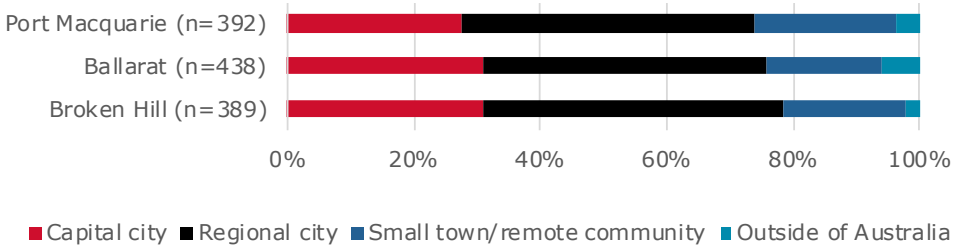
2 The only exception was that those from capital cities who moved to Ballarat were slightly more likely than those from regional areas to state that they would move again in the next five years (40% versus 39%, respectively).

3.4.3 Where movers from case study areas would potentially move to

Where respondents stated they would be most likely to move to was surprisingly similar across each case study area. For each case study area, respondents were most likely to move to another regional city (either in the same state or elsewhere in Australia), followed by capital cities. Smaller towns, remote communities or outside Australia were the least likely destinations, revealing a preference for regional city living (Figure 14).

In all case study areas, the movers from capital cities to the case study areas were more likely to move back to a capital city. Movers from capital cities to Port Macquarie Hastings were most likely to state that they would move to Sydney in the future (22%), while movers from capital cities to Ballarat were more likely to state that they would move to Melbourne (33%). Movers from capital cities to Broken Hill were more likely to state that they would move to Adelaide or other regional cities in NSW or Australia over Sydney (20% or 34% versus 11%, respectively). This is surprising, as Sydney was the origin destination for the largest number of respondents (Figure 7).

Figure 14: Where respondents stated they were likely to move to by case study area



Source: Authors' research.

Those who had moved from a regional area were more likely to state that they would move to another regional area. Movers from regional areas to Port Macquarie Hastings LGA were more likely to move to other regional cities in NSW (16%) or Australia (24%). They were also more likely to say that they would move to Brisbane or Newcastle over Sydney (9% or 8% versus 3%, respectively). Movers from regional areas to Ballarat LGA were more likely to state that they would move back to other regional areas, particularly another regional city in Victoria (30%). Movers from other regional areas to Broken Hill LGA were much more likely to move to other regional cities in NSW or Australia than anywhere else (56%).

3.4.4 Potential reasons for moving from case study areas

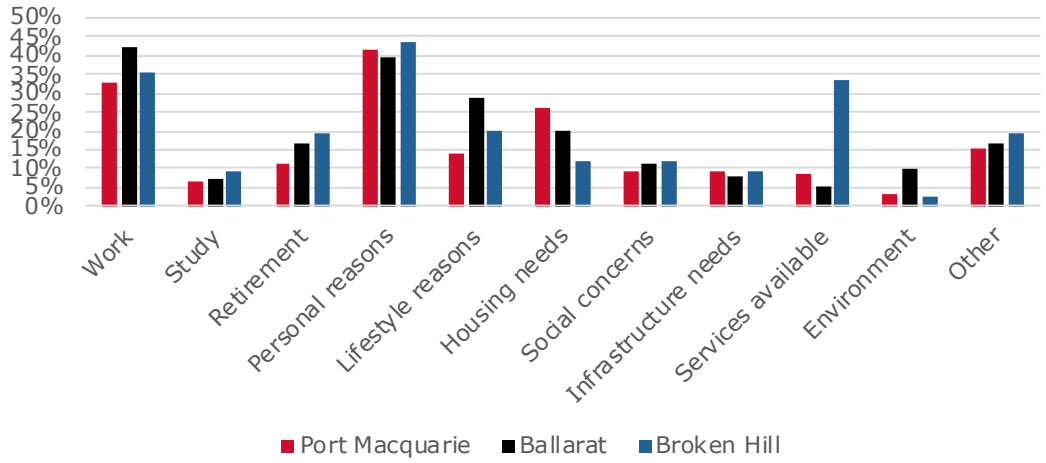
The possible reasons given for moving away from the case study LGAs were very similar across the three case study areas (Figure 15) and aligned with the reasons for moving stated in Section 3.3. Personal reasons and work were the most highly stated motivations for moving from all three case study locations.

Broken Hill respondents also selected 'services available' as a reason for moving, suggesting key concerns around services in that case study area. On average, respondents to the Broken Hill survey rated service-related place attributes, such as 'shopping options', 'recreational/entertainment facilities', 'banking and retail' and 'accessibility to tertiary education', 36–46 out of 100 (0 = 'very bad' and 100 = 'very good'). The lack of services available was discussed at length in open text responses, with particular reference to health and education services:

> *Medical care needs to be available; I have been unable to get a GP in 12 months. (Female, 60–69 years old, unlikely to move within 12 months but very likely to move within five years)*

> *To have access to more support and education services for our daughter with a disability. (Female, 40–49 years old, quite likely to move within 12 months and very likely to move within five years)*

Figure 15: Percentage of total respondents to each case study area by stated potential reasons for leaving



Source: Authors' research.

Housing was selected more often in Port Macquarie Hastings as a possible a reason for moving away than the other two locations. Respondents to the Port Macquarie Hastings survey rated rental housing–related place attributes such as 'rental options' 31 out of 100 on average, and 'rental prices' 32 out of 100. Housing and rental concerns were also noted in open text responses as reasons for moving away (e.g. 'Being priced out of rental market' [Female, 30–39 years old, very likely to move within 12 months]).

Respondents to the Ballarat survey stated that they were more likely to move for lifestyle reasons and environment than the other locations. Further questions revealed that respondents to the Ballarat survey may have been indicating 'pleasantness of climate' as low, with that attribute rating 51 out of 100 on average, and 140 respondents mentioning the cold weather as the aspect they liked least about living in Ballarat. Crime was also mentioned: 49 out of 100 respondents described the 'crime rate' as poor and 51 respondents noted that 'crime' was the aspect they liked least about living in Ballarat. Most other lifestyle and climate attributes rated more than 70 on average, suggesting these are the two main lifestyle and environment-related concerns for Ballarat.

The possible reasons given by young people for moving from all case study areas followed an expected pattern of 'employment, education and excitement' (Connell and McManus 2016: 13). This was reflected in the open text responses, where moving to 'experience different cultures and meet different kinds of people', for 'career progression' and for a 'change of scenery' were stated as possible reasons for moving from the case study areas by respondents in the 18–29 year age bracket.

3.5 Policy implications

Our analysis shows that each case study LGA has place-based pull factors attracting migrants to the area, and push factors possibly influencing moves away. Policy levers can amplify, exacerbate or manage these existing trends. The key policy levers influencing population growth are discussed below:

- Employment is still an important driver of migration, and so continued economic development is critical in non-metropolitan Australia.
- COVID-19 and associated lockdowns contributed to migration from metropolitan areas, as significant numbers of respondents stated that the pandemic's impacts contributed to their move. The pandemic seemingly influenced moves for housing (e.g. 'cheaper housing') and lifestyle-related (e.g. 'different lifestyle') reasons to non-metropolitan regions. Officials can anticipate that further internal migration could result from subsequent pandemics or housing market changes. There may also be an opportunity to build on the momentum for housing and lifestyle-related moves to non-metropolitan Australia through place marketing. Maintaining housing affordability should also be included in population growth agendas to preserve this migration driver.
- Growing familiarity with telecommuting during the COVID-19 pandemic impacted migration decisions to non-metropolitan Australia. Ensuring that high quality internet connections are available in regional cities would support the moving decisions of those who can work remotely and who would like to relocate from major centres.
- Perceptions of poor or inadequate services, such as primary and secondary education, tertiary education and training, and health and disability services, contribute to moving decisions, particularly among those considering moving away from Broken Hill. Therefore, supporting the continuation and growth of these services remains essential for population retention, especially in remote areas.
- Government and industry incentives are contributors to moving decisions but may not secure long-term settlement on their own.
- Population churn could be a concern for all three LGAs, and could potentially counteract population gains, with many community survey respondents considering moving within 12 months or five years, particularly young adults (18–29 year olds) and those who have moved into the case study areas recently (i.e. within five years). To reduce population churn, local governments could consider providing community-building programs to foster wellbeing and a sense of belonging for migrants, and could also identify and address local push factors, such as lack of rental availability, services and infrastructure, in cooperation with state and federal governments.
- A small number of respondents stated that climate related disasters were their principal reason for moving. Initiatives to increase disaster preparedness in high-risk locations could reduce forced moves in the future, while areas at lower risk should prepare for possible in-migration increases from nearby high-risk disaster zones.

4. Managing population change: interviews with local government and economic development stakeholders

- **Key challenges associated with population change in the case study areas were related to insufficient road and water infrastructure; health, childcare and educational services; housing; and key worker attraction to match growing populations or prevent further decline.**
- **The liveability of a location is place-specific; it is important to create a healthy and 'deep' population and to retain key workers.**
- **Solutions offered by participants to manage and retain populations included infrastructure and service upgrades, and efforts to increase housing affordability, stock and diversity, both of which need to be timed with anticipated change.**
- **Coordination from both industry and across multiple tiers and departments of local, state and federal governments is essential to deliver these place-based solutions.**

This chapter presents the results of 19 interviews with local government and economic development stakeholders of the three case study LGAs (see Chapter 1, Section 1.5 for more details). Specifically, it presents the interview participants' perceptions of the challenges associated with population growth in the case study LGAs. Participants discussed the impacts of different growth scenarios on their LGA, including the possibility of population decline, or, in the case of Broken Hill, further population decline. The participants largely discussed scenarios in which the current rates of population growth continue, or, in the case of Broken Hill, accelerate with the opening of new mines and new employment opportunities. Therefore, the responses presented in this chapter focus mostly on impacts and challenges related to maintained or accelerated population growth scenarios for each LGA. The final sections present solutions offered by the participants to manage these challenges and the policy implications of the findings of this chapter.

4.1 Challenges related to population change

The following section outlines the challenges raised by interview participants related to population change (both decrease and increase) in their local communities. Participants also spoke of the key challenges of expected future change.

4.1.1 Infrastructure

Interview participants from each of the case study areas discussed the burden of changing population on local infrastructure. Water infrastructure, stormwater systems and roads and public transport networks were discussed specifically as key infrastructure concerns. These concerns are discussed in greater detail below.

Road and transport infrastructure

Roads were described as being loaded due to population growth and/or car dependency within each case study area. In each city, a lack of efficient and reliable public transport was cited as a key factor in creating car dependency.

In Port Macquarie Hastings LGA, the options for public transport are limited, with few public bus networks and active transport is difficult due to a lack of footpaths and bicycle paths. The lack of public transport and infrastructure supporting active transport means that residents in Port Macquarie Hastings are car dependent, and the increase in population has created local congestion issues:

> *We haven't got the infrastructure in our region, yet, for reliable public transport … all those cars are on the road, going somewhere, trying to get to something, so that creates traffic congestion. (Mayor Pinson, Port Macquarie Hastings Council)*

Car dependency was also discussed as an issue in Ballarat LGA, with the lack of reliable and efficient local public transport cited as an added factor in creating this dependency:

> *Ballarat is a very car driven city in the mentality as well … [and we have a] not so effective or efficient bus system. (Ballarat City Council representative)*

Broken Hill, like the other case study areas, has limited public transport. At the time of the study, it had one public bus service and many roads had been severely damaged by floods—'they're literally dangerous at the moment' (Roy Butler MP, member for Barwon). Funding and resourcing for road upgrades were considered very important for the area.

Due to its remote location, connectivity to other centres is crucial for Broken Hill. At the time of the study, the train to outside locations was not running as it had been impacted by recent floods. Airport access is essential for connecting Broken Hill to other centres for commercial flights and for the Royal Flying Doctor Service (RFDS). Ensuring that flights are cheap and accessible to many locations was noted by Mayor Kennedy:

> *We need to make sure that it's more accessible. Because of the tyranny of distance for Broken Hill … it's really important that the airport works really well so it remains affordable to travel. (Mayor Kennedy, Broken Hill Council)*

Transport challenges were discussed as affecting the current liveability of the case study areas, with road congestion, lack of local transport and affordable transport to other centres cited as impediments to further population growth as well as being areas of concern for current residents.

Water infrastructure

Sewer and stormwater systems were discussed as concerns in both Port Macquarie Hastings and Broken Hill LGAs. For Port Macquarie Hastings, the concern was related to the impact of growing housing developments on stormwater systems and drainage:

> *on a very practical level, the greater the population becomes, the more pressure there is on your sewer network systems [and] stormwater systems. (Mayor Pinson, Port Macquarie Hastings Council)*

Access to water security and insufficient pipelines due to the remote, inland location were a concern for economic development in Broken Hill:

> *access to water was always a challenge … water is transported a hell of a long way in a pipe to get to Broken Hill … access to … water and power would be two inhibitors to starting a big business out there. (Business Development, DRNSW)*

These infrastructure challenges are not easy to overcome at the local level, and often require ongoing rather than just upfront state support:

> *Say state government gives a council $5 million for an infrastructure project … the downside to it is the council then has to wear the depreciation for that asset. (Roy Butler MP, member for Barwon)*

While the depreciation issue affects all councils in NSW, regional councils have less opportunities to raise revenue, beyond the special rates variation process, even with increasing numbers of rate payers as populations grow.

4.1.2 Facilities and services

Having sufficient facilities and services to support growing communities was a major concern. More and better health, educational and recreational facilities and services that meet the needs of the community were discussed by participants as future challenges.

Health

Participants with key insights into the Broken Hill case study area cited health services as a key limiting factor for liveability for current and future residents. Despite having a base hospital and being a key node of the RFDS, authorities in Broken Hill discussed the under-resourced health system and how this might be a factor of population churn:

> *when your nearest doctor is also 300 kilometres away, you take a different perspective of what your health care can and should look like, [with] the unfortunate result of poor health outcomes. (Health researcher, Broken Hill)*

> *Lack of maternity services [pose a challenge]. So if you've got to travel five hours to get to the hospital to have your baby, and you've got to leave two weeks before that. (Business Development, DRNSW)*

> *if you need [speech therapists] and OTs [occupational therapists] … access or lack thereof to those sorts of services is what holds back population growth. (Business Development, DRNSW)*

> *access to services will inform whether or not someone stays, depending on their health needs. (Health researcher, Broken Hill)*

The member for Parkes (which encompasses Broken Hill) noted that the perception of health issues in Broken Hill could turn away would-be migrants, including health staff that the area needs to attract.

In Port Macquarie Hastings, the hospital and health services were so far 'keeping pace' with the population growth, but the state member for Port Macquarie noted emerging concerns about future population growth and the strain this would place on emergency services:

> *We know that our presentations … to our emergency department are continuing to increase. (Hon Leslie Williams MP, member for Port Macquarie)*

Education and training

Educational services and opportunities were noted as a particular concern in Broken Hill. Roy Butler MP, the member for Barwon, noted that the National Assessment Program – Literacy and Numeracy (NAPLAN) scores, and Australian Tertiary Admission Rank (ATAR) scores, are typically lower in remote communities than in metropolitan areas, creating a possible push factor to move from remote and under-performing regional areas. A decreasing population and lack of educational services can create a feedback effect of further decreasing numbers and closing schools. The issues with high school and tertiary educational offerings in Broken Hill were discussed as reasons for moving away from Broken Hill and population churn:

> *The pre-schooling, the primary schooling all seems to work well and then the kids get to the high school … it all falls apart and the parents [think about] packing up the family and moving away. (CEO, Robinson College Broken Hill)*

The higher education and post-schooling opportunities in Broken Hill can also be limited, and many students are required to participate in online courses or components. The requirement for computer literacy, a personal computer and digital connectivity can make courses inaccessible to some students in remote areas.

Childcare

The availability of childcare services to meet demand was discussed as a concern by participants. An increase in childcare services was considered crucial to attracting and retaining new residents in Broken Hill:

> *Childcare is impossible. That is a problem. (Health researcher, Broken Hill)*

> *In terms of the next bottleneck that we've got … especially relevant to higher income earners and professionals, is childcare. (Roy Butler MP, member for Barwon)*

4.1.3 Housing and planning

Housing was discussed as a key concern in all case study LGAs. Housing concerns related to availability of stock, diversity of stock, affordability of rents and property ownership, and quality of housing stock.

In Broken Hill, housing was 'the number one issue' (Mayor Kennedy, Broken Hill Council) and possible 'bottleneck' for population growth. Affordable housing was discussed by the participants as a pull factor for migration to the area; however, housing demand has increased over the past few years — seemingly as part of the overall COVID-19 trend — prior to the expected population increase from new mines opening near the city.

Some of the attempts to entice key workers have had problematic effects on the constrained Broken Hill housing market. For example, one participant stated that rental subsidies for teachers and other professionals have already pushed rental accommodation prices up. The recent population growth and resulting house and rental price increase was discussed by participants as possibly preventing further population growth:

> *We didn't expect to get this in Broken Hill, but just with the population growth of about 500 people, we've seen virtually no vacancies in town, so a lot of teachers can't come to Broken Hill to teach, so it's causing a shortage. There's about 40 positions in the health sector that can't be filled because there's no housing, and 16 police jobs are in the same boat. (Mayor Kennedy, Broken Hill Council)*

Expanding the housing and rental stock in Broken Hill is challenging. There are considerable constraints to increasing new housing supply as the city is surrounded by Crown and Native Title land. Additionally, it can be challenging to attract investment in housing from developers. Much of the existing available housing stock is of poor quality or 'currently not habitable' (Roy Butler MP, member for Barwon) and some has been left vacant after the occupants moved away and '[the houses] are just left behind' (Hon Mark Coulton MP, member for Parkes).

Interview participants also noted that in Broken Hill there is not only a shortage of builders, but also a shortage of building certifiers and inspectors, which slows down the development process to either build new homes or renovate existing ones.

In Port Macquarie Hastings, key concerns were related to housing diversity, high population growth, and competition with short-term lettings creating limited housing stock and higher housing prices:

> *because we're also a tourism destination, I think a lot of people who recognised that owned investment properties, that there was more opportunity from a holiday letting. (Mayor Pinson, Port Macquarie Hastings Council)*

> *Our rental vacancy is very, very low … Prices of rental property are increasing. We've always had a significant waitlist for social housing in our area. But I think that's been heightened in the last couple of years. (Hon Leslie Williams MP, member for Port Macquarie)*

The demand for, and cost of, housing was exacerbated during COVID-19, and the lack of housing has had a flow-on effect of contributing to a skills shortage in Port Macquarie Hastings, as skilled migrants are not able to move there due to the difficulty accessing housing:

> *It's very difficult to be able to engage workers when there's nowhere for them to live. (Mayor Pinson, Port Macquarie Hastings Council)*

For Ballarat, there was some catch-up work in terms of strategic planning for population growth, as many migrants were interested in larger blocks on the outskirts of the city. Housing stock diversity is a key driver for planning as council officials grapple with the changing demographics of movers. Specifically, Ballarat officials argued that they would like to offer housing stock for younger ages, such as students (to attend Federation University) and lone person households.

Ballarat has also experienced a housing price increase. Particularly during the pandemic, 'house prices increased by 35 per cent' (Ballarat City Council representative), potentially impacting housing as an otherwise strong pull factor to Ballarat.

4.1.4 Key worker attraction and retention

An important consideration for both declining and growing populations was the ability to attract and retain key workers to the region.

Broken Hill is experiencing a skill shortage — 'At the moment, we've got more jobs than we've got people' (Roy Butler MP, member for Barwon) — and its remote location complicates the challenge of attracting workers:

> *We've got enormous potential, but we can't meet that because of lack of people … lack of doctors is quite topical and that's recorded, or teachers … right through all the professions, through all the trades. (Hon Mark Coulton MP, member for Parkes)*

> *We have a shortage of GPs at the moment, and to see a general practitioner it can be a six week wait to get in to see a doctor. (Health researcher, Broken Hill)*

Attracting key workers into areas experiencing high key worker employment vacancies can be challenging. While incentives, such as large rent subsidies, are offered to those who will agree to take placements, housing challenges, reduced services (i.e. childcare) and other factors of liveability, and lack of job opportunities for a spouse, can be a disincentive:

> *Recruiting people to take a position in a remote community is a challenge … it's not just the physical location … but the opportunity for travel … the other challenge of a remote space is being somewhere that also meets their social, spiritual, cultural needs, family needs … Spouses need jobs as well. (Health researcher, Broken Hill)*

In Broken Hill, a key concern is that job vacancies may be filled temporarily, but that ultimately migrants to the area might move elsewhere after only a few years. Council and community organisations are doing what they can to attract a workforce that will embed themselves in the local community:

> *Some remote communities lack population 'depth'. They end up having to employ people out of area, which provides a challenge for the context and understanding that the person has of the communities. (Roy Butler MP, member for Barwon)*

4.2 Solutions to managing population change

Solutions to problems associated with population change differ according to place-based factors, but the participants offered key solutions that apply to many non-metropolitan regions, regardless of whether population increase is being encouraged or whether it is already occurring. These key solutions offered by participants are explored in the following sections.

4.2.1 Infrastructure and service upgrades

The local councils of each case study area were keen to utilise state and federal government funding as a solution to the need to upgrade local infrastructure and services. Leslie Williams MP, the NSW state member for Port Macquarie, discussed the role of state government funding for transport and education:

> *I have met with various ministers to talk about how we can look at fast tracking some of those infrastructure projects … particularly around the road project.*

> *So I think that in terms of the education … the response is happening at an adequate pace … [the state government has] invested and [is] investing significantly in our public high schools.*

Planners in Ballarat have been proactive in developing master plans and project plans to be better prepared for opportunities when they arise:

> *as a city we weren't just grabbing every little bit of money that came our way … we strategically decided 'this project is transformational and will make a difference to everybody in Ballarat if we get this across the line'. (Economic development manager, DRNSW)*

Many participants spoke about the benefits of better alignment among local, state and even federal government priorities and services with the private sector:

> *we need members of federal and state governments, and the council, to sit down and work out what … they want to work towards (Mayor Pinson, Port Macquarie Hastings Council)*

> *social housing is primarily our [state government] responsibility, but at the end of the day, we are going to have to work with all jurisdictions to make sure we can deliver and meet those challenges and the need. (Hon Leslie Williams MP, member for Port Macquarie)*

Strategic alignments can create powerful place-based solutions to population challenges related to infrastructure and service shortfalls. Examples of good collaboration across government tiers in Port Macquarie Hastings and Broken Hill include airport upgrades and expansion, which received funding from three levels of government. In Port Macquarie Hastings, the local council has been updating roads next to the airport:

> *when you have members that understand what is trying to be achieved … then they're able to have a three-way partnership as far as funding is concerned. We've certainly enjoyed that in relation to our airport. (Mayor Pinson, Port Macquarie Hastings Council)*

The Department of Primary Industries and Regional Development (successor of the DRNSW) is a key source and distributor of beneficial funding for Port Macquarie Hastings and Broken Hill. In the past, the department has offered several funding opportunities for communities and businesses. For example, Port Macquarie Hastings Council was successful in 12 applications to the latest 'Stronger Country Stronger Communities' funding round, and Broken Hill Council was successful in six (NSW Government 2023b). The department also gives councils and businesses strategic advice about which grants to apply for:

> *I've got a database that identifies companies that I've worked with over the last three months … I'll go directly to all of those people on that database that I've already identified that I think would be a good fit for that but then others will come directly to us as well. (Economic development manager, DRNSW)*

There is an awareness on the part of state officials to align with councils where possible, and to collaborate on economic development and liveability while maintaining long-term objectives. Regional Economic Development Plans (REDS) have been important vehicles for economic cooperation.

Beyond government cooperation, industry involvement can help build a sense of community and provide place-based solutions. For example, in Port Macquarie, private investment in the childcare sector is picking up to provide more early childhood education spaces:

> *we're certainly seeing investment by the private [sector] in the early childhood sector. For example, where I live in Lake Cathie where we didn't have a childcare centre, we now have three very large childcare centres to meet the growing demand locally. (Hon Leslie Williams MP, member for Port Macquarie)*

Part of the challenge for Broken Hill is that it must create the impression that it is a good place to invest given the historically declining population. Participants spoke of attempts to diversify the economy beyond mining by building on the tourism and film industries that are growing in the city. Much of the investment in Broken Hill, whether public or private, is reliant on the perception of growth:

> *people start talking positive, they cause other people to talk positive, before you know it you don't even have to talk positive, everyone else is talking for you. (Mayor Kennedy, Broken Hill Council)*

There has been some cooperation between the local council and Foundation Broken Hill, a not-for-profit association set up to facilitate job creation in a post-mining context. The foundation initially provided loans for alternative small business ventures to support the local economy; however, it now partners with council and larger employers to attract key workers to Broken Hill by overcoming some of the hurdles such as the deficit in appropriate housing.

For Ballarat, growth in ICT and the higher education sector has created change for the community. The ICT company IBM has a branch in Federation University's technology park, with both state and local governments pursuing ICT companies to participate in the university's technology park. One of the flow-on effects is that smaller businesses co-locate to service the larger businesses and their customers:

> *People wanted to co-locate next to IBM. Even if they weren't working with IBM, they just wanted to co-locate, so they could say they were there. (Economic development manager, DRNSW)*

4.2.2 Housing and planning solutions

Place-based housing solutions were discussed to address the housing-related challenges that population growth has created in each case study area.

In Port Macquarie Hastings, housing solutions required a nuanced trade-off between increasing density in the CBD without affecting the lower density urban form that residents were accustomed to. Port Macquarie Hastings has a comprehensive housing strategy, developed in 2021, that uses demographic information and population projections to estimate future need in line with current demand and building approvals. Mayor Pinson discussed the approach, which would see an increase in density around the CBD rather than along the coastline:

> *I want to see housing go up, here, in high density housing, within the nucleus of what we've called our CBD. But, most importantly, I want to see our coastline protected, I want to see our natural environment protected, because these are things that make [the area] so beautiful. (Mayor Pinson, Port Macquarie Hastings Council)*

> *I just have a vision of a thriving regional city … but a regional city that also doesn't lose what has attracted so many people being here in the first place. (Mayor Pinson, Port Macquarie Hastings Council)*

As well as providing a diversity of housing types and increasing density and stock, the state MP for Port Macquarie, Leslie Williams MP, discussed solutions to social housing shortfalls, and the opportunity and current appetite for building social housing. At present, the challenge is not only the need for coordination among the different tiers of government, but also the need for skilled workers to be diverted away from private projects into social housing construction, and for more workers, in general, in the construction industry:

> *I think that the challenge will be having the skills, the people on the ground to do the work once there is a commitment [to] develop some new social housing here. And that's because in our local area, there's so much other building going on particularly in the construction of residential homes. So … you have to divert some of that over to … developing public housing … I don't think that's unsurmountable … I think where we're seeing things happening … we know in our local TAFE for example that the capacity for training electricians has doubled in recent years and they're one of the key skill sets we'll need in terms of construction.*

> *I just think we need to pick up the pace a bit [in terms of developing social housing] … be a little bit more serious about putting our words into action when it comes to that partnership between local, state and federal government.*

In Ballarat, the pre- and post-pandemic housing demand has encouraged both greenfield development and infill development. Council planners argue that density is needed to encourage more business services, entertainment and retail to add to the vitality and walkability of the city centre, and to prevent the urban sprawl experienced in other locations:

> *from a local government perspective is always a good thing [building up the CBD] because your infrastructure is already there. (Economic development manager, DRNSW)*

Broken Hill is in a unique situation in so far as it has had time to prepare for an expected housing boom with the opening of a mine. The Department of Primary Industries and Regional Development (previously DRNSW) has been facilitating communication between the local council, mining companies, state agencies and Foundation Broken Hill by convening quarterly meetings and sharing information. This has allowed any difficulties or development bottlenecks to be identified early and addressed in a timely way. Local organisations and council have been in conversation about the best approach to the housing problem in the LGA:

> *We bring [stakeholders] together. So, we've been bringing together the Council, [industry], the couple of government agencies and Foundation Broken Hill only once a quarter or something … That's really just so everybody knows what everybody's doing, and where can we work together. I guess for us to understand is there a blockage that we might be able to step in and help. (Business Development, DRNSW)*

Broken Hill Council has identified vacant or under-utilised homes and has begun identifying and contacting owners and offering to acquire them. The council have also been facilitating the private sale of some housing (Loughran and Ormonde 2023):

> *Council did an audit of the housing in Broken Hill and there were 1,500 unoccupied or vacant houses … so council's trying to put incentives our there for people to buy those, build them, make them new so that it takes a lot of pressure off. (Mayor Kennedy, Broken Hill Council)*

A potential solution to the housing problem suggested by one participant was to provide aid for the biodiversity offset system for Broken Hill so that they might be able to open-up greenfield sites:

> *If every council was given a grant to go and work out the next area for development, have it biodiversity-assessed, have somebody sit down with them to work out the offsets and how they can meet that. So that we are cutting out two years of lead-in time to get the next block ready. (Business Development, DRNSW)*

4.2.3 Upskilling and key worker attraction

Two main solutions for filling key or essential worker vacancies in the case study areas were discussed: upskilling residents or attracting new key workers. As this was a primary challenge for Broken Hill due to its remote location, most of the following findings are related to that case study LGA.

Upskilling local residents

A key challenge to filling current vacancies for key employment sectors is that local residents may not have requisite skills or, in the case of Broken Hill, that those with requisite skills may have moved away or already hold local positions. The participants considered local education and training opportunities to be important for upskilling more workers. In Broken Hill, Robinson College provides course offerings to match local employment needs in cooperation with local employers:

> *Because health is the biggest employer and we deliver Aged Care, Certificate III in Individual Support, we have a pretty good rapport with them and all of the students – 100 per cent of the students that we've had in that particular course have got employment, primarily at Southern Cross Care. (CEO, Robinson College, Broken Hill)*

Other courses at Robinson College were developed for mining work and included confined spaces and working at heights, forklift courses, first aid, crane, rigging and dogman courses, as well as hospitality and barista courses to meet demand from the growing tourism sector. Robinson College largely services Broken Hill residents; however, its trainers also travel to surrounding smaller towns such as Wilcannia, Ivanhoe and Menindee to deliver courses to high school students (e.g. White Card or heavy machinery training).

An important initiative to encourage locals, including young people, to remain in Broken Hill for further education and upskilling has been the Broken Hill Country Universities Centre, which has had 170 graduates in the two years since it opened:

> *that has been a game changer for Broken Hill because people can increase their education and skill set without leaving. (Hon Mark Coulton MP, member for Parkes)*

Attracting key workers and new businesses

While upskilling residents will create a 'depth' of skills and employment capacity, the problem is that there are not enough people to fill current vacancies. As Mayor Kennedy of Broken Hill Council stated: 'if we create 200 new jobs, we really have to bring 200 new people to town'. Therefore, in tandem with local upskilling, an external workforce also needs to be attracted.

Enhancing liveability in the local area was discussed as an important means to attract key workers, business investment and prevent population churn. Typical aspects to liveability include sports, the arts, good schools, health care services and community life in general:

> *it's got to be a place where people, once they move here, say that's where we want to live forever … then they have kids, once they have kids the schools will grow, all the other services grow. (Mayor Kennedy, Broken Hill Council)*

The Welcome Experience Program in Broken Hill offers an innovative means to try to attract key workers and embed them in the community (see Box 1 for more details).

Box 1: Welcome Experience Program

The Welcome Experience Program is a pilot program led by the Department of Primary Industries and Regional Development (previously DRNSW) to encourage key workers to remain in regional NSW locations that have key worker shortages. The program works across the NSW departments of Health, Justice and Education. Broken Hill is one of the pilot locations.

The key innovation of this program is that it does not market regional locations, but, instead, provides a concierge service to connect new migrants to communities. The program helps to match new movers' needs with established community resources and to offer place-specific advice (e.g. about local schools, recreational facilities, lifestyle). There is also a Partner Employment Program to aid spouses in securing employment in the new location, which is important for higher skilled positions that might attract people with families.

The Welcome Experience Program is intended to benefit both the community and the mover. The aim of the program is not to build population, but to help migrants that already intend to move to settle long term and fill key worker positions. As such, it not only targets metropolitan movers but also those already living in regional Australia.

Housing is an important attractor of key workers when it is affordable. However, as discussed above, it can also act as a key blockage if there is low availability or growing prices. Beyond the housing and planning solutions discussed above, the NSW Government is developing a purpose-built residential building in Broken Hill to support health, education, policing and other public service sector professionals. Whereas historically, each department has been tasked with providing their own housing for staff, this has seen collaboration across departments:

> *[Broken Hill] Council's also looking at dealing with the state government to fund a 300 unit multi storey building to house health, education, police and other government professionals that may come to town … they won't be moving here looking and then when they can't find something after a few weeks they go again. (Mayor Kennedy, Broken Hill Council)*

Other initiatives that are in progress to draw in key workers include tax settings specifically for mining towns. Councils and MPs in mining areas have been lobbying the federal government for tax reform to incentivise workers to relocate to remote areas, even if only temporarily:

> *hopefully what [fringe benefits tax] will do is then take a bit of pressure off those people that have a lower income because they'll be able to use their pre-tax income to pay their rent as opposed to their after tax. (Mayor Kennedy, Broken Hill Council)*

> *young nurses, doctors, teachers, whatever, if they come out and they've got a 100 per cent fringe benefits tax exemption, they'll buy a house in [Broken Hill], five or six years later they will have paid off $40,000 a year more than what they would have if they didn't have that. Suddenly they own their own home in Broken Hill and if they do want to go back to the coast or wherever they come from, they've got well on the way to having a deposit on a house. (Mayor Kennedy, Broken Hill Council)*

Broken Hill also has the University Department of Rural Health (UDRH) funded by the Australian Government as part of the Rural Health Multidisciplinary Training program. This program attracts students from universities across Australia, and also supports local health professionals and research into rural health. The UDRH works with multiple universities to accommodate students' needs. Placements in remote areas can create unique career opportunities for broader experience, and provide a sense of adventure:

> *There's a lot of evidence to that effect that students come out and they have opportunities that they wouldn't have, that their metropolitan colleagues don't ever get the chance to perform that procedure or have responsibility for a particular patient's care in that way. (Health researcher, Broken Hill)*

Officials are also aiming to attract an international workforce:

> *I think a huge part of our future in terms of labour shortage and in terms of skilled workforce is going to come from overseas. (Roy Butler MP, member for Barwon)*

There is political pressure to extend the footprint of the Designated Area of Migration Agreement (DAMA) from the Orana Regional Development Australia (RDA) region out to other areas, such as the Far West RDA and the North West RDA. Extending the DAMA would help those areas attract overseas migrants. This is considered important as it is much quicker and easier to attract a skilled worker from overseas than to train someone in Australia. Recent changes in visa rules by Investment NSW mean that migrants can self-sponsor instead of needing to be employed, and it is hoped that this will also help to attract more migrants to non-metropolitan regions.

4.3 Key implications for managing population change

The evidence presented from interviews with government representatives and economic development stakeholders from the case study LGAs revealed surprising commonalities of issues related to changing populations across the different locations, and the different place-based responses required to address these population challenges. Key implications for policy in the non-metropolitan regions were:

- Efforts to shift population into non-metropolitan areas need to be driven by the needs of the LGAs and not by metropolitan planning agendas (e.g. to reduce congestion or housing shortages/lack of affordability), as this can simply cause the shifting outwards of transport, social and housing impacts.
- The liveability of a location is very important to creating a healthy and 'deep' population. Liveability is place-specific and not something easily measured. Knowledge from local planners and stakeholders is essential to determine appropriate solutions to improve liveability for local communities and aid population retention.
- Blockages to liveability, such as childcare, housing needs and supply, and transport infrastructure, cannot be managed by local councils in isolation. Instead, they should be continually identified and monitored according to changing populations over time. Overcoming such blockages may require creative solutions. Local governments could consider prioritising childcare provision as part of council business or increasing childcare places in existing facilities if councils already run daycare centres.
- Increased funding and support from state and federal governments for housing, infrastructure upgrades and essential services are required for both population growth and decline scenarios in non-metropolitan regions.
- Whole of government coordination, including the different tiers of government (local, state and federal) and across departments (justice, health, education), as well as cooperation with industry and private sector, is required to meet the changing needs of rapidly changing populations in a timely and efficient manner. Departments such as NSW's Department of Primary Industries and Regional Development can act as effective facilitators for coordination between government and industry.

5. Conclusions and policy development options for non-metropolitan Australia

This research investigated contemporary place-based drivers of population change and the challenges and solutions for managing population change in non-metropolitan Australia.

A statistical modelling method was used to explore the contemporary drivers of population change in SUAs in non-metropolitan Australia, and three case study LGAs — Port Macquarie Hastings, Ballarat and Broken Hill — were investigated in greater depth. A community survey was conducted to identify the contemporary push and pull factors creating population change in these locations. Finally, local government, industry and economic development knowledge holders from each LGA were interviewed to identify the challenges they faced, as well as policy development options for managing population growth.

This chapter reflects on the key policy development options based on these findings. It discusses policy opportunities to strengthen and diversify key pull factors to non-metropolitan urban areas; the mitigation strategies for push factors for moving from these areas; and, finally, the key policy advice for managing population change.

5.1 How can regional pull factors be strengthened and push factors be addressed?

This study has revealed some important trends in population changes across non-metropolitan Australia based on key place attributes that determine where people decide to move and when. The local industry and employment options in an area, the lifestyle offered in an area and liveability factors such as work–life balance, proximity, or ease of access to larger urban centres and housing affordability were found to be important place attributes and pull factors determining migration trends to the case study LGAs.

Despite strong pull factors, the likelihood of churn was high across all case study areas, with many respondents stating they were likely to move away in the next five years, the lowest being 30 per cent (Port Macquarie) and highest 44 per cent (Broken Hill). The overall liveability of non-metropolitan areas needs to be considered to retain populations and prevent this churn. For some areas, select push factors (e.g. lack of services, limited employment opportunities, lack of rental accommodation) can influence out-migration despite an area hosting many positive place attributes. Policy implications related to these employment, lifestyle, service, infrastructure and housing push and pull factors are discussed below.

5.1.1 Employment, jobs growth and economic development

Job prospects and economic growth continue to be important drivers of population growth across non-metropolitan Australia. This was evident from the statistical modelling in relation to hospitality workers, as well as from the community surveys, in which moving for work was among the top three reasons for moving to the case study areas (36–58% of respondents, depending on case study LGA). Therefore:

- Policy and government support that drives economic growth in non-metropolitan regions remains a key instrument by which to grow populations, such as the Australian Government's Regional Jobs and Investment Packages, and economic growth strategies such as RDAs.
- Supporting avenues for the upskilling of local school students and residents into local industry pathways or industries of need in non-metropolitan areas, such as through funding technical colleges and TAFE courses, and ensuring that these courses are accessible and appropriate for remote and under-resourced communities, could help retain local youth and fill vacancies in non-metropolitan areas.
- The growth and focus on key industries for a local area needs to be matched with coordinated efforts to diversify local economies. This will ensure that areas are better insulated against the growth and decline of specific sectors (e.g. supporting tourism, hospitality and the entertainment industry in Broken Hill to mitigate against the population impacts of the opening and closing of mines).

5.1.2 Promoting and maintaining place-specific lifestyle and amenity attributes

Lifestyle factors have grown in influence over the last few years, especially among those who left metropolitan areas and moved to each of our case study LGAs. The lifestyle attributes that drew migrants to each case study area were unique and place-based (e.g. the coastal lifestyle and amenity in Port Macquarie, work–life balance in Ballarat, and 'adventure' and small-town lifestyle in Broken Hill). By contrast, the lifestyle offered in capital cities was seemingly less desirable, due to lockdowns and other impacts of the COVID-19 pandemic. There is an opportunity to leverage this through place marketing to attract migrants looking for a 'different' lifestyle, while at the same time maintaining the lifestyle attributes that the residents of non-metropolitan Australia enjoy:

- Place marketing should highlight place-specific lifestyle attributes. To be successful at drawing in migrants, and to differentiate themselves from other migration destinations, local residents' and community knowledge of specific lifestyle attributes should be utilised to create tailored marketing for regional towns and cities.
- Place marketing could be targeted to the large population of capital city residents that were greatly impacted by the COVID-19 pandemic and lockdowns (e.g. Sydney and Melbourne). This can be costly for local governments but could be supported by state and federal campaigns (e.g. Move to More campaign).
- Where possible, local and regional strategic plans should aim to preserve the key local lifestyle attributes of non-metropolitan cities identified by their communities to continue to promote migration and retain residents due to these strong pull factors.

5.1.3 Enhancing local infrastructure and services

The findings of the statistical modelling showed that transport infrastructure — in particular, air services and airports — are a positive factor of population growth. By contrast, poor roads and lack of public transport, and lack of road, train or air connectivity to major cities, as well as outdated sporting and health/hospital infrastructure, negatively affected liveability in the case study LGAs. Therefore, improving local infrastructure is important to attract and manage population growth. The key policy advice related to infrastructure is as follows:

- Upgrading and developing air, road and rail services in non-metropolitan areas influences the area's connectivity to other major centres and, therefore, its overall desirability as a place to live. Concerns about encouraging FIFO or DIDO work practices were outweighed by the benefits of better connectivity.

- Enhancing internet connectivity in remote and outer regional areas, combined with physical transport upgrades, could shift commuting zones further outwards and allow people to live in remote areas more confidently, while maintaining employment, study and social ties to major centres.
- Infrastructure grants at all levels of government can influence the liveability of regional areas. Federal and state government grants targeted towards regional areas, such as the Australian Government's Building Better Regions Fund, the Victorian Government's Regional Infrastructure Fund and the NSW Government's Accelerated Infrastructure Fund, can be important resources for local communities in need of infrastructure development and upgrades beyond the scope of local government. However, the resulting projects require support for ongoing maintenance so that local governments are not burdened with depreciating assets.
- Local transport infrastructure is not necessarily a strong pull or push factor but does affect liveability post-move. Development centred around the CBD of non-metropolitan cities and local transport that connects to surrounding suburbs could improve liveability.

Further, accessible education services, tertiary education and training, and health services contribute to decisions on where to move, and population retention:

- Quality early childhood, primary and secondary educational options are important for attracting and retaining families. Enhanced federal funding for rural and remote childcare centres could support the business case for more private and community childcare centres. At the same time, state funding and support for non-metropolitan schools is crucial to bridge the gap between metropolitan and non-metropolitan education outcomes.
- State government financing for, and improvement of, local health services is essential for attracting and retaining populations, particularly vulnerable and ageing populations.
- Tertiary and further education options in non-metropolitan regions remain important for retaining school leavers and attracting those hoping to undertake further study in regional Australia. Federal and state funding for regional university and TAFE campuses, and increased numbers of Regional University Centres, can help remote and regional Australians to access higher education facilities (Country Universities Centre 2023; Department of Education 2023).
- Encouraging key workers to live in non-metropolitan Australia is essential for providing quality services, especially in remote areas. See Section 5.1.5 below for policy advice on key worker attraction and retention.

5.1.4 Increasing housing and rental stock and diversity, and ensuring housing affordability

All case study LGAs had seen an increase in migrants who were looking for 'cheaper' housing in the last five years, particularly movers from capital cities. This trend was the strongest in Broken Hill and Ballarat. The negative effects of high house prices on regional centre growth were demonstrated by the statistical modelling results in Chapter 2. Despite the perception of 'cheaper' housing in non-metropolitan Australia, housing-related challenges, such as recent house price growth, a lack of rental availability due to population growth or competition with short-term rentals in high tourism zones, were identified as potential push factors from the LGAs under review, both now and into the future. Efforts to maintain housing affordability need to be implemented urgently in non-metropolitan Australia, including:

- Support with housing or rental costs for movers into regional Australia (e.g. Quilpie Shire Council's Home Owners Grant or the Australian Government's Regional First Home Buyer Guarantee) can lessen the impact of housing unaffordability. However, these approaches need to be assessed for their unintended possible impacts on local housing markets.
- Increasing or attracting trade workers and building inspectors to non-metropolitan Australia, and additional human resourcing for local governments to process residential building approvals to increase local housing stock that maintains local character.
- Limiting STRA permits in high short-term letting penetrated areas, as proposed by Byron Shire Council (2023).

- State and federal government support to build appropriate social and affordable housing (e.g. NSW Regional Housing Fund [NSW Government 2022]).
- Local housing plans should identify future needs and outline appropriate strategies with forecasted outcomes. Which approach(es) will be the most appropriate for an area depends on the local context and may require creative housing solutions from different levels of government.

5.1.5 Key and skilled worker attraction and retention

Key worker attraction and retention is important to support local essential services, and is also foundational to community building. While many policy efforts are directed at attracting key and skilled workers into regional and rural Australia, retaining these workers requires equal attention. Key policy actions to support attraction and retention of key/skilled workers include:

- Government and industry incentives can contribute to key worker moving decisions. Therefore, grants targeted at skilled workers or key workers to address worker shortages in regional and remote areas can be effective for filling vacancies (e.g. the SA Government's Country Incentive Zone Allowance, the WA Government's Attraction and Retention Initiative for teachers, and the NSW Government's Regional Skills Relocation Grant for relocation costs). However, such grants may only be temporarily effective.
- Highlighting the unique career opportunities of working in regional and remote areas and targeting key workers with pre-existing experience of living and working in regional Australia, with an appetite for adventure, with the desire for work–life balance or who might be seeking a particular lifestyle could be a successful place-marketing approach to attract metropolitan talent.
- International visas are a mechanism for influencing skilled workers to move to designated areas of need. However, larger regional urban centres and some capital cities are considered under the designation of regional area for different visa types (e.g. Darwin, Hobart, Adelaide, Gold Coast and Sunshine Coast), and these areas tend to be more popular destinations than smaller and more remote locations in critical need of workers (Hugo, Khoo et al. 2006). Tiered incentives could be provided for international visa provision based on remoteness/need of a local area, within the broad category of 'designated regional areas'.
- Increasing the amenities and 'liveability' of non-metropolitan areas is considered important to retaining key workers as well as attracting workers (Haslam McKenzie 2011). Therefore, many of the broad approaches to improving liveability discussed throughout this section (5.1) are also applicable to retaining key workers.
- Housing can be a key factor in decisions to move, particularly for key and skilled workers coming from expensive capital city housing markets; therefore, 'cheaper housing' could be used as an attractant to non-metropolitan areas. However, cash incentives, such as housing grants, to bring in key workers should be assessed for their ability to inflate local housing and rental markets. Non-cash incentives, such as ensuring childcare spots, better schooling and enhancing liveability in the local area, combined with broader approaches to maintaining housing affordability (discussed in Section 5.1.4 above), could continue to attract key workers while also maintaining 'cheaper housing' as a drawcard.
- Local governments could consider providing community-building programs to foster wellbeing and a sense of belonging for new movers, as well as approaches such as the piloted Welcome Experience Program in NSW, which aid key workers to settle and become embedded in local communities (see Chapter 4, Box 1).

5.2 How can population growth and change be managed effectively?

While increased migration to regional urban centres is often welcomed, this should not be discussed uncritically, as growing populations can prove challenging for local governments to manage. Key policy strategies for effective management of population change are outlined below through two main themes: 'timing and preparedness' and 'coordination and cooperation'.

5.2.1 Timing and preparedness

A key takeaway from this study is the importance of timing policy responses with population changes and adapting attraction and retention agendas accordingly. From the case study examples, Ballarat LGA is largely keeping pace with in-migration in terms of residential development, and Broken Hill Council is rapidly attempting to upgrade and develop more housing stock in anticipation of a new mine and the resulting forecasted population growth. However, unprecedented growth in the last few years has already impacted Broken Hill and Port Macquarie Hastings LGAs.

In Broken Hill, housing and rental markets are incredibly tight, creating a population growth 'bottleneck'; in Port Macquarie Hastings, rapid population growth has meant that certain types of infrastructure, particularly water and roads, and rental and housing supply, has not been able to keep pace with demand, resulting in detrimental effects for liveability in the area. From these examples, timing growth across different sectors is crucial, as any one factor lagging behind can cause ongoing challenges for community.

Below are some key strategies for improving the timing of responses and preparedness of the community to growth and change:

- Being able to effectively anticipate population growth (also discussed as part of the overall Inquiry), as well as who is moving and for how long, is critical for timing interventions appropriately. Local planners should have access to accurate growth forecasting and research resources to be able to plan as effectively as possible for population change in their communities.
- To meet unexpected demand for housing and infrastructure, temporary measures could be put in place that allow for faster development approvals or planning amendments, for example through Temporary Local Planning Instruments. Rapid mobilisation of human resources from other areas to process development applications, and additional support for stakeholders and community organisations going through the development approval process, should be available for unexpectedly high growth areas.
- Climate events and natural disasters can influence population growth and decline in non-metropolitan Australia. Preparing for the impact of climate change and natural disasters simultaneously builds community and population resilience. Ongoing research on possible local impacts and initiatives to increase disaster preparedness could reduce forced moves in the future and prepare nearby low-risk locations.

5.2.2 Coordination and cooperation of place-based interventions

A major challenge to being able to keep pace with population change is that governance of the different needs of new residents is delivered by multiple public and private sector bodies. Therefore, government and industry cooperation with local communities is essential to meet the diversity of needs across a range of sectors. In each case study area, interview participants noted the necessity and benefits of clear communication and cooperation across tiers of government and with industry and community stakeholders to maintain the liveability of their regional cities.

- The needs of regional cities and local communities should drive efforts to enhance liveability and manage population change, rather than metropolitan planning agendas (e.g. reducing congestion or housing shortages/lack of affordability in capital cities) as local residents and stakeholders tend to have better knowledge of the migration drivers in and out of their area and key areas of concern affecting the liveability in their city.

- Opportunities for cooperation through strategic planning between different tiers of government and industry should be sought for high growth areas. Strategic planning can enable faster response times to anticipate challenges and streamline processes where necessary. Examples of government/industry strategic planning include designating Special Activation Precincts in NSW (NSW Government 2023a), the Regional Centres Development Plan in WA (Government of Western Australia 2015), and the Australia's Government's Regional Deals (Department of Infrastructure 2022), which formalise public and private cooperation and set common objectives with community consultation.
- Government bodies like the Department of Primary Industries and Regional Development in NSW can take on the role of coordinator between different tiers of government and the community and stakeholders to identify appropriate funding schemes and develop projects that draw in migrants, enhance the lives of local residents and support the needs of the community.

5.3 Final remarks and further research

The current sentiment and appetite for regional living has created a unique but perhaps fleeting opportunity to attract and retain population in non-metropolitan Australia. Previous research and our findings in this report indicate that poorly managed growth can undermine the appeal of regional cities (Crommelin, Denham et al. 2022). Already, select regional cities and towns experiencing rapid population growth are facing housing supply and rental vacancy challenges, and infrastructure, services and key worker shortfalls.

For non-metropolitan centres to take advantage of this growth opportunity requires a coordinated, place-based approach that ensures the ongoing liveability of these communities, including enhanced infrastructure, housing and service provision. This report finds that the timing and coordination of interventions remains crucial to managing a range of factors that influence population growth and retention; the best interventions are those that centre the experience and knowledge of local residents and stakeholders — the people that know the needs of their communities. Future research could investigate the efficacy of place-based interventions to address infrastructure, service and social challenges, as well as housing affordability and rental availability in high growth regional areas.

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Appendix 1: Justification for case study LGA selection

The case study LGAs were Port Macquarie Hastings (NSW), Broken Hill (NSW) and Ballarat (Vic). They were selected based on five factors:

- **Population change:** LGAs with SUAs that are experiencing a high population change (historical and recent) identified in Stage 1 were first identified and shortlisted. Some SUAs with higher population change were excluded due to high population change being a result of a relatively low resident number or for being situated too close to a capital city where growth is likely attributed to urban sprawl from the nearby capital (e.g. Melton, Wollongong).
- **Migration profile:** Case study areas were also chosen to typify a diversity of different migration profiles of non-metropolitan regions (see typology discussed in Section 1.1.2). Ballarat was selected as a 'large regional urban centre', Broken Hill as a 'resource-dependent' city, and Port Macquarie Hastings for its 'coastal amenity'.
- **Size:** The chosen case study LGAs ranged in size from Broken Hill at around 17,000 residents to Ballarat at almost 114,000 residents. The selection of case study areas was limited to regional cities with populations of between 10,000 and 250,000 to ensure that the results were relevant to other regional cities, as towns with fewer than 10,000 residents can be impacted by relatively small changes in population and cities of 250,000 people are less likely to be the focus of urban and regional settlement policies.
- **Geography:** Each case study required an established urban centre rather than a collection of urban areas, as this may have detracted from local characteristics. Areas such as the Gold Coast, Sunshine Coast or the Central Coast were excluded on this basis.
- **State:** The case study LGAs were intended to be from a range of different states to ensure the findings would not be state specific. Two case studies were situated in NSW and one in Victoria. Broken Hill, although in NSW, is close to the SA border and has cultural, economic and infrastructure ties to SA.

Appendix 2: Rationale and data sources for included variables

Amenity

The influence of amenity on urban population change was measured by including a suite of variables (described below) confirmed in the literature as potentially significant.

- Hospitality workers as a percentage of total workforce in 2011 or 2016: This variable was included to reflect the attractiveness of places for tourism and resulting economic activity, and also for retirement in-migration (Argent, Smailes et al. 2007; Argent, Tonts et al. 2014). Values for this variable were calculated from ABS population census data for 2011 and 2016.
- Arts and media professionals as a percentage of total workforce in 2011 or 2016: This cohort of workers was selected as representative of a 'creative class' that induces urban growth, drawing on Florida (2002), although this hypothesis has been criticised by prominent scholars (Markusen 2006; Storper and Scott 2009). Values for the variable were calculated from ABS population census data for 2011 and 2016.
- Distance to coast: Coastal locations have been demonstrated to be an attractive lifestyle factor for regional in-migration (Argent, Tonts et al. 2014; Burnley and Murphy 2004; Clark and Murphy 1996; McGuirk and Argent 2011). Distance values were calculated using the Geographic Information System method provided by QGIS. The distance in each case was measured from the centroid of each SUA to the minimum distance from the SUA centroid to all coastal points. Distance values were transformed to natural logarithm values to reflect a hypothesised relationship in which the influence of a coastal location declines exponentially as coastal distance increases.
- Annual precipitation, average minimum July temperature, average maximum January temperature: Research indicates several climate factors can influence regional and urban migration (Argent, Smailes et al. 2007; Beeson et al., 2001; Cheshire and Magrini 2006; Clark and Murphy 1996; Graves 1980). This research shows that annual rainfall, wet day frequency, number of annual heating days, annual available sunshine, difference between average maximum July temperature and average maximum January temperature (northern hemisphere), and warmer climate can all influence population change. Only some of these indicators were available for Australian SUAs. The three variables chosen were selected from available Bureau of Meteorology (BoM) SUA data as best reflecting research findings on climate variables affecting population change. The weather station data for each SUA were derived from the BoM website (http://www.bom.gov.au/nsw/?ref=hdr).

Industry specialisation

The significance of economic specialisation in non-metropolitan growth in Australia has been shown in several studies that demonstrate that greater specialisation increases growth rates (Beer and Clower 2009; Mardaneh 2016; Plummer and Taylor 2001). Duranton and Puga's (2000) method was used to calculate a specialisation index for each SUA, using employment for each industry at the 3-digit (ANZSIC classification) level from ABS population censuses in 2011 or 2016.

ICT professionals

This variable was included to test whether there is any 'knowledge economy' effect on population change in centres of the size analysed, whereby a greater number of knowledge economy workers – using ICT workers as a proxy – would contribute to more growth, as indicated by Raspe and Van Oort (2006) and Van Oort, Oud et al. (2009). The variable values (number of ICT professionals) were derived from ABS population census data for 2011 or 2016 on the number ICT professionals in each SUA. Because such numbers are skewed towards higher values with higher SUA population numbers, values were transformed to natural logarithmic values.

Surgeons

The availability of specialised medical services, drawing on largely anecdotal evidence (e.g. Connell and McManus 2016; Veitch, Sheehan et al. 1996), is hypothesised to help attract or retain SUA residents. The variable values (number of surgeons) were derived from ABS population census data for 2011 or 2016 for each SUA. Again, because such numbers are skewed towards higher values with higher SUA population numbers, values were transformed to natural logarithmic values.

Health diagnostic and promotion professionals

This was included as an explanatory variable for the same reason as surgeons. The variable was denoted by the number of health diagnostic and promotion professionals in each SUA in 2011 or 2016. The data sources and transformation were also the same as for surgeons.

University lecturers and tutors

Universities are central to the development of the knowledge economy and, as such, are regarded as having special potential for expanding urban economies with accompanying population increase (Addie 2017; Cetin, Aksov et al. 2021; Johnston 2019). The number of university lecturers and tutors in each SUA in 2011 or 2016 is included as a proxy variable to indicate the size of the potential influence of universities in those SUAs. The data sources and transformation were also the same as for surgeons and health etc. professionals.

Percentage of the workforce with a university degree

This variable was included to test the hypothesis that a higher skilled work force has greater potential to drive growth as the knowledge economy deepens (e.g. Plummer and Taylor 2001; Sobyra, Sigler et al. 2022). The percentage was calculated for each SUA for 2011 or 2016.

Annual air passenger movements

For SUAs more distant from the major cities, the availability of air transport is potentially significant for economic development (Baker, Merkert et al. 2015; Campante and Yanagizawa-Drott 2018; Lenaerts, Allroggen et al. 2023). Annual air passenger movement data were used to denote air transport availability in the absence of data on annual commercial passenger services. The annual air passenger data were drawn from the Bureau of Infrastructure and Transport Research Economics domestic aviation activity reports for 2012–13 (the earliest available data) for the 2011–16 model, and for 2015–16 for the 2016–21 model (BITRE 2014, 2016). No data were available from the reports for SUAs not included in the top 10 airports or the top 50 regional airports. Such SUAs were allocated a zero value. The raw air transport passenger numbers were transformed logarithmically for inclusion in the model because the raw values were skewed towards larger SUAs.

Population size

SUA population changes are highly correlated with SUA population size. In turn, a number of the other independent variables can also be hypothesised to be correlated with population size. Population size was included as an independent variable, transformed logarithmically, so that its correlation with the other independent variables could be identified via calculation of VIF values for each, and excluded if its VIF values were calculated to denote unacceptably high correlation with the other variables.

Road distance to the nearest capital city

As noted in the report text above, towns near larger cities tend to grow faster (Frost 2004; Rupasingha, Liu et al. 2015). This is associated with greater access to business services and supplies in large cities and to specialised city facilities and consumer services for residents. Road distance was measured from the SUA to the nearest major metropolitan capital city area (Sydney, Melbourne, Brisbane, Peth and Adelaide). Distances to nearer but smaller metropolitan areas were not measured because of the hegemony of the five largest cities over their economic catchments, except for Goulburn/Canberra (see below). For Tasmanian SUAs, distance was measured as a straight line distance to Melbourne. For some SUAs, non-nearest metropolitan cities were used instead of the nearest one, based on known economic flows:

- Grafton, Armidale and Coffs Harbour distances were measured from Sydney, not Brisbane, based on historic linkage patterns (Woolmington 1965).
- Wagga Wagga and Griffith distances were measured from Sydney, not Melbourne, based on the number of direct daily flights to Sydney and Melbourne from Wagga Wagga.
- Goulburn distance was measured from Canberra.
- Mildura distance was measured from Melbourne.
- Mount Gambier distance was measured from Adelaide.

Median dwelling price
As noted in the report text above, lower dwelling prices may attract people to non-metropolitan regions (Vij, Ardeshiri et al. 2022; Vij, Connor et al. 2021). House prices are a driver of migration for those seeking cheaper housing or home ownership, particularly out of higher-priced capital cities (Crommelin, Denham et al. 2022; Vij, Ardeshiri et al. 2022). Median dwelling prices for SUAs were not available from ABS data sets. Instead, median asking prices for dwellings at the time of the 2011 and 2016 censuses were obtained from the SQM Research website (https://sqmresearch.com.au/asking-property-prices.php?t=1). The median asking price for each postcode in an SUA was averaged to obtain an average median for that SUA. While asking prices may not reflect the final sold prices for the properties advertised, the use of asking prices was deemed appropriate as an indicator of the market as perceived to a prospective migrant to an area.

Appendix 3: Justification for excluded variables

CSIRO climate index

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) produces a range of climate indices for Australia, including the Australian Climate Observations Reference Network – Surface Air Temperature and the Australian Water Availability Project. These climate indices are not available at the SAU level in Australia. This is because the data used to produce these indices is collected from weather stations often located outside of urban areas. Further, CSIRO climate indices are generally designed to provide a national or regional overview of climate trends and patterns, rather than detailed information at a local level. Some state and local government agencies in Australia may collect and provide more localised climate data, including temperature and rainfall information, which may be available at the SUA level. However, the specific availability of these data will depend on the agency and the location in question. Climate amenity is an important determinant of migration in Australia, Europe and the US (Argent, Smailes et al. 2007; Cheshire and Magrini 2006; Graves 1980). It is known that higher rainfall leads to lower population growth in the US context (Beeson, DeJong et al. 2001), so data for annual precipitation, average minimum July temperature and average maximum January temperature were collected instead.

Number of FTE students enrolled in university campuses located in the urban area

The Australian Government's Department of Education and Training publishes annual data on higher education statistics, including information on student enrolments by institution, level of study, field of education and other characteristics. However, these data are typically reported at an aggregated level, such as by state or territory, institution or level of study. One possible reason for the lack of availability of FTE student enrolment data at lower geographic levels is that it can be difficult to accurately attribute enrolments to specific campuses or locations, particularly for institutions that have multiple campuses or offer online or distance education programs. Some institutions may publish information on their own websites about the number of students enrolled at specific campuses or locations, which could provide more detailed information for certain areas. Additionally, the Department of Education and Training's Higher Education Information Management System provides access to detailed higher education data for researchers and other authorised users, which may include more granular enrolment information for specific campuses or geographic areas. However, there are other metrics that can be used to understand the drivers of population growth and change in regional Australia. Some of these metrics are employment opportunities, the number of university lecturers and the percentage of the workforce with a university degree, all of which are used in this study.

Average NAPLAN scores of the highest 25 per cent of high schools in an urban area

The average National Assessment Program – Literacy and Numeracy (NAPLAN) scores of the highest 25 per cent of high schools in an urban area are not readily available in Australia. This variable has been proposed to test the importance of high quality schooling in residential choices. NAPLAN scores are released at the individual student, school and state/territory level, but they are not publicly available at the level of the highest-performing schools in a specific urban area. In addition, there was no research evidence of the importance of schooling quality on inter-urban population change. Instead, the number of health professionals, the level of employment specialisation and the number of university lecturers are analysed to reflect the importance of education levels in general.

Number of scheduled rail passenger services per week

Data on the number of scheduled rail passenger services per week are available in Australia, but not at the level of each SA2 or SA3 SUA. This is because rail services are often operated across large geographic areas, and the number of services may not vary significantly at a local level. Instead, this study uses number of air passengers (as a proxy for number of services) and road distances to calculate accessibility of each SUA.

Appendix 4: Variance inflation factors

2011–16 Variance inflation factor

Independent variables	VIF (2011–16)
Hospitality workers as percentage of total employment	2.332073118
Log (distance to coast)	3.147656716
Arts and media professionals as percentage total employment	3.444011585
Industry specialisation index	5.320818374
Log (ICT professionals)	8.614547265
Log (number of surgeons)	8.038755071
Log (number of health diagnostic and promotion professionals)	16.14953489
Log (number of university lecturers and tutors)	5.441207584
Percentage of the workforce with a university degree	6.162840908
Log (annual air passenger movements)	2.987217858
Log (population size 2011)	30.61886464
Log (road distance to nearest capital city)	4.343349732
Annual precipitation	4.257232873
Average July minimum temperature	1.606249729
Average January maximum temperature	2.760412151
Median dwelling price	1.157653032

2016–21 Variance inflation factors

Independent variables	VIF (2016–21)
Hospitality workers as percentage of total employment	4.466656328
Log (distance to coast)	4.407749358
Arts and media professionals as percentage total employment	2.366642274
Industry specialisation index	6.631108431
Log (ICT professionals)	17.50234313
Log (number of surgeons)	8.014991883
Log (number of health diagnostic and promotion professionals)	27.56079279
Log (number of university lecturers and tutors)	7.430710979
Percentage of the workforce with a university degree	4.342653338
Log (annual air passenger movements)	3.460413887
Log (population size 2011)	45.18667355
Log (road distance to nearest capital city)	4.114571646
Annual precipitation	3.121015091
Average July minimum temperature	1.924819649
Average January maximum temperature	4.704888665
Median dwelling price	3.169039022

Appendix 5: Example survey (Ballarat)

Below is a text export of the online community survey run Port Macquarie Hastings, Ballarat and Broken Hill LGAs, showing the questions presented to a respondent when 'Ballarat' is selected in response to question 2 'Where do you live?'. This text export has some formatting errors, but presents all questions asked in the survey and the survey question text in full. The survey asked the same questions for each case study area, with only the name of the area changed for each location.

Start of Block: Community and Population Change Survey

Introduction

Community and Population Change Survey

Welcome to our survey of resident's experiences of regional Australia. Please select the arrow button to start the survey.

End of Block: Community and Population Change Survey

Start of Block: Migration survey

Consent: The University of Sydney is conducting research on reasons for moving and effective management of population growth and change in regional Australia. We are interested in the reasons people move to the regions and how population change is managed by local governments.

You have opted to participate in this study about living in Port Macquarie, Broken Hill or Ballarat. If you would like further information about this study, you can download a Participant Information Sheet here, or contact Dr Caitlin Buckle by email (caitlin.buckle@sydney.edu.au) or phone (+61 2 9351 8598).

The survey only takes about 15 minutes to complete.

You must live in Port Macquarie, Broken Hill or Ballarat to participate. Participation in the survey is voluntary. By completing the survey, you consent to the information you provide being used by University of Sydney for research into place-based drivers of migration to regional areas.

By selecting 'I consent to the above' to take part in the survey, you are giving consent to participate.

In giving my consent I state that:

- I understand the purpose of the study, what I will be asked to do, and any risks/benefits involved.

- I have read the Participant Information Statement and have been able to discuss my involvement in the study with the researchers if I wished to do so.
- The researchers have answered any questions that I had about the study and I am happy with the answers.
- I understand that being in this study is completely voluntary and I do not have to take part. My decision whether to be in the study will not affect my relationship with the researchers or anyone else at the University of Sydney, James Cook University or the Australian Housing and Urban Research Institute now or in the future.
- I understand that I can withdraw from the study at any time.
- I understand that my questionnaire responses cannot be withdrawn once they are submitted, as they are anonymous and therefore the researchers will not be able to tell which one is mine.
- I understand that personal information about me that is collected over the course of this project will be stored securely and will only be used for purposes that I have agreed to.
- I understand that information about me will only be told to others with my permission, except as required by law.
- I understand that the results of this study may be published, and that publications will not contain my name or any identifiable information about me.

Select 'I consent to the above' to begin the survey.

End of Block: Migration survey

Start of Block: Survey Eligibility 1

Q1 Are you over 18? Please select 'yes' to continue or 'no' to complete the survey

- Yes (2)
- No (3)

End of Block: Survey Eligibility 1

Start of Block: Survey Eligibility 2

Q2 Where do you live? (Please select one of the cities below or select 'elsewhere' to complete the survey)

- Port Macquarie-Hastings (6)
- Broken Hill (7)
- Ballarat (8)
- Elsewhere (9)

End of Block: Survey Eligibility 2

Start of Block: Ballarat Residential History

Q3 How long have you lived in Ballarat?

- Moved here less than 1 year ago (1)
- Moved here between 1 and less than 5 years ago (2)
- Moved here between 5 and less than 10 years ago (3)
- Moved here more than 10 years ago (4)

- Have always lived in the area (5)
- Prefer not to answer (6)

Skip To: End of Block If Q3 = Have always lived in the area

Skip To: End of Block If Q3 = Prefer not to answer

Q4.1 Where did you move to Ballarat from?

- Melbourne (3)
- Geelong (10)
- Regional city in Victoria (8)
- Small town/remote community in Victoria (4)
- Small town/remote community elsewhere in Australia (2)
- Regional city elsewhere in Australia (9)
- Capital city elsewhere in Australia (5)
- Outside of Australia (7)
- Prefer not to say (11)

Q4.2 What was you or your households' main reasons for leaving your previous location? (Choose up to 3 ranked from 1 = most important to 3 = least important)

_____ Work (1)

_____ Study (25)

_____ Retirement (2)

_____ Personal (e.g. closer to family or friends, health of family member) (3)

_____ Lifestyle (e.g. work/life balance) (4)

_____ Wanted to live in Ballarat (6)

_____ Housing related (e.g. need a more appropriate house, property purchase) (7)

_____ Social concerns (e.g. crime, community feel) (8)

_____ Infrastructure related (e.g. access to transport, ability to telecommute) (10)

_____ Services related (e.g. access to healthcare, banking, commercial, recreation services) (11)

_____ Environmental (e.g. climate, threat of natural disasters) (5)

_____ Other (specify) (24)

Q4.3 How true are the following statements about your/your household's decision to move to Ballarat specifically?

	Definitely false (25)	Mostly false (26)	Mostly true (27)	Definitely true (28)
I/we moved to Ballarat for work opportunities (1)	○	○	○	○
I/we moved to Ballarat for study opportunities (39)	○	○	○	○
I/we moved to Ballarat to lessen my/our commute (38)	○	○	○	○
I/we moved to Ballarat due to the ability to telecommute (7)	○	○	○	○

Q4.4 How true are the following statements about your/your household's decision to move to Ballarat specifically?

	Definitely false (25)	Mostly false (26)	Mostly true (27)	Definitely true (28)
I/we moved to Ballarat to be closer to family or friends (3)	○	○	○	○
I/we moved to Ballarat to retire (2)	○	○	○	○
I/we moved to Ballarat for better work/life balance (4)	○	○	○	○
I/we moved to Ballarat for a different lifestyle (26)	○	○	○	○
I/we moved to Ballarat for the pleasant climate (5)	○	○	○	○
I/we moved to Ballarat for the attractive landscapes (27)	○	○	○	○
I/we moved to Ballarat as it is safe from natural disasters (40)	○	○	○	○

Q4.4 How true are the following statements about your/your household's decision to move to Ballarat specifically?

	Definitely false (25)	Mostly false (26)	Mostly true (27)	Definitely true (28)
I/we moved to Ballarat for cheaper housing (28)	○	○	○	○
I/we moved to Ballarat for more appropriate housing for my lifestage (29)	○	○	○	○
I/we moved to Ballarat to own a property (30)	○	○	○	○

Q4.5 How true are the following statements about your/your household's decision to move to Ballarat specifically?

	Definitely false (25)	Mostly false (26)	Mostly true (27)	Definitely true (28)
I/we moved to Ballarat for its lower crime rate (31)	○	○	○	○
I/we moved to Ballarat to live with people of similar backgrounds (39)	○	○	○	○
I/we moved to Ballarat for its sense of community (32)	○	○	○	○
I/we moved to Ballarat for its small-town feel (33)	○	○	○	○
I/we moved to Ballarat for its urban feel (34)	○	○	○	○

Q4.6 How true are the following statements about your/your household's decision to move to Ballarat specifically?

	Definitely false (25)	Mostly false (26)	Mostly true (27)	Definitely true (28)
I/we moved to Ballarat due to its proximity to major cities (8)	○	○	○	○
I/we moved to Ballarat to access better healthcare (35)	○	○	○	○
I/we moved to Ballarat to access better facilities and services (36)	○	○	○	○
I/we moved to Ballarat for better public transport options (37)	○	○	○	○

Q4.7 Were there any reasons for your/your household's decision to move to Ballarat specifically that were not listed in previous questions?

○ Yes (please specify) (1) _____

○ No (2)

Q4.8 Did you receive any financial assistance or incentives that helped your decision to move to Ballarat? (e.g. assistance with moving costs, subsidised housing, education scholarships, tax offsets, better work conditions/ employment security)

○ Yes (1)

○ No (2)

Q4.81 What was the assistance/incentives you received that helped you decide to relocate?

_____

Q4.9 Were you directly or indirectly influenced in your decision to move because of the COVID-19 pandemic, bushfires or floods?

○ Yes (1)

○ No (2)

Q4.91 How did the pandemic, bushfires or floods influence your decision to move?

_____

Q4.10 Were there any features of Ballarat that made you consider NOT moving here?

○ Yes (please specify) (1) _____

○ No (2)

Q4.11 From your own experience, how satisfactory is it to make the following lifestyle adjustments in Ballarat?

	Very satisfactory (1)	Satisfactory (2)	Unsatisfactory (3)	Very unsatisfactory (4)	Not applicable (5)
Making new friends (1)	○	○	○	○	○
Maintaining family ties (2)	○	○	○	○	○
Raising children (3)	○	○	○	○	○
Living a different lifestyle (4)	○	○	○	○	○
Getting involved in the community (5)	○	○	○	○	○
Telecommuting/ commuting to work (6)	○	○	○	○	○
Finding paid work (7)	○	○	○	○	○
Accessing community services (8)	○	○	○	○	○

End of Block: Ballarat Residential History

Start of Block: Ballarat Place Attributes

Q5 Based on your own experience, rate the following ECONOMIC attributes of Ballarat out of 100 (0 = Very bad, 100 = Very good)

	Not sure 0 10 20 30 40 50 60 70 80 90 100
Job opportunities ()	
Cost of living ()	
Ability to get a high-paying job ()	

Q6 Based on your own experience, rate the following HOUSING attributes of Ballarat out of 100 (0 = Very bad, 100 = Very good)

	Not sure 0 10 20 30 40 50 60 70 80 90 100
Housing affordability ()	
Diversity of housing options ()	
Rental prices ()	
Rental options ()	
Retirement accommodation ()	

Q7 Based on your own experience, rate the following ENVIRONMENTAL attributes of Ballarat out of 100 (0 = Very bad, 100 = Very good)

	Not sure
	0 10 20 30 40 50 60 70 80 90 100
Attractiveness of the landscape ()	
Pleasantness of climate ()	
Safety from natural disasters ()	

Q8 Based on your own experience, rate the following LIFESTYLE attributes of Ballarat out of 100 (0 = Very bad, 100 = Very good)

	Not sure
	0 10 20 30 40 50 60 70 80 90 100
Opportunities for work/life balance ()	
Outdoor activities on offer ()	
Place to raise children ()	

Q9 Based on your own experience, rate the following SERVICES of Ballarat out of 100 (0 = Very bad, 100 = Very good)

	Not sure 0 10 20 30 40 50 60 70 80 90 100
Accessibility to major cities ()	
Recreational/entertainment facilities ()	
Banking and retail ()	
Schools ()	
Accessibility to tertiary education ()	
Shopping options ()	

Q10 Based on your own experience, rate the following INFRASTRUCTURE attributes of Ballarat out of 100 (0 = Very bad, 100 = Very good)

	Not sure 0 10 20 30 40 50 60 70 80 90 100
Internet connection ()	
Public transport to travel within Ballarat ()	
Public transport to travel from Ballarat to other areas ()	
Walkability of Ballarat ()	
Ability to commute to work ()	
Traffic congestion ()	

Q11 Based on your own experience, rate the following SOCIAL attributes of Ballarat out of 100 (0 = Very bad, 100 = Very good)

	Not sure 0 10 20 30 40 50 60 70 80 90 100
Crime rate ()	
Sense of community ()	
Friendliness of residents ()	

Q12 In your experience, how true are the following statements about Ballarat?

	Definitely false (3)	Mostly false (4)	Mostly true (5)	Definitely true (6)
People living in Ballarat are of similar backgrounds (2)	○	○	○	○
My family and friends are mostly in Ballarat (19)	○	○	○	○
There are too many people living in Ballarat for my liking (16)	○	○	○	○
Ballarat is too densely populated (17)	○	○	○	○
Ballarat should have more of a multicultural mix of residents (20)	○	○	○	○

Q13 What do you like MOST about living in Ballarat?

_____

Q14 What do you like LEAST about living in Ballarat?

_____

Q15 Are there any features of Ballarat that need to be addressed urgently?

- Yes (please specify) (1) _____
- No (2)

End of Block: Ballarat Place Attributes

Start of Block: Ballarat Future Plans

Q16 What is the likelihood of you moving away from Ballarat within the next 12 months? (0 = Very unlikely, 50 = Not sure, 100 = Very likely)

	0 10 20 30 40 50 60 70 80 90 100
Likelihood of moving within 12 months ()	

Q17 What is the likelihood of you moving away from Ballarat within the next 5 years? (0 = Very unlikely, 50 = Not sure, 100 = Very likely)

	0 10 20 30 40 50 60 70 80 90 100
Likelihood of moving within 5 years ()	

Q18 Why might you consider moving from Ballarat? (Choose any that apply)

Work (1)

Study (25)

Retirement (2)

Personal (e.g. closer to family or friends, health of family member) (3)

Lifestyle (e.g. work/life balance) (4)

Housing related (e.g. need a more appropriate house, property purchase) (7)

Social concerns (e.g. crime, community feel) (8)

Infrastructure related (e.g. access to transport, ability to telecommute) (10)

Services related (e.g. access to healthcare, banking, commercial, recreation services) (11)

Environmental (e.g. climate, threat of natural disasters) (5)

Other (specify) (24) _____

Q19 Where are you most likely to move from Ballarat to?

- ○ Melbourne (3)
- ○ Geelong (10)
- ○ Another regional city in Victoria (8)
- ○ Small town/remote community in Victoria (4)
- ○ Small town/remote community elsewhere in Australia (2)
- ○ Another regional city elsewhere in Australia (9)
- ○ Capital city elsewhere in Australia (5)
- ○ Outside of Australia (7)
- ○ Prefer not to say (11)

Q20 What is the main reason you might consider remaining long term in Ballarat?

_____

End of Block: Ballarat Future Plans

Start of Block: Ballarat About Me

Q21 What is your age?

- ○ 18-29 (2)
- ○ 30-39 (3)
- ○ 40-49 (5)
- ○ 50-59 (6)
- ○ 60-69 (7)
- ○ 70 years and over (8)
- ○ Prefer not to say (20)

Q22 Are you

- ▼ Female (1) ... Prefer not to say (4)

Q23 In which country were you born?

- ○ Australia (1)
- ○ Overseas (2)
- ○ Prefer not to say (3)

Q24 Which country were you born in (if not Australia)?

_____

Q25 How long have you lived in Australia for?

- ○ Less than 5 years (1)
- ○ 5-9 years (2)
- ○ 10-19 years (3)
- ○ More than 20 years (4)
- ○ Prefer not to say (5)

Q26 Which of the following best describes the current makeup of your household?

- ○ Only yourself (1)
- ○ Couple (partners) with no dependent child at home (2)
- ○ Couple with one or more dependent children at home (3)
- ○ A parent with one or more dependent children at home (4)
- ○ Group of adults to whom you are not related (5)
- ○ Group of adults to whom you are related (6)
- ○ Other (7)
- ○ Prefer not to say (8)

Q27 What is the average weekly (annual in brackets) pre-tax income for your household?

- ○ Less than $300 ($15,600) (1)
- ○ $300-$399 ($15,600 - $20,799) (2)
- ○ $400-$499 ($20,800 - $25,999) (3)
- ○ $500-$649 ($26,000 - $33,799) (4)
- ○ $650-$799 ($33,800 - $41,599) (5)
- ○ $800-$999 ($41,600 - $51,999) (6)
- ○ $1,000-$1,249 ($52,000 - $64,999) (7)
- ○ $1,250-$1,499 ($65,000 - $77,999) (8)
- ○ $1,500-$1,749 ($78,000 - $90,999) (9)
- ○ $1,750-$2,499 ($91,000 - $129,999) (11)
- ○ $2,500 to $3,499 ($130,000-$181,999) (13)
- ○ $3,500-$4,499 ($182,000-$233,999) (15)
- ○ $4,500-$7,999 ($234,000-$415,999) (16)
- ○ $8,000 or more ($416,000 or more) (18)
- ○ Prefer not to say (17)

Q28 What is your highest qualification (or closest equivalent)?

- ○ High School Certificate (2)
- ○ TAFE Certificate (3)
- ○ Advanced Diploma/Diploma (4)
- ○ Bachelor Degree (5)
- ○ Doctorate/Postgraduate qualification (7)
- ○ None of the above (11)
- ○ Prefer not to say (6)

Q29 What is your employment status?

- ○ Full time paid employment (1)
- ○ Part time paid employment–looking for more work (2)
- ○ Part time paid employment–NOT looking for more work (3)
- ○ Unemployed–looking for work (4)
- ○ Not in labour force–not looking for work (5)
- ○ Prefer not to say (6)

Q30 What is the industry of employment for the primary income earner of your household?

- ▼ Government administration/Public works (1) ... Prefer not to say (17)

Q31 Which of these best describes the property where you live at the moment?

- ○ Own or have a mortgage on the property (1)
- ○ Rental property (2)
- ○ Rent free in a property I don't own (3)
- ○ Retirement village (5)
- ○ Tourist accommodation such as hotel, backpackers, caravan park (6)
- ○ Long term in a caravan and/or motorhome park (8)
- ○ Communal accommodation (e.g. boarding/residential house, workers camps, barracks, nursing home or aged care facility) (10)
- ○ Other (11)
- ○ Prefer not to say (12)

End of Block: Ballarat About Me

Start of Block: Prize Draw

Q32 You have completed all the survey questions. Would you like to enter the draw to win one of three $100 cash cards? Your responses will remain anonymous.

○ No (1)

○ Yes (2)

End of Block: Prize Draw

[Survey Ends with a message thanking the respondent]

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